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Is Organizational Culture Explicitly Linked to Perceived Corporate Performance? A Multidimensional Analysis of Corporate Culture and Perceived Corporate Performance in the United States and Taiwan

By

Kuo-Kuang Huang

DISSERTATION

Submitted to
H. Wayne Huizenga School of Business and Entrepreneurship
Nova Southeastern University

in partial fulfillment of the requirements
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By

Kuo-Kuang Huang

We hereby certify that this dissertation submitted by Kuo-Kuang Huang conforms to acceptable standards, and as such is fully adequate in scope and quality. It is therefore approved as the fulfillment of the Dissertation requirements for the Degree of Doctorate of Business Administration.

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Nova Southeastern University
2003

CERTIFICATION STATEMENT

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Kuo-Kuang Huang

ABSTRACT

Is Organizational Culture Explicitly Linked to Perceived Corporate Performance? A Multidimensional Analysis of Corporate Culture and Perceived Corporate Performance in the United States and Taiwan

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This dissertation extends Denison's (1995) culture and effectiveness model to Taiwan with a smaller sample of U.S. companies. Denison and Mishra (1995) reported that corporate culture is positively related to executives' perceptions of corporate performance. Their conclusions were only based on U.S. samples. Since1995, several researchers have supported the model. A few studies included other countries as well as the U.S. However, companies in Taiwan, the thirteenth largest trading country, have not been studied. Therefore, along with some Fortune 500 companies in the U.S., this study surveyed Taiwan's Common Wealth 500 companies and medium-sized companies as well. The sample included 356 companies from 74 industries in the U.S. and Taiwan. The results show that corporate culture is positively related to corporate performance. There are similarities and differences between Taiwanese and U.S. companies. Mission was found to be related to all the performance indicators assessed in this study. Also, the participants from both countries assessed mission as the most effective culture trait to corporate performance. In addition, there are different relationships between organizational culture and performance in the two countries. Some generalizabilities of the relationship were supported by this study.

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This doctoral dissertation could not have been completed without the contributions and academic assistance from my chairperson, committee members, the research director at the Denison Consulting, Inc., and my families.

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appreciation goes to all the instructors from the five universities who allowed me to distribute questionnaires in their classes, assisted me in collecting surveys, and who provided me with the opportunity to conduct personal interviews with survey participants. Without the cooperation of these instructors, the survey collection process would have been filled with obstacles.

I could never have completed my four years of study or written this dissertation without the immeasurable and enduring devotion of my family. Show-Ching, my lovely wife, who quit her job in order to give me her care and unfailing support, was the critical motivator who enabled me to pursue my doctoral studies. My two daughters, Yi-Chien and Wei-Jun, also deserve my appreciation. Many times, when I felt exhausted, they were able to make me laugh and relax. The research process is a lonely and difficult one and my daughters and my wife gave me the energy to keep moving forward.

My last and greatest thanks go to my parents. Four years ago, when I told them that I wanted to study for a doctorate, they promised me their complete support. And, throughout those years, they endured the heavy burden of providing financial support for me and my family. I could not have devoted myself to uninterrupted studies or persisted in the long and difficult effort to win my doctorate without my parents' help and encouragement. This doctorate is dedicated to my parents.

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CHAPTER I

INTRODUCTION

This study examines the relationship between corporate culture and organizational performance of companies in Taiwan and the U.S. This chapter introduces the study with the following sections: (1) research motivation, (2) definition of terms, (3) previous problems, (4) approaches to studying corporate culture, (5) objectives of the study, (6) theoretical framework, (7) research questions, (8) importance of the study, (9) scope and limitations, (10) design of the study, and (11) summary.

Research Motivation

Organizational, or corporate, culture has been a popular issue in management literature since the early 1980s (Deal & Kennedy, 1982). The influence of organizational culture on how individuals view their organizations has been studied. However, further research in this area is needed (Ritchie, 2000). A number of authors note that when conducting organizational effectiveness studies, the area of interest is to discover whether variables predict effectiveness or whether variables indicate effectiveness (Lewin & Minton, 1986; Cameron, 1986).

Most research on corporate culture does not consider organizational effectiveness as an outcome and relatively little empirical work relates culture to corporate effectiveness. Their relationship needs to be examined from at least two perspectives: the instrumentality of organizational culture in generating, improving, or maintaining organizational effectiveness (e.g., Lawler, Hall & Oldham, 1974) and the determination of the most effective means of managing organizational culture.

In the past few years, culture and effectiveness research has been extended to cross-border studies (Hofstede et al., 1988). More and more organizations are crossing national borders and thus, differences in nationality are increasingly becoming a source of potential conflict and contradictions in organizations (Hofstede, 1996). Hofstede's (1983) article, "Can American Theory be Applied Overseas?" indicated that many academicians and practitioners apply American theories developed with U.S. samples outside the U.S. cannot be done without considering necessary adjustment. However, nationality differences can produce different results on applying specified theories developed in specific areas (Hofstede, 1996). Thus, more empirical tests on any developed theory could provide more generalities to facilitate their applications.

Management scholars have developed diverse definitions of organizational culture. There are 136 definitions of corporate culture. Thus, to facilitate culture research, a specific definition and model is necessary. Denison's (1995) organizational culture and effectiveness model examines the relationship between corporate culture and perceived corporate performance. With U.S. companies, Denison found that corporate culture has a positive effect on corporate effectiveness and that can be linked to specific effectiveness criteria in the U.S. Denison and specific aspects of culture can be linked to various effectiveness criteria. Denison and his colleagues expanded his research to other nations after 1995. However, studies in other countries, especially in Asia are still limited (Denison et al., 2000).

One question was raised: " Does Denison's model and the relationship between the four culture factors and corporate effectiveness apply to companies in Taiwan?" No study to date addresses this question. Thus, this study includes samples from American and Taiwanese companies to empirically examine the extent to which the results apply to Taiwanese companies.

This study can benefit practicing managers' and academic researchers' understanding of culture results to company's effectiveness in two countries. Academic researchers can learn more empirical facts about the relationship between culture and effectiveness by bringing more countries in this kind of study.

Definition of Terms

This study adopts Schein's (1989) definition of corporate culture, "The pattern of basic assumptions that the group has invented, discovered or developed in learning to cope with its problems of external adaptation and internal integration that has worked well enough to be considered valid, and therefore to be taught to new members as the correct way to perceive, think, and feel in relation to those problems." (P.9). Corporate culture usually refers to how people feel about their organization, the operational system, and the degree of their commitment to their organization. If corporate culture is the "soft" stuff in modern organizations, then the operations system can be regarded as the "hard" stuff. Managers need to understand how the "soft" and "hard" stuff are related to each other. Many managers are unaware of how the soft stuff, such as corporate culture, impacts the hard stuff, such as strategic and authorization systems. Organizational culture has been acclaimed as the normative glue that ties organizational members together (Tichy, 1982). Culture also functions as a distinctive characteristic that distinguishes one company from another (Forehand & von Gilmer, 1964).

Previous Problems

The questionnaire approach is used widely to study corporate culture (e.g., Hofstede, 1980), based on participants' viewpoints about their companies; however, researchers always interpret survey results with their points of view. When survey methodology cannot help researchers tell

the distinction from respondents, the approach was not appropriate to measure corporate culture (Ouchi & Wilkins, 1988, p. 236). In addition, most of the existing studies on the linkage of corporate culture and corporate performance do not employ formal or consistent measurement of either performance or culture (Gordon & DiTomaso, 1992). The basic problem in interpreting survey results is bridging the gap between the researcher's and the respondents' minds.

Approaches to the Study of Culture

This study operates within the functionalist paradigm and utilizes the objective viewpoint and a quantitative methodology to examine the relationship between organizational culture and organizational effectiveness. Survey data is used to collect behavioral data to measure corporate culture. Individual survey data is aggregated to the organization level and linked to performance measures. Corporate culture characterizes organizations and not individuals (Hofstede 1998); thus, corporate culture should be analyzed at the level of organizational units and not at the individual level. Initially, several researchers used qualitative approaches to study corporate culture. Since 1990, several researchers, for instance, Hofstede (1990) and Denison (1995) developed quantitative approaches to measuring corporate culture. Some researchers also mix both the qualitative and quantitative approaches to learn more about organizational culture.

Corporate culture is a construct; therefore, a variety of definitions and ideologies with which measure corporate culture. Schein (1990) suggests the best way to analyze culture is to link it to a founder's definitions and on its historical events. The result is a view of corporate culture at the given time. Schein writes that: "By reconstructing the history of critical incidents in the group and how members dealt with them, one can get a good indication of the important cultural elements in that group." (Schein, 1990: 115).

In addition, a company's beliefs and basic assumptions are more difficult to identify than their practices and artifacts. According to Schein (1985), assumptions form when a solution initiated from the founder works well to solve problems. Then, the assumption will become an antidote and is applied when similar situations occur. Assumptions become part of the organizational memory and followed by organization's members. Thus, assumption becomes a well-defined, deeply held belief and is difficult to change. Therefore, the study will try to measure corporate culture through organizational practices and values.

Objectives of the Study

This study examines the linkages between corporate culture and corporate performance (Denison & Mishra, 1995) in a sample of small and large companies in the U.S. and Taiwan. Small companies are those of part-time business students at universities in south Florida and the northern section of Taiwan. When Denison developed his organizational culture and effectiveness model and theory in 1995, thirty-four industries were involved in his study. This study updates his research and provides more proof on the application of his model by brining more industries and more countries seven years later. This study provides more updated information on the linkage between corporate culture and corporate performance during 1995 to 2003.

Theoretical Framework

The theoretical framework for this study comes from Denison's (1995) model of organizational culture. It focuses on the aspects of organizational culture that are linked to business performance. Denison, like Schein (1988), acknowledges that culture is related to

deeply held beliefs and values; he emphasizes organizational performance because the more abstract nature of beliefs and values. He divided corporate culture into four dimensions based on external and internal factors. The four components include flexibility, mission, adaptability and involvement.

Research Questions

The objectives of this current study lead to the overall research question. Is corporate culture positively related to organization performance in the U.S. and Taiwan? Two additional questions are linked to the hypotheses in Chapter III.

1. Are the four organizational culture traits related to measures of company effectiveness?
2. Does the culture - effectiveness relationship apply equally to firms in Taiwan and the U.S.?

Importance of the Study

Corporate culture is a key component in the successful performance of a firm (Corbett & Rastrick, 2000). A large body of research concentrated on comparing strong vs. weak cultures (Deal & Kennedy, 1982). It suggests that culture can have varying degrees of influence on an organization's members (Ritchie, 2000). This study adds to the existing body of knowledge on corporate culture and corporate performance by testing the Denison's (1995) model in both the U.S. and Taiwan. It will be helpful for American-based multi-national companies to gain a greater understanding of possible influence of culture traits on a company's performance when they plan to expand their business units to Taiwan and other countries. In summary, the study is expected to contribute in these ways.

CHAPTER I

INTRODUCTION

This study examines the relationship between corporate culture and organizational performance of companies in Taiwan and the U.S. This chapter introduces the study with the following sections: (1) research motivation, (2) definition of terms, (3) previous problems, (4) approaches to studying corporate culture, (5) objectives of the study, (6) theoretical framework, (7) research questions, (8) importance of the study, (9) scope and limitations, (10) design of the study, and (11) summary.

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Most research on corporate culture does not consider organizational effectiveness as an outcome and relatively little empirical work relates culture to corporate effectiveness. Their relationship needs to be examined from at least two perspectives: the instrumentality of organizational culture in generating, improving, or maintaining organizational effectiveness (e.g., Lawler, Hall & Oldham, 1974) and the determination of the most effective means of managing organizational culture.

1. The study is a cross-border study. Thus, it can provide more support on applying the theory and model internationally.
2. The study will try to sample Fortune 500 companies. The results could be valuable in terms of understanding the role of corporate culture on corporate performance in these highly reputable companies.
3. This comparison research approach could provide more valuable information through the difference of the culture-performance linkage.

Scope and Limitations

Many approaches identify the dimensions of corporate culture. This study takes Denison's (1995) four dimensions – mission, flexibility, adaptability, and involvement- to describe corporate culture. The data on performance is obtained from the perceptions of managers/executive working for each company. Thus, performance indicators are limited to perceptual data.

Design of the Study

This study extends Denison's (1995) corporate culture and effectiveness study. It uses Denison's Organizational Culture Model and questionnaire to examine the culture-performance relationship. This study samples different sized companies. The large companies came mainly from Fortune 500 companies, which are among the largest companies in the USA. Taiwan counterpart to the Fortune 500 is called Common-Wealth 500/1000 that lists the largest companies in Taiwan.

Summary

In this section, some critical points, including research motives, study approaches, research questions, scope and limitation, framework and study design were introduced. Starting from the author's empirical experiences in a merged company, and later being attracted by some excellent corporate culture researchers' work, the idea for this dissertation was born. The distribution of the study will extend the culture and performance study to more countries. Previous research on corporate culture and performance was gathered when researchers interpreted the results gained from completed questionnaires. Researchers were subject to interpret the results from their own viewpoints instead of the participants'. This study will attempt not to be trapped into the same drawback.

Two research questions were described in this section. The main ideas of the two questions were gleaned from Hofstede's (1988) doubt on the application of theories developed based on samples in the U.S. This study expands Denison's model to non-U.S. companies. If not totally fit like in U.S., this phrase needs to be clarified. Although their may be differences between the U.S. and Taiwan organizations, this the study hopes to find the differences so that managers and academic researchers can better understand how to transform corporate culture into an effective tool to benefit organizations.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this study is to examine the linkage between corporate culture and corporate performance in companies in the U.S. and Taiwan. This review of the literature on organizational culture first describes early attempts to define the construct and to understand its relationship to organizational performance. Then, the review focuses specifically on Denison's development of an organizational culture model and his scales and performance measures. In addition, this chapter identifies the major streams of research, some controversial viewpoints, and the research designs used to examine the corporate culture and effectiveness. This chapter consists six sections: (1) Introduction, (2) Definition of terms, (3) Culture and Climate, (4) Corporate Culture and Effectiveness Literature Reviews, (5) Denison's Organizational Model and applications, (6) Conclusion.

Introduction

Culture is an abstract concept, not a physical thing; a concept is created in people's minds, and is also a concept that can be defined and refined (Ott, 1989). Corporate cultures differ within the same organization. Kroeber and Kluckhohn (1952) found 164 different definitions of culture from their search of literature. Since the culture is a concept, different definitions of culture may result in different perceptions of corporate culture in people's minds. Schein (1985) classified organizational culture into three levels from visible to invisible. They are: (1) basic assumption, (2) values and artifacts and (3) creations. Culture has long been assumed to have an important influence on an individual's reactions to organizational life (Harris & Mossholder, 1996). By the 1990's, the concept of organizational culture became a 'household word' in organization theory and practice, due largely to the emerging dominance of non-Western economies, notably Japan

(Altman & Baruch, 1998). Research on corporate culture encompasses a wide variety of different approaches and methods, including case study (Deshpande & Farley, 1999), culture change (Green, 1998; Tushman & O'Reilly, 1996), comments (Hitt & Ireland, 1998), environment (Boeker & Goodstein, 1991), Ethics (Brigley, 1995); general concept (Buskirk & McGraph, 1999; Denison & Mishra, 1995; Hofstede, 1998; Pettigrew, 1979; Rousseau & Cooke, 1988; Schein, 1985, 1988, 1993, 1996; Schulz 2001; Silverweg & Allen, 1976; Wiener, 1988), and performance (Atkinson et al., 1997;Calori & Sarnin, 1991; Rousseau, 1990; Schulz & Hauck, 2001; Shipchandler & Moore, 2000; Shoham, 1999; Wilkins & Ouchi, 1983; Zeller, 1998). Culture and effectiveness research is still young: it has proliferated for the last 20 years (Ouchi & Wilkins, 1983). However, empirical studies on the topic are still needed (Denison & Mishra, 1995).

For the past 50 years, researchers in sociology, anthropology, and social psychology have found that culture plays a critical function in a social organization. Claims that culture is a key to profitability have proliferated in the scholarly as well the popular literature on organizations. Sociologists and social psychologists, like Weber (1930), Mead (1934), and Radcliffe-Brown (1952) viewed culture as a tool for integrating functions of society. They perceive culture as helping organizations adapt to society.

Definition of Terms

This section defines corporate culture and corporate performance. Corporate Culture is a characteristic of the organization, not of individuals; however, the measure of organizational culture is emanates from individuals. Although Blake and Mouton (1964:169) identified "organizational culture" as the aspect of organization necessary managing a company, the current popularity of corporate culture started in the 1980's (e.g., Deal & Kennedy, 1982). Many

definitions emerged from previous corporate culture research (Schein 1985/1992; Kluckhohn, 1951). Most researchers define culture as that which is shared, although they differ considerably concerning what it is that is shared (Siehl, 1988). Still, there is no consensus on the definition of corporate culture and culture (Hofstede et al., 1990). Kroeber and Kluckhohn (1952) identified 164 meanings of the word, "culture." Organization culture has been defined as shared meanings (Louis, 1985), central values (Barney, 1986; Broms & Gahmberg, 1983), assumptions (Dyer, 1985; Schein, 1985), and beliefs (Davis, 1984; Lorsch, 1987). However, some researchers' efforts to define corporate culture are worth mention here. Kluckhohn (1951) defines culture as "a system of explicit and implicit design for living" (p.87).

Schein's (1985) definition of organizational culture, accepted by many researchers (Calori & Sarnin, 1991), is "A pattern of basic assumptions-invented, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration- that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems"(p. 9). Corporate culture is a set of shared values/assumptions believed by all the organizational members to be valid for solving problems. Also, culture must be shared and learned (Titiev, 1959). Schein (1990) also describes corporate culture as the values and behaviors that create success and are taught to newcomers. Hofstede (1991: 262) defined culture as "the collective programming of the mind which distinguishes the members of one organization from another. This study uses Schein's (1985) culture definition to define corporate culture. Hofstede et al. (1990) examined 20 companies in Denmark and the Netherlands, and identified six characteristics of corporate culture. They are: (1) holistic, (2) historically determined, (3) related to anthropological concepts, (4) socially constructed, (5) soft, and (6) difficult to change. They indicated that the six factors should be useful in identifying the main concepts of corporate culture in a variety of situations.

Based on the above definitions developed over the past 20 years, it is clear that corporate culture embodies, and is a significant determinant of, beliefs, values, attitudes, and behavior in organizations (Buono et al., 1985). Identifying the basic values and underlying assumptions in an organization can thus be regarded as corporate culture study (Schein, 1988). Based on the separately developed culture definition, the past research studied culture through relatively observable phenomena, such as a formal structures and responsibilities, informal behavioral patterns, and symbolic artifacts, such as rituals. Other studies focus on the values, meanings, and interpretations that underlie the more easily observable phenomena. Still others seek fundamental, pre-conscious assumptions (Schein, 1985), hidden symbolic meanings, or other aspects of deep interpretations.

Corporate culture is a key ingredient in a successful company (Cameron & Quinn, 1999). Most organizational scholars recognize that organizational culture has a distinct effect on the long-term effectiveness and performance of organizations (Cameron & Quinn, 1999). Cameron and Quinn (1994) repeat that successful companies can be distinguished from other companies on the basis of having a distinctive and identifiable company culture. They state, "The major distinguishing feature in these companies, their most important competitive advantage, the most powerful factor they all highlight as a key ingredient in their success, is their organization culture" (p. 4). Cameron and Quinn (1994) emphasize that every successful company develops its own unique corporate culture. They continue:

> Simply stated, successful companies have developed something special that supersedes corporate strategy, market presence, or technological advantages. Although strategy, market presence, or technology is clearly important, highly successful firms have capitalized on the power that resides in developing and managing a unique corporate culture. (p. 4).

Some researchers stress the importance of strong vs. weak as another way to understand the construct of culture (Denison, 1982; Saffold, 1993). Strong culture can be seen when members of

an organization widely share norms and practices based on a consensus, and when they use these as a basis for shooting trouble situations. Through survey data, strong culture can be recognized from the difference of variance score at the organization level. An organization with strong culture will be the one whose variance score is lower. A low variance score implies high consistency, common practices throughout the organization, and a widely shared conception of the way things are done within a particular organization. This implies that ideals, and the degree to which they are commonly understood, should have a direct impact on organizational performance. In summary, there still is no consensus on the meaning of corporate culture, and the methodologies used to study it. Corporate culture can still be identified and diagnosed with a number of different dimensions.

Corporate Performance

The definition and operational ability of performance has been less problematic (Siehl, 1988). Researchers in both arenas generally measure performance with financial ratios. For example, the four standard ratios frequently most utilized in research include return on assets, return on equity, return on sales, and earnings per share (Siehl, 1988). Past research demonstrates that there are many ways to assess performance ranging from qualitative factors, like employee satisfaction, to quantitative variables, like shareholder wealth (Cameron, 1986). Financial indices are used extensively to measure organizational performance (Denison 1982, 1995). However, there is also an inherent paradox of the performance measurement. It involves "whose performance" (Blau & Meyer, 1971) as different stakeholders have different definitions of performance or effectiveness, and hold different and incomparable standards (Cameron & Whetten, 1983).

Hansen and Wernerfelt (1989) studied the determinants of firm performance by comparing economic factors and organizational factors. They tested three performance models, which were: (1) economic model, (2) organizational model and (3) myriad model. They used accounting rates of return as the measurement of performance. They found that organizational factors can explain a firm's profit twice as much as economic factors. Other researchers used other measures. Hansen and Wernerfelt (1989) used profitability/return-on-asset, market share, and employee satisfaction; Klein (1992) used sales growth; Sagie (1994) used employee satisfaction; Huselid (1995) used market share and employee satisfaction, and Klein (1995) used quality. Lawler, Morhrman, and Ledford (1995) used return-on-assets; Petty and Beadles, et al. (1995) used overall organizational performance; and Denison and Mishra (1995) used quality. The approach of using one item to measure the different factors associated with performance could be questioned in terms of validity and/or reliability.

Other organizational characteristics have been found to be related to performance. A firm's size was found to impact performance negatively (Porter, 1987; Rumelt, 1982). Additionally, the performance and quality of managers are critical to changing employees' behavior and the performance of the organization (Hansen & Wernerfelt, 1989). Research also suggests that managers can change the behavior of their employees and thus enhance the performance of the organization by altering the formal and informal organizational structure, reward systems, etc.

In summary, both financial and non-financial factors have been found to impact a firm's performance. While both can represent a company's performance, it is important to identify whose performance is being measured in order to assure accuracy.

Culture and Climate

Historically, research on climate appeared earlier than that on corporate culture. The term, "corporate culture" emerged in one periodical in the USA in the early 1980s. Culture and climate are related constructs (Glick, 1985; James & Jones, 1974; Lundberg, 1982; Schein, 1985, 1990). Much of the organizational research to date on "culture study" should be regarded as climate research because it is difficult and time consuming to dig out the real corporate culture (Siehl, 1988). Quinn (1988), in a similar vein, believes that most of the previous corporate culture research should be considered climate study. Both organizational climate and organizational culture focus on behavioral characteristics common to an entire system (Denison, 1982); thus, although the current culture research studies focus on climate factors, they can still be considered culture studies. Taylor and Bowers (1972) argued that organizational climate is a "concrete phenomenon reflecting a social psychological reality, shared by people in the organization, and having its impact on organizational behavior" (p. 62).

Denison (1995) provided one of the best discussions on the distinction between climate and culture. He examined previous research on culture and climate, and noted similarities between the two while also emphasizing that one must distinguish between the two. He viewed organizational climate as a system-level attribute (Denison, 1982). He argued that the difference between culture and climate derives from the perspective one takes rather than from the phenomenon itself. He found that there were many similarities between the two. Culture and climate share a common ground in terms of describing and explaining existing relationships among groups of people who share the same experiences and value system within an organization.

Although there are similarities, the two concepts are different and derive from different sources. Culture researchers derive their methods from anthropology, and climate researchers derive their methods from psychology. Table 1 compares culture and climate.

Table 1
Comparison of Culture and Climate

Focus	Culture	Climate
Epistemology	Contextualist	Nomothetic/comparative
Point of View	Natives'(via researcher)	Researcher's (via native's)
Methodology	Qualitative	Quantitative
Concern	Values and Assumptions	Consensus of Perceptions
Theoretical Foundations	Social Construction/Critical Theory	B = f (P X E)
Discipline	Anthropology/Sociology	Psychology

Source: Payne, 1997.

Culture research is generally more accurate and deeper than climate research. Climate research is more generalized and less accurate than culture research. However, climate research can still provide useful descriptions of an organization's situation and can also provide comparisons among organizations (Payne, 1997). Thus, it is reasonable to regard the study of climate as a legitimate way to study culture.

There are different definitions from previous researchers (Denison 1992; Schein, 1988). For example, Schein (1988) defines climate as, " a culture artifact resulting from espoused values and shared tacit assumption."

Climate research related to performance. Many researches have found organizational climate to be directly linked to organizational performance (Denison, 1982; Likert, 1961; Simmons & Mares, 1983). According to Denison (1982), climate measure was more appropriate at the organizational level than department level or group levels. Denison developed his " Denison Organizational Culture Questionnaire" in 1995 based on climate factors. He found a relationship between climate factors and corporate performance.

Corporate Culture and Performance Review

Previous corporate culture research focused on socialization (Chatman, 1991; Van & Schein, 1979) and change (Kotter & Heskett, 1992; Schein 1985; Wilkins & Ouchi, 1983). However, little attention was given to the linkage of corporate culture and effectiveness (Denison & Mishra 1995). Hence, additional empirical research is necessary.

Existing research on the link between culture and financial performance is frequently contradictory (Calori & Sarnin, 1991; Sihel & Martin, 1988). Much empirical research demonstrates that organizational culture has a powerful effect on enhancing organizational performance (Cameron & Ettington, 1988; Denison, 1990; Trice & Beyer, 1993). The earliest studies on culture and performance were the Hawthorne studies (Ashkanasy and Holmes, 1995). Research indicates that strong culture can improve firm performance (Sorensen, 2002). Sorensen analyzes how significantly culture influences firm performance by facilitating within companies internal learning behavior under stable and volatile environments. He concludes that strong culture can produce superior firm performance when the external environment is stable. However, strong culture will have no effect on the firm performance if external environments are volatile. According to Jaques (1951), if the culture is not congruent with organizational structure and environment, culture will be a barrier to productivity.

In the 1970s, the emergence of successful Japanese firms focused researchers' attention on the influence of corporate culture on performance. Many researchers argued that a strong emphasis on the aspects of human relations, skills, style, and subordinate goals would result in higher performance (Siehl, 1988). Silverzweig and Allen (1976) used case methodology to study the cultural change process. They picked eight companies that suffered financial losses and tried to discover how the cultural component influenced those losses. They found that the performance

of six of the eight firms improved after changes in their culture. In using previous performance as a source of data, Silverzweig and Allen and contributed to a better understanding of the relationship of culture to performance. Ouchi and Johnson (1978) presented an in-depth portrait of the culture of two companies. They demonstrated with a stratified, random sample of careful interviews and observations that a particular theoretically derived set of humanistic values was shared in one company and not in the other.

In 1982, Peters and Waterman, in their book titled In Search of Excellence, studied the differences between high and low performance companies. They found that companies with adaptive and humanistic cultures achieved superior high performance. On the other hand, companies with pure technical and rational approaches were less likely to achieve high performance.

Deal and Kennedy (1982) argued that shared values could enhance organizational performance. They found that employees who are more open to and accepting of change exhibited greater adaptability. Ouchi and Wilkins (1983) compared the impact of the corporate culture and clan culture to organizational performance. In their study, the concept of culture was from a paradigmatic view, was called a clan. They argue that each company develops its distinct culture, and that local culture significantly affects performance efficiencies under some conditions. Carroll (1983) criticized some of the categories in Peters and Waterman's study.

Denison (1984) studied a sample of 34 firms, collecting a number of financial performance measures, including return on investment, return on sales, and performance against competitors for a five-year period. The companies in the sample were "self-selected." The client organizations volunteered to get involved in the social research initiated by the University of Michigan's Institute at some point between 1966-1981. Unfortunately, the measures of a "strong" culture were inadequate. Cultural data were obtained from the " Survey of

Organizations." This survey, a 125 item standardized questionnaire, was administered to 43,747 employees at varying levels of the participating companies' hierarchies. Employee responses were averaged into 22 indexes. The index scores were then averaged to obtain a score for the entire organization. The index that was correlated with performance was the decision-making practices index. These measures assessed the perceptions of employees about the level of participation in the organization. As Denison states, one cannot conclude from the data that characterizing the cultures of Company X and Y as participative means the same thing to members of both companies. It is noteworthy that Denison found that companies in a widely-shared participative culture, had superior returns on investment and sales.

Gordon (1985) examined the direct version of the culture-performance argument. He sampled 14 utility companies (electric, gas, and local telephone) 18 manufacturing firms, and 31 financial institutions (banks and insurance companies). Cultural data were collected from top managers of the firm, including four or five levels of management from the CEO down. Culture was measured by obtaining the perceptions of top managers about the value system of their companies. Questions were asked about 11 values, including clarity of company direction, innovation, top management communication, individual initiative, action orientation, and human resource development. A comparison was made between a company's performance data and the industry's average performance (profitability and growth) for the same years. High performing companies were contrasted with low performing companies. The results showed that there were virtually no significant differences between the low and high performers of the three industries for any of the 11 values. Only one difference was found to be significant at the .01 level. However, this study is plagued by many of the same problems and shortcomings described above, such as culture having been equated with externally exposed values. In addition, the opinions of

a small number of non-randomly selected high-ranking managers were implicitly taken as indicative of the opinions of lower ranking members of the organizations.

Martin and Siehl (1988) randomly selected 100 organizations from the 1980 Fortune Directories of the 500 largest U.S. industrial corporations. A systematic content analysis of the photographs and texts of these firms' annual reports produced measures of the extent to which the top management of the firms externally espoused 10 types of values. These value profiles were used as input for a cluster analysis, which yielded seven distinct clusters. Unlike Denison, no claim was made or implied that these externally espoused values represent all aspects of the culture for all members. They used four measures of financial performance (return on assets, return on equity, return on sales, and earnings per share) at only one point in time. Control variables often associated with performance (such as firm size, market competitiveness, industry) were also included. Results showed relatively little support for this second, more limited version of the culture-performance argument, with one significant exception. Socially responsible firms had significantly higher performance levels than the firms emphasizing their economic well-being. These results for the economy cluster are congruent with the findings of previous attribution studies of annual reports. The results of this study suggest that any direct association between externally espoused values and financial performance may be relatively weak. Further, these results indicate that the direction of causality may be reversed. Financial performance levels may cause certain values to be externally espoused.

Hitt and Ireland (1987) studied 185 Fortune 1000 type industrial firms, including 14 of the firms studied in Peters' research. Hitt and Ireland found that the firms that Peters and Waterman found to be superior achievers did not perform better than the other companies. Saffold (1988) found that the organization models were not adequate for studying the relationship between

culture and performance (C-P). He suggested that more sophisticated models needed to be developed to better investigate the relationship.

Siehl and Martin (1990) agreed with Saffold's (1988) argument and indicated that the C-P link approach could not be substantiated and that there were methodological problems. In 1990, numerous C-P link research and surveys emerged. However, many of these used only quantitative methodologies, such as studies by Marcoulides and Heck (1993) and Wilderom and Berg (1998). They also lacked evidence of validity for the central variables. Furthermore, there were ambiguities surrounding the C-P relationship, the number of participants in the studies, and sufficient representative participation in the studies.

Several researchers indicate that satisfaction is perceived as a key dependent variable in incorporating personal belief into corporate performance (Ferrell & Grsham, 1985; Herndon et al., 2001). Since 1990, the effect of national culture on corporate performance has attracted the attention of researchers (Hofstede et al., 1990; Herndon et al., 2001). In Dr. Hofstede's study, 64 IBM subsidiaries were surveyed on their perception of a corporate culture. This research, in which IBM's branch office staffs were surveyed, found that the culture at IBM headquarters did not influence the perception of corporate culture throughout IBM's subsidiaries. However, Herndon el al.'s study, which examined the moral values and ethical content of corporate cultures in Taiwanese versus U.S. sales people, found that the culture at headquarters could influence corporate performance, thereby, influencing corporate ethical values. Herndon et al. (2001) defined corporate ethical values as a central dimension of corporate culture that guides service quality, product development and customer treatment. They found that national, i.e., headquarters, culture could influence corporate culture when the corporate culture was not strong.

Some researchers studied industry characteristics and organizational culture and found that industry characteristics influence organizational culture (Chatman & Jehn, 1994). Others focused

on the interactions among powerful members or group members in various processes (Boeker, 1989; Schneider, 1987). Many, such as Chatman and Jehn (1994), found that the performance of an organization affects the corporate cultural features.

Many cultural researchers agree that the envisioning of shared values in an organization is critical to the enhancement of service quality, productivity, and organizational change in clients' eyes (Chatman & Jehn, 1994; Kotter & Heskett, 1992). This belief is consistent with Denison's Culture and Effectiveness Model (Denison & Mishra, 1995).

Many economic and organizational theorists apparently believe that culture is epiphnomenal or irrelevant to an understanding of organizational performance (Wilkins & Ouchi, 1983). There is a range of organizations for which the local organizational culture is the dominant form of control. There is also, a level-of-analysis problem to be dealt with, i.e., some unit of a formal (bureaucratic or market form) organization which might develop a unique form of control to help perform transactions efficiently within the unit, yet to the detriment of the larger, non-clan association (Wilkins & Ouchi, 1983). This realization helps to deal with the role of organizational "counter cultures" or bifurcated interests (Selznick, 1957), where it is necessary to measure both the performance of the overall organization, and the performance of the subunit in terms of its own objectives and within-unit transaction costs (Wilkins & Ouchi, 1983). Having a general theory linking organizational performance and clan or culture is important to organizations.

Some aspects of organizational culture will presumably be irrelevant to performance. Some forms of culture will promote and some will inhibit efficient operation, depending on the theoretical linkages being described or explored. The development of insights and theory on the application of culture to organizational functioning is critical if we are to make use of the concept of culture to understand organizational performance (Wilkins & Ouchi, 1983).

The idea that humanistic reforms will eventually have financial benefits is not new, but firm empirical support for the idea has remained elusive (Siehl, 1988). Ouchi and Johnson (1978) presented an in-depth portrait of the culture of two companies, demonstrating with a stratified, random sample of careful interviews and observations that a particular theoretically derived set of humanistic values was shared in one company and not in another company. The financial performance of the humanistic company was shown to be superior.

Calori and Sarnin (1991) studied five French business companies operating in mature industries with a differentiation strategy. They found cultural intensity, homogeneity and other cultural attributes to be related to firm growth..

The relationship between culture and performance was also examined in England. Appiah-Adu & Singh (1999) surveyed 500 service firms on the relationship between marketing culture and performance. They interpreted marketing culture as having six dimensions: (1) service quality, (2) interpersonal skill, (3) selling task, (4) organization, (5) innovation and (6) internal communication. They also identified three performance indicators: (1) customer satisfaction, (2) customer retention and (3) ROI. They found that the marketing culture can be used to explain company performance. Different marketing cultures are related to different types of company performance. For instance, service quality and interpersonal skills are linked to ROI.

Appendix A summarizes empirical studies from 1990 to 2002 found on the relationship between corporate culture and corporate performance. Some of the studies are described in greater detail below. Gordon and DiTomaso (1992) investigated culture strength and two substantive cultural values linked to corporate performance. They surveyed 11 U.S. insurance companies in 1981 on financial data, such as asset and premium growth for six years (from 1982 to 1987). Their findings revealed a culture of adaptability related to two and three subsequent

years performance. Their findings supported Denison's finding on the positive relationship between culture and short-term performance.

Denison and Mishra (1995) developed and tested a four-trait culture and effectiveness model. The four traits are involvement, consistency, adaptability, and mission. Seven hundred sixty four organizations were involved in this study with 764 CEOs giving their perceptions of the four traits and with subjective and objective measurements of effectiveness. Denison and Mishra found that all the four traits were strong predictors of subjectively rated effectiveness measures.

On an empirical level, there is increasing interest in the integration of functionalist and phenomenological approaches to culture and effectiveness research (Denison & Mishra, 1995). More and more research integrates qualitative and quantitative approaches on studying culture and effectiveness (Denison 1990; Jermier et al. 1991; Hofstede et al., 1990; Siehl & Martin 1988).

Culture researchers who studied a link to organizational performance, unfortunately, focused primarily on narrow, relatively superficial, and potentially misleading aspect cultural manifestations namely espoused values. Obviously, the more a value statement is constructed by someone else other than a respondent, and the more the audience is external, the more self-presentational and socially desirable biases are likely to influence the expression of espoused values. Researchers seeking a link between culture and performance have focused primarily on externally espoused values by using value descriptions formulated by the researcher rather than by members of the culture.

This section describes previous research on culture and effectiveness. The research on corporate culture had a lack of comparison groups to provide evidence that companies with different traits induced different levels of performance (Carroll, 1983; Saffold, 1988). The next section describes Denison's model and its application in research from 1995 to the present.

Denison's Organizational Model and Applications

Denison (1982) used an existing social research database at the University of Michigan, called SOO, to initiate his research on the linkage between corporate culture and corporate performance. He categorized the behavior variables on the basis of a literature review, and he added financial ratios drawn from the S&P's COMPUSTAT Financial Service. In his 1982 dissertation, Denison used climate instruments to study the linkage between corporate culture and corporate performance. He found that behavior data can predict long-term performance. He set the year 1981 as year 0 and integrated behavioral data from the SOO and financial data from S&P Statistic Service and used a cross-sectional design to compare behavior and performance for five years before and after year 0. He found that behavior is positively related to performance, and that the relationship exhibits a trend. Two or three years before the year 0, the performance was usually in a peak position. At year 0, the performance was down to a concurrent relationship. After year 0, the relationship remains 0 or slightly negative for the year +1 and year +2. From year +3 and year +5, the relationship is raised vividly. In summary, Denison (1982) found that the corporate culture will positively influence the company's long-run performance.

Denison's (1982) dissertation mainly tested whether organizational level or behavior items are better predictors of performance. He derived 17 financial measures from S&P COMPUSTAT Financial Service and then calculated a set of financial ratios to measure organizational effectiveness, financial health and performance. Companies with both behavior data and financial data available constituted his sample. He found that behavior had a two-to-three year delayed effects on performance.

After screening the data match result, only 34 companies were included in the study. All the individual and group level data were aggregated for comparing organizational level to performance. Satisfaction was a good performance indicator against competitors. Group

functioning was a good predictor of concurrent performance (<.20 with some small negative relationship) and also a moderate performance predictor over the medium time. Job reward, job clarity and peer leadership measures were the best indicators of concurrent performance.

Denison's (1982) study assumed that culture strength was comprised of two components, which were consistency of management and organizational conditions. Based on this assumption, Denison (1982) developed his first hypothesis: strong organization culture would have a positive impact on corporate performance. Also, he assumed that symbolic or idealized organizational features of an organization would be related to organizational performance. Denison found the climate measure to be very reliable for estimating the behavior-performance link. He also found that a high degree of control system had no effect on concurrent performance; however, the effect would initiate a strong, positive, long-term benefit after three years. He also found climate indexes to be good predictors of future performance. This finding implies that certain values, norms, and patterns of behavior could make a positive contribution to the effective functioning of a variety of organizations.

Based on Denison's (1990) theory, involvement and consistency were likely to predict qualitative perceptions of performance such as quality and employee satisfaction; adaptability and mission were likely to predict financial perceptions of performance, such as sales growth and market share. Denison has studied the linkage between corporate culture and effectiveness since 1985. In 1990, Denison initiated a study involving 43,747 employees within 6, 671 work groups. Thirty-four firms from 25 different industries were selected to compose this culture-performance research. Based on this study, Denison developed his culture and effectiveness theory and model. Four dimensions comprise organizational culture: (1) involvement, (2) consistency, (3) adaptability and (4) mission. Also, three sub-scales compose each of the four culture traits. Brief descriptions of the four hypotheses in Denison's culture and effectiveness study follows:

The Involvement Hypothesis: The involvement trait shows an organization's capacity to build human capability, ownership and responsibility. High involvement encourages members' participation in decision-making and creates a sense of ownership and responsibility. When an organization receives more input from its members, the quality of decision-making improves and the members' commitment to the organization is stronger. Under this concept, all of the employees are regarded as managers. High levels of participation instill within them a sense of ownership and responsibility. There are three component indices comprising the involvement trait: (1) empowerment, (2) team orientation and (3) capability development. Three sub-scales follow.

Empowerment: Individuals are authorized, encouraged and equipped with the capability to manage their own tasks. Empowerment makes individuals feel ownership and responsibility for the organization, and create a stronger sense of commitment to the organization. In Denison's questionnaire, questions 1 through 5 will be used to evaluate the extent of empowerment. For example, " Most employees in this organization are highly involved in their work." (Item 1).

Team Orientation: A company values a team operation. The company relies on team members' mutual accountability and cooperation. In Denison's questionnaire, questions 6 through 10 are used to evaluate the degree of team orientation. For instance, " Cooperation and collaboration across functional roles are actively encouraged in this organization." (Item 6).

Capability Development: For maintaining competitive advantages and matching business needs, the company continues investing resources on development of employee's skills. In Denison's questionnaire, item 11 through 15 are used to measure the capacity development. For instance, " This organization delegates authority so that people can act on their own." (Item 11).

The Consistency Hypothesis: The management team can achieve the right level of coordination and integration if belief and values central to an organization are closely aligned with actual policies. If the management system can achieve high levels of coordination and integration, the organization can have a stronger capability to facilitate the decision making process. Three sub-scale items are described below.

Coordination and Integration: The organization puts values on teamwork. Different units contribute different functions to an organization. For achieving common goals, different units and departments should be able to work together to reach the same goal. In Denison's survey, items 16 to 20 are used to diagnose this scale. For instance, item 16 states, " Our approach to doing business is very consistent and predictable."

Agreement: The organization should be able to reach agreement in any critical situation. This part should include the ability to get past the value difference in different departments when the differences happen. Items 21 to 25 in Denison's survey are used to evaluate the scale. For instance, item 21 states, " When disagreements occur, we work hard to achieve "win-win" solutions."

Core Value: The core value can build in members' minds a set of expectations about the organization. Survey items 26 to 30 of Denison's survey are used to evaluate core value. For instance, item 26 says, " There is a clear and consistent set of values in this company that governs the way we do business."

The Adaptability Hypothesis: Three aspects of adaptability can impact an organization's effectiveness: (1) the ability to perceive and respond to the external environment, (2) the ability to respond to internal customers, and (3) the ability to react to external or internal customers' inquiries about restructuring the organization. The three sub-scales are described below.

Creating Change: This sub-scale shows an organizational ability to adapt changing needs. This one can be used to evaluate an organization's ability to adapt to the current and future changing needs. Survey items 31 to 35 are used to diagnose this dimension. For instance, item 31 states, " This organization is very responsive and changes easily."

Customer Focus: The strength of the indicator reflects an organization's ability to satisfy its customers' needs. Survey items 36 to 40 are used to measure this scale. For example, item 36 says, "Customer comments and recommendations often lead to changes in this organization."

Organizational Learning: This scale can reflect an organization's learning ability on how to interpret marketing signals from the environment and transform them into opportunities for encouraging innovation. Survey items 41 to 45 are used to measure this scale. For instance, item 41 says, "This organization encourages innovation and rewards those who take risks."

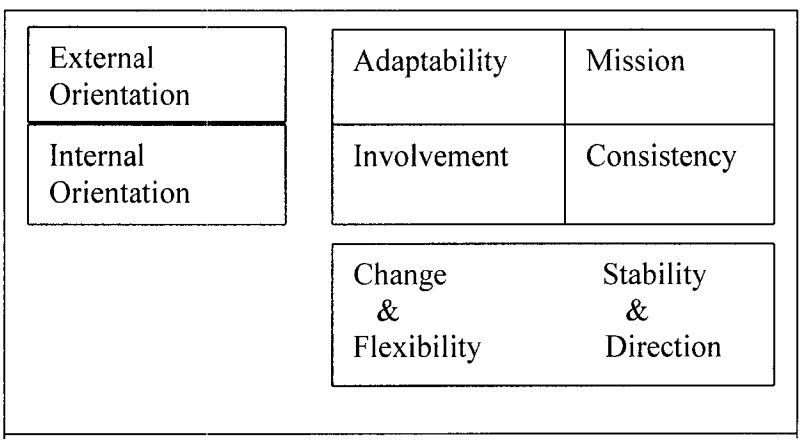
The Mission Hypothesis: A mission provides meaning and purpose by defining the social role and purpose of the organization in the business world. Mission statements can define employees' roles and refine staff's desired behavior. Through the internalized process, the behavior of employees is given norms for handling internal and external customers. This process contributes to commitment and leads to effective performance. The three sub-scales are described below.

Strategic Direction and Intent: Clear strategic direction can assist individuals in knowing what to contribute to their organization's purpose and mission statement. An organization with clearer strategic direction and intent will be more able to "make the mark" in its industry. In Denison's questionnaire, items 46 to 50 are used to measure the degree of strategic direction and intent in an organization. For example, item 46 says, " This organization has a clear mission that gives meaning and direction to our work."

Goals and Objectives: A clear goals and objectives can provide employees with a clear direction for their work, and can be linked to mission and vision. Items 51 to 55 are used to evaluate the extent of goals and objectives in an organization. For example, item 51 states, " There is widespread agreement about the goals of this organization."

Vision: Organizational vision can provide employees with guidance about the future direction of their organization. Vision is a shared view from the organization's members about a company's desired future state. Thus, vision can reflect an organization's core values, assumptions and members' desired future image for the organization. In Denison's questionnaire, items 56 to 60 are used to survey the extent of vision in an organization. For instance, item 56 states, " We have a shared vision of what this organization will be like in the future."

Figure 1
The Denison Culture and Effectiveness Model.



Source: Denison, D.R. and Neale, W.S. Denison Organizational Cultural Survey: Facilitators Guide, 1996, p. 15.

Denison's model can be explained vertically and horizontally. Horizontally, the model shows that involvement and consistency contribute to the dynamic of the internal environment but not to the external environment. Adaptability and mission mainly relate to the external environment.

Vertically, the model shows that involvement and adaptability relate to the ability of the organization to change and be flexible. Mission and consistency can bring stability and direction to the organization.

Most culture and effectiveness researchers emphasize the characteristics of paradox and contradiction in an organization (Lewin & Minton 1986; Mitroff, 1984; Quinn, 1988). Denison's model shows logic similar to the other culture and effectiveness models, such as, Quinn's competing values model. Quinn (1988) developed the competing values model to describe the importance of balancing competing demands in a modern complex organization. Quinn thought a situation of competing needs exists in organizations, and that effective organizations are able to balance the competing needs of all members within the organization. Denison's framework follows a similar logic. For instance, to some extent, mission and involvement are contradictory with each other (Denison and Mishra 1995). High involvement among an organization's members does not necessarily get direction from the mission statement. On the other side, the declaration of mission statement does not necessarily require high involvement of members.

Table 2
Denison's Four Organizational Culture Traits and components

Trait	Index	Function
Involvement		Building human capability, ownership, and responsibility
	Empowerment	Creates a sense of ownership and responsibility toward the organization.
	Team Orientation	Value is placed on working cooperatively toward common goals for which all employees feel mutually accountable.
	Capability Development	The organization continually invests in the development of employee's skills in order to stay competitive and meet ongoing business needs
Consistency		Defining the values and systems that are the basis of strong culture. Consistency provides a central source of integration, coordination and control. Develop a mindset and a set of organizational systems that create an internal system of governance based on consensual support. They have highly committed employees, key central values, a distinct method of doing business, a tendency to promote from within, and a clear set of do's and don't. Consistency creates a " strong" culture based on a system of beliefs, values, and symbols that are widely understood by members of an organization. Implicit control system and explicit rules and regulation ---- achieving coordination and integration. ---- become an effective organization.
	Core Values	Members of the organization share a set of values which create a sense of identity and a clear set of expectations.
	Agreement	The organization is able to reach agreement on critical issues. This includes both the underlying level of agreement and the ability to reconcile differences when they occur.
	Coordination and Integration	Different functions and units of the organization are able to work together well to achieve common goals.
Adaptability		Translating the demands of the business environment into action. Three aspects of adaptability impact an organization's effectiveness. ■ the ability to perceive and respond to the external environment ■ the ability to respond to internal customers ■ the ability to restructure and re-institutionalize a set of behaviors and processes that allow the organization to adapt.
	Creating Change	The organization is able to create adaptive ways to meet changing needs.
	Customer Focus	The organization understands and reacts to its customers, and anticipates customers' future needs. This reflects the degree to which the organization is driven by a concern to satisfy its customer.
	Organizational Learning	The organization receives, translates, and interprets signals from the environment into opportunities for encouraging innovation, gaining knowledge and developing capabilities.
Mission		Mission defines a meaningful long-term direction for the organization. A mission provides purpose and meaning by defining a social role and external goals for the organization. A sense of mission allows an organization to shape current behavior by envisioning a desired future state. Success is more key when individuals and organizations are goal directed.
	Strategic Direction & Intent	Clear strategic intentions convey the organization's purpose, and make it clear how everyone can attribute, and " make their mark" in the industry.
	Goals & Objectives	A clear set of goals and objectives can be linked to the mission, vision, and strategy. These can provide everyone with a clear direction to their work.
	Vision	The organization has a shared view of a desired future state. It embodies core values and captures the hearts and minds of the organization's people, while providing guidance and direction.

Source: Denison, D.R. and Neale, W.S. Denison Organizational Cultural Survey: Facilitators Guide, 1996.

Denison's (1995) Organizational Culture Model links corporate culture to effectiveness as indicated in Figure 2.

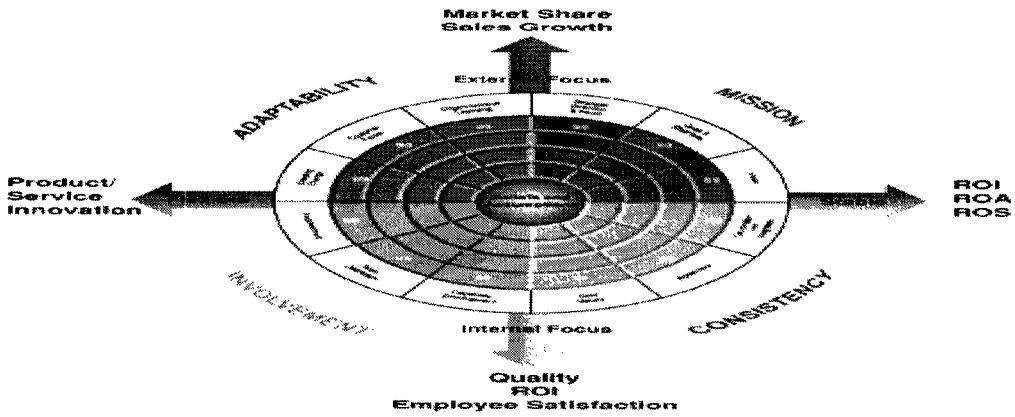


Figure 2: Linkage of Denison organizational culture to effectiveness measurement
Source: Denison Organization Culture Survey Facilitator Guide, p. 2-5.

Denison developed his model by starting with five case studies in 1995. Using interviews to identify all the possible components of corporate culture found in these five case studies. The model has been used to verify the relationship of corporate culture and corporate performance in different industries and sections (Cooper, 2000; Denison & Mishra, 1995; Fisher, 1997). Denison's original study on the culture and performance relationship in 1982 used a database established by the University of Michigan called SOO. Using an in-depth interview approach and analyzing company documents and practices of companies, he picked selected companies for a case study to support his findings on the relationship between corporate culture and corporate performance. In 1995, Denison surveyed 764 CEOs from 764 companies to develop the Denison's culture and effective model and questionnaires for diagnosing corporate culture. The questionnaire has 60 items for identifying the perceptions of corporate culture, with four culture traits, adaptability, mission, involvement, and consistency. Each culture trait is explained by

three variables. Five items measure each variable. Thus, the 60-item questionnaire can be used to measure the four culture traits based on 12 sub-scales.

After developing the theory of corporate culture and effectiveness in his 1982 dissertation, Denison applied the theory in developing the culture and effectiveness model in 1995 based on survey data from 764 CEOs of 764 industries in 1995 (Denison & Mishra, 1995). He reported that the four culture traits are positively related to CEO's perceptions of performance. He also found the four culture traits to be positively related to objective performance such as sales growth and return on asset (Denison & Mishra, 1995). In this two-stage study, Denison and Mishra first examined five companies to identify culture traits and links to effectiveness. In a second quantitative phase of the study, 764 CEOs recorded their perceptions of organizational culture traits and corporate performance. Objective performance measurements were then used to explore the culture traits and corporate performance relationships within these companies.

In developing performance indicators used to measure effectiveness, Denison surveyed 674 managers to determine whether the model's performance indicators were measured with which managers were familiar. He asked managers to rate their organizations on the five indicators listed in the table below, and he then calculated the correlation. The results are shown in Table 3.

Table 3
Correlation Coefficient between Culture Traits and Performance Perception

	Sales Growth	Profits	Quality	Employee Satisfaction	Overall Performance
Involvement	0.04	0.01	0.26***	0.32***	0.16***
Consistency	0.03	0.13**	0.29***	0.33***	0.29***
Adaptability	0.08**	0.06	0.20***	0.21***	0.18**
Mission	0.22***	0.10**	0.18**	0.27***	0.35***

** Significant at .01 level; *** Significant at .000 level.
Source: Denison, D.R. and Neale, W.S. Denison Organizational Cultural Survey: Facilitators Guide, 1996.

Table 3 indicates that the four culture traits are completely and strongly related to quality, employee satisfaction and overall performance, but partial related to sales and profits indicators.

Applications of Denison's Culture and Effectiveness Model

Several research studies since 1997 have already applied Denison model (Cho & Young, 2000; Cooper, 2000; Denison & Fey, 2001; Denison & Haaland, 2001; Denison, Haaland & Goelzer, 2002; Haaland & Neale, 2001; Fisher, 1997). Some of the studies also expanded the model overseas (Denison & Fey, 2001; Denison & Haaland, 2001); however, most research on this model is limited to the United States (Cooper 2000; Fisher 1997). Table 4 shows that two dissertations (Fisher and Cooper) used Denison's culture and effectiveness model as the basis of their research.

Cooper (2000) used Denison's culture and effectiveness theory with the organizational culture inventory (OCI) assessment to study the relationship between corporate culture and corporate performance. Unlike Denison's study, Cooper uses three dimensions of corporate culture: constructive, passive/defensive and aggressive/defensive cultures. Cooper concluded that a company's past performance could provide insights to the corporation's current culture. She used the past five years of performance data to predict the current or future culture, which is in contrast to how culture and performance research since 1980 had predicted culture. Cooper contributed to Denison's culture and effectiveness theory by introducing another culture measurement tool for determining the relationship between corporate culture and performance.

Table 4
Application research of Denison's Culture and Effectiveness Model

Author	Organizational Culture Dimensions	Performance Dimensions	Organizations involvement	Result
Fisher (1997)	Five culture dimensions: Denison's four Involvement, consistency, adaptability, and mission with culture strength added.	6 measures : 3 perception measures (1-3) and 3 financial measures (4-6): 1) Profitability/return-on-assets 2) Sales/revenue growth 3) Market share 4) Quality of product and services 5) New Product development/innovation 6) Employee satisfaction	4750 participants in 60 companies from 3 different industries (goods producing, service producing, and government related.	1. provide further evidence of the relationship between scores on the Denison Organizational culture Survey and Managers' perceptions of performance.
Cooper (2000)	Organizational culture Inventory(OCI) Three Dimensions: 1)Constructive, 2)Passive/Defensive, 3)Aggressive/Defens ive	Stern Stewart Performance 1000 index 1) Market Value Added 2) Economic Value Added, 3) Cost of Capital, 4) Return on Capital	33 firms from Manufacturing, Service, Telecommunicati ons/Computer	1) An organization's past performance and its industry type may provide insight into its culture. 2) Negative significant correlation between organizations with Passive/Defensive culture types and their market value added rating. 3) Negative correlation between Cost of Capital and the Constructive culture style

Fisher (1997) also used Denison's culture and effectiveness model to study the corporate culture and corporate performance of 4,750 participants in 60 companies from three different industries. In addition to using Denison's original four dimensions, Fisher added culture strength to her model. She also used six performance measurements; three were subjective performance indexes (quality of product and services; new product development/innovation, and employee satisfaction), and three objective performance indexes (profitability/ return on asset, sales/revenue growth, and market share). Lastly, Table 5 shows the most recent studies that apply Denison's culture and effectiveness model.

Table 5
Applications of the Denison model after 2000

References	Organizational Culture Dimensions	Performance Dimensions	Organizations involvement
Denison & Cho & Young (2000)	Same as Denison		36,542 people from 94 organizations
Fey & Denison (2001)	Same as Denison		179 foreign-owned firms operating in Russia.
Neale & Haaland	Same as Denison	Sales Growth	12,000 directors and managers of 2,700 stores
Denison & Haaland	Same as Denison	Return on Shareholder's Equity	161 publicly traded firms
Denison & Haaland (2002)	Same as Denison	1. Sales Growth 2. Customer Satisfaction	2 studies 1. 2700 grocery stores 2. 21500 individuals from 338 automotive service centers and 1,584 employees from a large construction company
Denison & Haaland & Goelzer (2002)	Same as Denison	Same as Denison	Case 1: 230 organizations from Europe, North America, or Asia. Case 2: 218 organizations from 7 countries: Canada, Australia, Brazil, USA, Japan, Jamaica, & South Africa

Fey and Denison (2001) applied the model to 179 foreign-based companies operating in Russia. Unlike Denison and Mishra (1995), they used both qualitative and quantitative approaches but they reversed the sequence. They used the model as a reference point in surveying 478 firms based in six countries: Canada, Germany, Finland, France, Sweden and the United States with a final sample of 179 firms. During the three-month data collection period, questionnaires were personally taken to the senior manager in each of the 179 companies. Questionnaire provided measures of organizational culture, organizational effectiveness and several control variables. Utilizing factor analysis, correlations, and ordinary least squares multiple regression analysis, they found a similar relationship in Russia as in the United States. They found that corporate culture is a strong predictor of market share, sales growth, and

profitability, but is a weak predictor of overall performance, employee satisfaction, quality, and product development. Their study supports the idea that different cultural traits can be linked to different components of effectiveness, although the results showed Russia shows a different relationship between culture traits and performance variables. They found that, in Russia, the best predictors of performance were adaptability and involvement. This may be due to Russia's social and economic turmoil following 1989. To support their findings, Fey and Denison (2001) initiated two case studies. They also added national culture as a consideration in developing their research hypotheses.

Denison, Cho and Young (2000) studied the relationship between culture and customer satisfaction by surveying 8,634 participants (1,861management and 6,773non-management) from 338 automotive service centers and 31 regions of the construction company in the United States. Denison's organizational culture and effectiveness questionnaire was used an assessment tool for identifying corporate culture and performance. Several statistical techniques, Fisher R to Z-transformations and Z-tests, were used to evaluate the different coefficients. They found different relationships between management and non-management. Non-management respondents showed higher culture coefficients than those of management respondents. This implies means that non-management respondents feel stronger about the critical role of corporate culture on customer satisfaction. With the automotive centers, only two of the 12 culture indices, agreement and strategic direction and intent, had an significant correlation to customer satisfaction where $p < .05$. With the construction companies, all the 12 culture indices showed a significant correlation to customer satisfaction where $p < .05$. This study, therefore, supports a positive relationship between corporate culture and customer satisfaction.

Comparison of Culture Measurement Models

There has been little agreement among researchers regarding culture dimensions and scales. Many culture measurement models were initiated in the past 20 years. For instance, Organizational Culture Inventory (OCI). OCI is a quantitative instrument which uses 12 scales of behavioral norms to describe three types of corporate cultures: constructive, passive/defensive, and aggressive/defensive.

Quinn and Rohrbaugh (1983) examined the relationship between culture and organizational effectiveness and showed that differences among the many effectiveness criteria in the literature could be better understood when they were organized along two axes. This framework, which is depicted in Figure 3, includes three dimensions (external vs. internal focus; flexibility vs. control; and ends vs. means) and four models (open system model, rational goal model, human relations model, and internal process model).

According to Quinn (1988), each organization could emphasize in polar opposite models at the same time. Each of the four models reflects an information-processing procedure in an organization; each has shared values. The four models in the competitive values framework reflect the organization's operation process. The human resource model and rational goal model are opposite in the sense that the human resource model emphasizes more internal concerns and the need for flexibility. The rational goal model focuses more on the need for control and identifies external concern. The open system model is opposite to the internal process model. The open system model emphasizes flexibility and external concern, whereas, the internal process model focuses on internal concerns and the need for control.

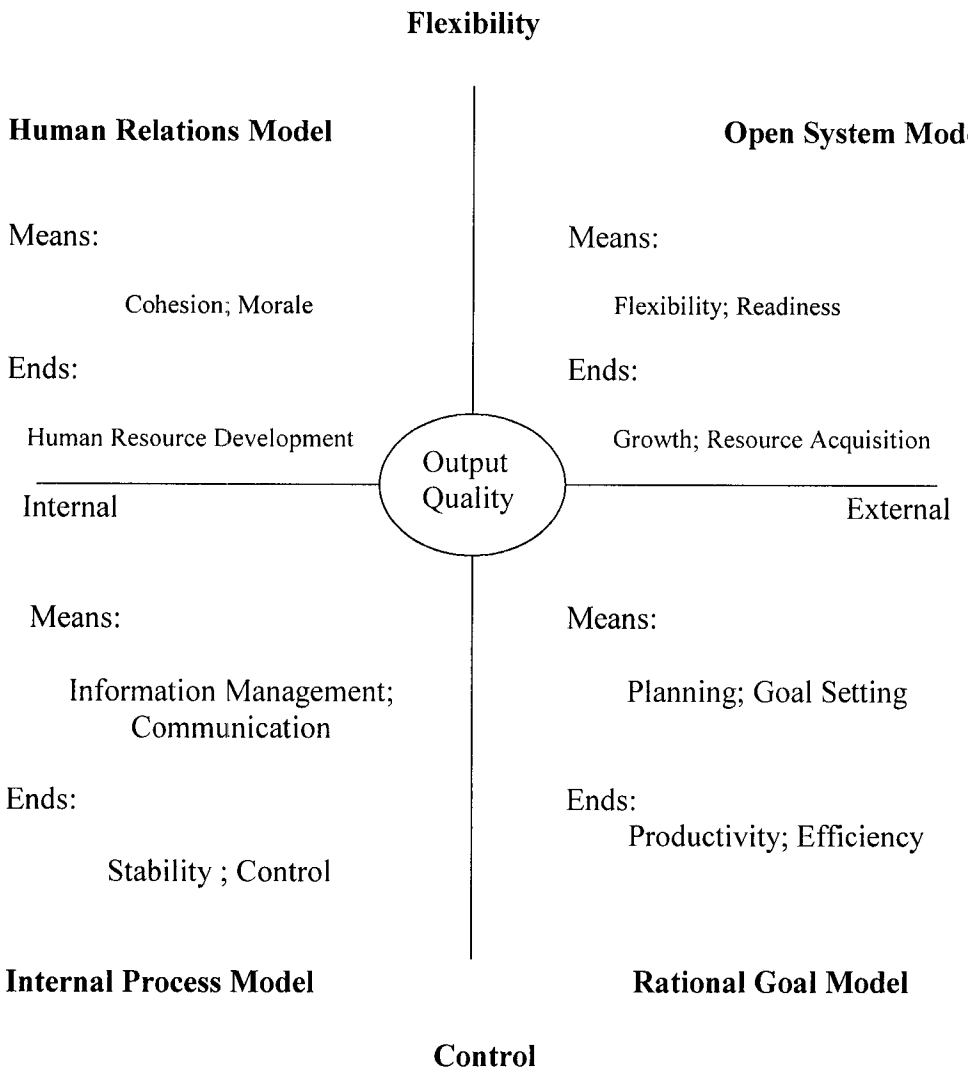


Figure 3: Quinn's Competitive Values Framework on EffectivenssResource: Robert E. Quinn and John Rohrbaugh (1983). A spatial model of effectiveness criteria: Towards a competing values approach to organizational analysis. Management Science, Vol. 29, No. 3, pp. 369.

There are some share values across these four models. The human resource model and the open system model share flexibility. The open system model and the rational goal model share external concern. The rational goal model and the internal process model share control factor, while the internal process model and the human relations model share Internal concern. The four models, thus, show the different means and ends for achieving effectiveness. The human resource model uses cohesion and morale to achieve human resource development. The open

system model takes advantage of flexibility and readiness as a means of achieving growth, resource acquisition and external support. The rational goal model uses planning and goal setting as a means of achieving productivity and efficiency, and the internal process model uses information management and enhance communications as a means of achieving stability and control.

Summary

This chapter began by discussing previous research studies in corporate culture. Although culture is an abstract concept that cannot be touched or felt, there are a variety of dimensions used to measure culture. Schein's (1988) definition of corporate culture is widely accepted by many researchers.

As for corporate performance, financial indicators for assessing corporate performance are readily available. It is very important, however, to recognize that different stakeholders will perceive different performance criteria. This chapter identified three factors that have been used to measure performance of a company: financial indicators, non-financial factors and economic factors. All three factors can be used to evaluate corporate performance.

Next, culture and climate were described as similar in some ways and also different in terms of sources and types of research. Many studies that claim to study culture, actually examine corporate climate. Thus, quantitative instrumentations are used to measure corporate culture. Corporate culture, however, is very difficult to assess.

The major streams of culture and effectiveness research after the 1970s were reviewed extensively in this chapter. Denison's culture and effectiveness model was described in depth as as the procedures for assessing its components. The follow-up application research, including two dissertations and five cross-border application studies were introduced. Denison's model is

similar to Quinn's competing value model. Both reflect the existence of competing values in a complex organization.

Finally, other culture instrumentations were introduced to enrich the knowledge on culture measurement tools. Arguments still exist about the relationship between corporate culture and corporate performance (Hofstede, 1998). Denison's study demonstrated a linkage between corporate culture and corporate performance in the United States (Denison, 1982; Fisher, 1997). In the past seven years, Denison's culture and effectiveness model has been examined in several countries, and the results have been similar. When Denison and Fey (2002) applied the model in Russia, they found that some adjustments to the model were needed. At the same time, some researchers used the model to develop multi-national studies (Denison, Haaland & Goelzer, 2001). However, to expand the culture - performance research to theory, more studies are needed, especially in other countries. This present cross-border study used the Denison's culture and effectiveness model to examine the relationship between corporate culture and corporate performance, both in Taiwan and the United States. Two contributions are expected. One is the expansion and further verification of Denison's culture and effectiveness model. The other is a more in-depth understanding of the relationship between corporate culture and corporate performance.

CHAPTER III

METHODOLOGY

This study examines the relationships between corporate culture and corporate performance in the U.S. and Taiwan using Denison's (1995) model. This chapter describes the methodology in the following order: source of behavior data and corporate performance data, sample population, construct and instruments, research questions and hypotheses, data collection and data analysis methods.

Introduction

This study updates and extends Denison's (1995) culture and effectiveness model using a sample of companies in the U.S. and Taiwan. Previous studies reveal that corporate culture impacts corporate performance positively (Denison 1982, 1990, 1995). According to Denison, attributes of corporate culture can be used to "predict" the performance of organizations. This study updates the earlier research on managers' perceptions of their companies' organizational culture and performance and extends the research to Taiwan as well. C.J. Fisher's (1997) dissertation used managers' perceptions of performance to measure actual performance. In addition, in a paper presented at the 2002 AIB-SE Conference, Brouthers and Nakos used subjective performance data to measure corporate performance since financial data is not easy to obtain when a privately held company is involved. The questionnaire data were aggregated to organization level. Denison expanded the model to multiple-countries in September, 2002. However, Taiwan was not covered. This makes the second way that this study will be distinguished from Denison's original study.

There are several problems when sample companies come from different industries. For instance, returns on investment and economic cycles vary in different industries. Thus, it is not

easy to determine excellent companies based only on the facial financial data without considering the versatile characteristics of different industries .The nature of the industry may have a spurious effect on the outcome measure. This study uses cross-sectional data obtained from Denison's (1995) culture and effectiveness questionnaire to assess the relationships between corporate culture and corporate performance in companies in the U.S. and Taiwan.

Organizational Climate and Organizational Performance: The Predictive Validity

These behavioral variables tap organizational processes that have long, rather than short-term payoffs. Consequently, the effects of such a current state are positive, but involve a lag factor. Pecorella, Bowers, et al's. (1978) approach to the behavior-performance relationship at the organization sub-unit level can be applied to this study. They found that performance was moderately related to concurrent performance. There was a stronger relationship, however, to future performance.

Research Strategy and Design

This study is a non-experimental study using survey methodology (Aronson et al., 1987). Responses obtained through the quantitative survey (Denison's Organizational Culture Survey) provide the data to assess four culture traits (involvement, consistency, adaptability, and mission) and eight criteria of organizational performance (budget achievement, perception of profitability/ return-on-asset, sales/revenue growth, market share, quality of products and services, new product development/innovation, employee satisfaction, and whole corporate performance). This researcher believes this design facilitates a sound approach to compare culture-performance issues across industries, companies, and countries. Thus, it provides a means of effectively testing Denison's culture-performance theory. Individual data received from participants was

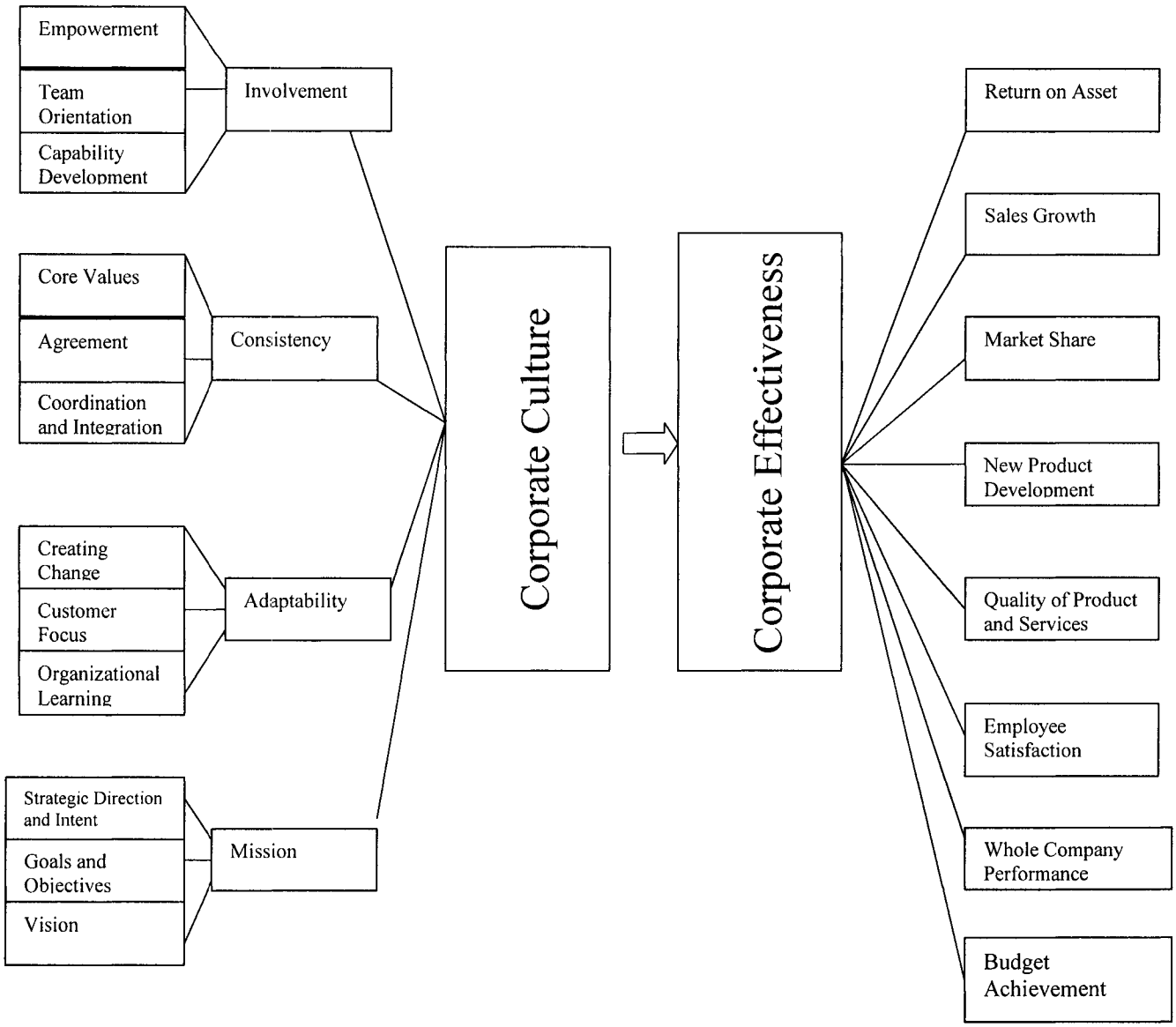
aggregated to the organization level. Denison (1995) identified precise relationships between dimensions of organizational culture and effectiveness. His empirical work found the relationships depicted in Table 6.

Table 6
Linkage of Culture Traits and corporate performance

Orientation	Culture Traits	Corporate Performance
Stable	Mission + Consistency	ROI, ROA and ROS
Internal	Consistency + Involvement	Quality, ROI and Employee Satisfaction
Flexible	Involvement and Adaptability	Product/Service Innovation
External	Adaptability + Mission	Market Share and Sales Growth

The culture traits facilitating a stable environment, Mission and Consistency, are related to the three performance indicators: ROI, ROA and ROS. The flexible culture traits, Involvement and Adaptability, can be linked to product and service innovation ability. The internal focus cultural traits that are linked to Consistency and Involvement are related to quality, ROI and employee satisfaction indicators. The external concerns, adaptability and mission, can be linked to market share and sales growth. Thus, this study attempts to verify the relationships reported by Denison (1995) and to determine if there are differences in the measures between USA and Taiwan. The research framework, based on Denison's Organizational Culture and Effectiveness model, is depicted in Figure 4. Figure 4 shows that corporate culture is composed of four traits: involvement, consistency, adaptability, and mission. Each trait has three components. Figure 4 also shows that performance is measured with Denison's seven performance indicators: ROA (Return on Asset), sales growth, market share, new product development, quality of product and services, employee satisfaction, and whole organization performance. An additional performance measure, added by this researcher, is budget achievement.

Figure 4: Research Model – Corporate Culture and Corporate Performance



Population and Sample

Denison's original (1982) study included 34 firms from 25 different industries. He picked one, or at the most two, companies from each of the 25 industries. To run any relationship study, it is necessary to diversify study samples to avoid industry bias. Aggregation over many industries is liable to reduce the amount of variance attributable to industry effects (Hansen & Wernerfelt, 1989). Thus, to capture the industry effect, this study includes many industries. Companies from the same industry are assumed to have similar organizational culture styles. Hofstede (1980) indicated that looking across borders was always one of the most effective approaches to get new ideas for management and organization. Like the USA, Taiwan also has Fortune 500 companies listed every April. This study selected companies listed for year 2002. In the USA, the Fortune 500 companies represent 70 industries. Fortune 500 companies were selected randomly. Thus, stratified random sampling methodology was used to collect data from these companies. An invitation letter was sent to the top director of the human resource department to ask for their participation in this study. Participants from each company were required to be from 1 at least to 25 at most. The title of these participants was expected to be either CFO or CEO, and managers will compose the remaining samples.

Study participants were corporate managers in the U.S. and Taiwan. The sample is drawn from two types of companies in each country. One is large company represented by Fortune 500 respondents. The other group comes from part-time students who are full-time managers. To maximize the diversification effect of industry factor, the sample companies will be drawn from each industry. Every other company was picked as the sample companies surveyed in the study. Following the same methodology, the Taiwan's Fortune 500 companies were picked. Two hundred and fifty of the companies listed in Taiwan's 2002 Fortune 500 were picked based on the stratified random sampling approach. This approach is expected to offer more verification in

each industry to provide more depth analysis on this kind of study. In addition to sampling Fortune 500 companies, this study sampled smaller companies/business represented by part-time students who are managers who are enrolled in business schools. Furthermore, all participants are CEO's, CFO's, senior managers, and first line managers. The reason for using the management's opinions as the construct of corporate culture is that the management is always the ignition of a company's culture. The number of participants from each company ranged from 1 to 25 people.

The research invitation paper was sent to these companies during 2002 and 2003, with a stamped and addressed return envelope. Two weeks after the mailings were sent out, follow up phone calls were made to the companies who had not responded.

Furthermore, there are two questions on the sample survey that were checked before doing any further analysis. The status of the of survey participants from each organization and the effect this has on their observed relationship between organizational culture these two quality concern and corporate performance variables. To solve these two quality concerns and effect on the linkage research, the sample participants were restricted to only CEOs, CFOs, senior managers, (or managers) who know well about their company's whole situation and corporate performance. The latest participant sample was targeted under senior manager or human resource manager's assistance. For the second concern, the effect of sample participant on the observed linkage, this study checked whether the sample companies with CEO or without CEO's participation influenced the observed effect or not.

Also, sampling theory described by Kish (1965, p.88) made a good observation about the limitation of sample quality: fewer responses are needed to obtain an equally accurate estimation of the population when the phenomenon of interest is more homogeneous. While the sample is

clearly far from perfect, then the relationship that has been identified was neither error nor coincidence.

Research Questions and Hypotheses

Denison's (1995) organizational culture model proposes that organizations that are high in all four cultural traits have high performance levels. Thus, the two research questions are:

1. Is organizational culture positively related to organizational performance? Denison's (1995) research answered the question affirmatively.
2. Do the positive culture -performance relationships apply equally to Taiwanese firms and U.S. firms?

The hypotheses are based on Denison's organizational culture and effectiveness model, and they are extended, based on the national culture differences, to test the specific culture-performance linkages in Taiwan. The rationale for this is that national culture affects corporate culture, according to Hofstede (1980).

Hypothesis 1: Different national culture will produce the different culture–effectiveness pattern.

Hypothesis 1_0: There is no difference between Taiwan and the U.S. on the four organizational culture traits and corporate performance.

Hypothesis 1_a: There is a difference between Taiwan and the U.S. on the four culture traits and corporate performance.

The second hypothesis examines the relationship between the four culture traits and corporate performance. It tests the universal characteristics of the model and whether the culture–performance relationship applied in countries other than the U.S.
Therefore, the second hypothesis is:

Hypothesis 2: The four culture traits (involvement, consistency, adaptability, and mission) are positively related to overall corporate performance in the USA and Taiwan.

Hypothesis $2a_0$: Involvement, consistency, adaptability, and mission are negatively related or not related to corporate effectiveness in the U.S.

Hypothesis $2a$: Involvement, consistency, adaptability, and mission are positively related to overall effectiveness in the U.S.

Hypothesis $2b_0$: Involvement, consistency, adaptability, and mission are negatively related or not related to overall corporate effectiveness in Taiwan.

Hypothesis $2b$: Involvement, consistency, adaptability, and mission are positively related to overall corporate effectiveness in Taiwan.

Hypothesis $2c_0$: Involvement, consistency, adaptability, and mission are negatively related or not related to overall corporate effectiveness in both U.S. and Taiwan.

Hypothesis $2c$: Involvement, consistency, adaptability, and mission are positively related to overall corporate effectiveness in both U.S. and Taiwan.

Denison's (1995) model assumes that specific culture traits are related to different effectiveness indicators. This study examines this assumption in the U.S. and Taiwan. Therefore, hypotheses 3 to 6 are:

Hypothesis 3: Different culture traits are differentially related to aspects of effectiveness.

Hypothesis 3_0: The externally focused organizational culture traits (mission and adaptability) are not related or are negatively related to sales growth and market share.

Hypothesis 3_1: The externally focused organizational culture traits (mission and adaptability) are positively related to sales growth and market share.

Hypothesis 4_0: The internally focused organizational culture traits (involvement and consistency) are not related or negatively related to quality and employee satisfaction.

Hypothesis 4_1: The internally focused organizational traits (involvement and consistency) are positively related to quality and employee satisfaction.

Hypothesis 5_0: The stable focused organizational traits of mission and involvement are not related or negatively related to quality, ROI and sales growth.

Hypothesis 5_1: The stable focused organizational traits of mission and involvement are positively related to quality, ROI and sales growth.

Hypothesis 6_0: The flexible focused organizational traits (involvement and mission) are not related or negatively related to product/service innovation.

Hypothesis 61: The flexible focused organizational traits (involvement and mission) are positively related to product/service innovation.

Constructs and Instruments

The two constructs in this study, corporate culture and effectiveness, are assessed with Denison's (1995) scales that measure four dimensions of organizational culture and seven perceptual assessments of organizational performance. The survey instrument appears in Appendix B. The researcher added an additional performance measure, budget achievement. Validity and reliability are discussed at the end of this section.

Denison's (1995) theory of Organizational Culture and Effectiveness grew out of fifteen years of research on organizational culture and effectiveness, involving both qualitative theory – building and quantitative theory-testing methods. Data collected from over 1000 organizations of various sizes, sectors, and industries comprise the theory's foundation (Denison, 1984; 1990; 1996; Denison & Mishra, 1995).

The Denison Organizational Culture Survey is a paper and pencil instrument consisting sixty items measuring four culture traits with twelve factors (three factors for each culture trait). A five- point scale assesses the level of respondent agreement with each item (1 = strongly disagree; 5 = strongly agree).

Independent Variables: The independent variables are the four organizational culture traits: Involvement, consistency, mission and adaptability. Although each is composed of three sub-dimensions or factors, the measures average the sub-dimensions to measure each trait. They were described more fully in Chapter II and are depicted in Table 2.

Dependent Variables: The dependent variables are the eight aspects of corporate performance, items that tap perceptions of organizational performance: four quantitative

assessments and four qualitative aspects including the subjective evaluation of overall organizational performance. The eight measures are: budget achievement, sales/ revenue growth, market share, profitability/ROA, quality of products and services, new product development, employee satisfaction, and overall organizational performance. The eight outcome measures, like the 60 culture items, use five-point Likert-type scales. The performance dimensions are based on the participants' perceptions of company performance. There are several good reasons to use perceptions of company performance instead of financial data. First, as this study is a comparative study, it's almost impossible to get comparable financial data to compare companies from different countries (Denison & Fey, 2001). Secondly, some companies do not provide financial data to outsiders; therefore, the companies could not be involved in this study under this requirement. To reach more companies in this comparison study, taking management's perception to their companies could make it easier to obtain their participation. In addition, some previous studies have used perceptual measures (Delaney & Huselid, 1996; Denison & Mishra, 1995). Denison and Mishra (1995) used seven subjective performance measures when they developed the Denison organizational culture and effectiveness model, and demonstrated that subjective performance measures correlate well with objective measures of performance (Powell, 1992).

Questionnaire

This study uses the questionnaire research method to obtain manager's perceptions of corporate culture and performance. This approach yields individual employees' perceptions of the nature of their experience of organizational phenomenon and climate (Hansen & Wernerfelt, 1989). A letter explaining the intent and scope of the research project was mailed to each president and/or CEO with a stamped, self-addressed response form enclosed.

Data collection had two stages. First, a pilot study of the Denison's culture and effectiveness questionnaire of 30 professionals in the sample industries and management professionals was administered to graduate students in human resource management /organizational behavior classes, and secondly, the administration of the final instrument to the sample participants and firms. A brief explanation of the purpose of the questionnaire and its use was attached to each survey. Typically, participants took 15-20 minutes to fill out the 60 questions.

Source of Behavior and Performance Measurements

The assessments of organizational performance in this study consist of the eight items developed by Denison (1995), and "budget achievement" added by the present researcher. Managers in each company will be asked about their perception of the eight organizational performance variables:

1. Budget Achievement
2. Sales/Revenue Growth
3. Profitability/ROA
4. Market Share
5. Quality of Products and Services
6. New Product Development
7. Employee Satisfaction
8. Overall Organizational Performance

Perceptions regarding the eight factors are used in this study as criteria for performance within each organization. Each participant rates the performance of his/her company in the eight areas, relative to other similar companies in the industry.

Validity and Reliability

Types of validity include face validity, content validity, criteria-related validity, and construct validity (Carmines & Zeller, 1979; Kerlinger, 1986). The most common type of validity is face validity, which indicates whether a measure " appears" to measure what it portends to measure (Babbie, 1986), and it serves as a first step in the approximation of validity (Crozby, 1985). Content validity is a second, related type of validity that applies to how the measure represents the relevant phenomenon. It's representativeness of the relevant phenomenon, according to Kerlinger (1986). Denison's survey is strong in both face and content validity. Denison created the instrument in 1995 in partnership with 960 individuals in forty organizations representing various levels and roles. The survey content and methodology was implemented in these organizations.

Criterion-related validity, a third type of validity (Carmines & Zeller, 1979; Kerlinger, 1986), is associated with the instrument's ability to predict a future event or phenomenon. Denison's survey meets this requirement. A lack of content validity results in an incomplete measure of the construct being studied leading to erroneous conclusions based on the measuring instrument. Face validity is established when a person examines an instrument and concludes that it measures the relevant trait. The importance of face validity is the value placed on the instrument by the respondents. If the items do not appear to be relevant to the stated objectives of the instrument, respondents may not accept the questionnaire as valid, thus affecting the results. Face and content validity are more subject to error than other forms of validity.

Working with a sample size of 36,542, Cho (2000) examined the validity and reliability of Denison's Culture and Effectiveness Questionnaire. His analysis supports the validity and reliability of the questionnaire. First, Cho (2000) made the item-level analysis for each index. Cho (2000) started checking each index as to whether their three scales were totally from their

own 15 items. The purpose of this particular stage was to identify the latent constructs in the questionnaire. Next, scale level analyses on each pair of indexes were analyzed to determine if each of the six scales were interrelated.

Scale validity was estimated several ways. The dimensionality of each of the four dimensions was established with factor analysis (explanatory and confirmatory). Cho's (2000) validity analysis on Denison's questionnaire (in Appendix C) indicate that each of the four dimensions assesses three distinct factors. Lastly, construct validity is an important concept in basic, theoretical research. A measurement device that actually measures the theoretical variable or constructs that it is supposed to measure is said to have construct validity (Cosby, 1985). A factor analysis conducted by Denison tested the original validity of the scales and ensured that the index structure fit the overall model.

A 1.0 lambda coefficient lower than .50 indicates a relatively weak link between the index and trait. The lambda coefficient tested by Denison is strong enough to give support for the underlying model (Denison & Neale, 1996).

Denison Culture Survey-Reliability

Reliability is reflected in the internal consistency of a measure based on the average correlation among items within a scale. For all scales, internal consistency was originally assessed by Denison using a Cronbach's alpha statistic (Cronbach, 1951). The result was twelve indexes that had internal consistency scores in the range of .62 to .84. Typically, a .70 alpha statistic is considered acceptable for internal reliability.

As for the coefficients of the questionnaire, the range of Cronbach coefiicient alpha (α) from 3 scales for each trait is from .81 to .89. Therefore, for each trait, the three scales are

sufficient to explain the matched trait. In addition, the Cronbach coefficient alphas from 15 inter-items are ranged from .88 to .92. The reliability estimates (Cronbach coefficient alpha) for the four-organization culture traits (dimensions) ranges from a high of .92 for mission to .87 for adaptability. It appears that each 15 items for each trait can clearly and sufficiently describe its matched index. Compared with the above results, it seems that the aggregated score from each 15 items can reflect its matched trait more sufficiently.

For the analysis of inter-items for the 12 scales, the range of the Cronbach coefficient is from .70 to .85. The result is accepted if α is larger than .7. For further information regarding this section, please refer to Table A of Appendix C.

The Validation of a System-Level Construct: Convergent-Discriminant Validity

Using questionnaires to collect behavioral data has been a very curious and effective method. (Denison, 1982). The previous researchers who used questionnaires to collect data were concerned with the validity of such data. To face this concern, the measure of conceptual construct can be operated through the modern statistical techniques (Denison, 1982).

Pilot Study, Questionnaire Translation and Revision

Since data were collected in Taiwan, the English version of the questionnaire was translated into Chinese a professional translation company. The Chinese version of the questionnaire was translated back by another professional translation company. Next pilot study compared the original English and the back-translated English. After this wording translation, the pilot study for testing the quality of the Chinese version was initiated before the final questionnaire is sent to the sample companies. Also, to avoid any possible blurring on the Chinese translation, the study

had 20 bilingual Chinese who earned a masters degree or a PhD from the U.S. and have worked in the U.S. for over 5 years to test the feasibility of the Chinese version of the questionnaire. The 20 Chinese were divided into 2 groups based on the random sampling method. Each of them received both versions of the questionnaire. Group 1 was required to start with the English version of the questionnaire and then complete the Chinese version. Group 2 was required to complete the Chinese version first and then complete the English version. After completing the questionnaires, the two groups will be gathered together to report what they feel about the two versions. After both tests are complete, the Chinese version of questionnaire was revised to incorporate their useful suggestions and ideas into the survey implementation.

The pilot study on the English version of the questionnaires was conducted with DBA students majoring in human resource management or organizational behavior at Nova Southeastern University. Before filling out the questionnaire, the Denison organizational culture and effectiveness model was introduced. After a twenty- minute introduction, the class participants started filling out the questionnaire. The length of time needed to complete the questionnaire and any possible misunderstanding was detected by the pilot test. The time spent in filling out the questionnaire was recorded. Also, questions were clarified as needed.

Data-Collection Methods

The study sampled forty companies from manufacturing, service, and financial industries included the Fortune's listing of the top 500 companies and other small and middle sized companies. Companies with a plus profit in the year 2001 were picked as the study population. Then study samples were chosen by the random sampling approach. Each selected company was assigned a number from 1 to 40 and then a table of random numbers was used to pick companies.

The initial contact for each company was made with the top human resource manager. The top human resource manager provided possible information as to those who was most likely to complete the survey. These human resource managers were regarded as a key resource to provide the study with the names and titles of the other participants. This study used CEOs to complete the survey and to evaluate their corporate culture and corporate performance. In addition to CEO, the researcher included between 1 and up to 25 participants to represent each company. Thus, each company was expected to have a CEO and another four managers, at least, to take part in the study. In order to increase the response possibility of CEOs, the study collected the names of each participating company from the 2003 Fortune 500 Company lists and send out a questionnaire to them directly.

This study used the mailed survey method to collect behavioral data. The mail survey approach was used in order to collect the surveyed people's opinions and eliminate bias. Also, the study would like to benefit from the development of Internet. One website was established to collect data from the on-line questionnaires. This helped to increase the number of responses and how quickly they are returned.

Data Coding and Analysis

Since the unit of analysis is the organization, and not the individual, each company's responses was aggregated (averaged) to form a company score for each variable. The mean for each company was used in further analysis. The means, standard deviation and other descriptive statistics were derived from the aggregated data for each company as outlined in table 7.

Table 7
Descriptive Statistics

Taiwan Company	Means					Standard Deviation
	Trait 1	Trait 2	Trait 3	Trait 4	Performance	SD
TN 1	Xtn1				Xtnp1	1.8
TN 2	Xtn2				Xtnp2	2.2
TN 3	Xtn3				Xtnp3	
TN N	Xtnn				Xtnpn	
US Company	Trait 1	Trait 2	Trait 3	Trait 4	Performance	
US 1	Xus1				Xusp1	
US 2	Xus2				Xusp2	
US 3	Xus3				Xusp3	
NS N	Xusn				Xuspn	

For all scales, internal consistency was assessed using a Cronbach's alpha statistic (Cronbach, 1951). The data was aggregated to the group level for both culture and variables, and performance variables. The pooling of the individual responses followed Robert, Hullin, and Rousseau's (1978) recommendation that there be a "composition" theory or a strong rational to justify the aggregation of items. The justification for aggregating the performance data using each company's top management was the individuals in these positions often see and understand the broadest aspects of a company's performance, especially in the financially oriented arenas.

Culture Dimensions

The 60 corporate culture items in the survey form 12 subscales. The extent of involvement for each company was derived from question 1 to question 15. The score of the consistency was integrated from question 16 to question 30. The value of adaptability for each company was obtained from the average of question 31 to question 45. The score of mission was valued from

question 46 to question 60. Also, for testing hypothesis 2, the two cultural dimensions in internal and external factors was aggregated by 30 questions. For testing hypothesis 2a, the relationship of external culture factors to performance, the extent of external culture traits was valued from question 30 to 60. Also, the internal cultural traits were evaluated by questions 1 to 30.

Performance Dimensions

The overall corporate performance indicator was used to link to culture traits were used to test hypotheses 1 about the relationship between corporate culture and corporate performance. The other 7 effectiveness indicators were used to test Hypotheses 2: the relationship between the internal and external culture dimensions to different performance indicators.

Statistics Techniques

Several statistics techniques were used in this study. Multiple Regression, ANOVA, t-test and descriptive statistics will describe variables and their relationships between culture and effectiveness.

Analysis of Variable (ANOVA)

ANOVA was used to compare the difference between corporate culture and performance means and variance. ANOVA (Analysis of Variable) assess differences in the corporate culture and corporate performance relationship between the two countries. The results were applied to the first hypothesis to determine if there are differences between the two countries.

Multiple Regression Analysis

Regression analysis is by far the most widely used and versatile dependence technique, applicable in every facet of business decision-making. The technique was used to evaluate the contribution of the independent variables (Involvement, Consistency, Mission, and Adaptability) to performance outcomes as follows:

Performance = Inv. + Cons. + Adapt. + Mission + Country

$$Y = a + X1b1 + X2b2 + X3b3 + \ldots\ldots\ldots\ldots$$

T-Test

If two groups' means (U.S. and Taiwan) are far enough apart, the t-test will yield a significant difference, thus permitting the researcher to conclude that the two populations probably do not have the same mean. The T-test will determine if the corporate culture dimensions and the performance dimensions differ significantly.

Summary

This chapter discussed the hypotheses, validity of the questionnaires, data analysis, statistical techniques and the pilot study. Denison found that corporate culture had a lagged effect on corporate performance. In other words, the impact of corporate culture can emerge two or three years later. This study collects the behavioral data and performance perception data in the current year.

Population and samples selection rules were discussed in this section. Some participants came from 2002 Fortune 500 companies in Taiwan and U.S. and some came from university students who have full-time positions. Two approaches to distributing the questionnaires were used: mailing by traditional approach and attachment with email. There are seven hypotheses in

this study, and their development was discussed in detail in this chapter. The pilot study was initiated by inviting thirty DBA students with practical experience in the business world to participate. The procedure and results were also mentioned in this chapter.

The validity of the questionnaire used in this study was mainly derives from Cho and Denison's research. They selected over 34,000 sample participants and conducted validity analysis of the questionnaire. Their results demonstrate that the culture dimensions used in Denison's Organizational Culture Model can measure corporate culture effectively and completely.

Statistical techniques to test the seven hypotheses developed in this study include multiple regression and T-Tests. Coefficient table and descriptive statistics are also used to detect the relationship between variables and displayed participants' profile. Chapter IV describes the data analysis results and tests the seven hypotheses.

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CHAPTER IV

ANALYSIS AND PRESENTATION OF FINDINGS

This chapter presents the results of testing the seven hypotheses developed in Chapter III in the following sections: 1) Data Collection, Screening and Characteristics, 2) Demographic Data, 3) Factor Analysis, 4) Descriptive Statistics, 5) Hypotheses Testing and Results, and 6) Multiple Regression Analysis.

Data Collection, Screening and Characteristics

This first section of this chapter describes the data collection and sources, data screening and characteristics; the later examines the data to determine if they meet the assumptions required to use multivariate techniques. Data came from respondents in both the U.S. and Taiwan. The respondents came from these sources and were contacted in three ways. The first group of respondents comprised part-time students who work full time. They were contacted at their universities, which consisted of one university in the U.S. and four in Taiwan. There were 121 U.S. participants and 464 Taiwanese respondents in the first university group. They are the largest group of respondents (86.2% of the total). The second group included managers (CEOs, Senior and middle managers) obtained from 26 companies listed in the 2002 U.S. Fortune 500 list and the 2002 Taiwan Common Wealth 500 companies. These participants received a mailed invitation to participate in the research with the questionnaire and a stamped return envelope addressed to the researcher. Of the 260 firms receiving the survey, 26 responded, for a response rate of 10 %. The third group of respondents consisted of the researcher's personal contacts in Taiwan and U.S. Fifty seven participants sent their questionnaires back to the researcher directly. This group composed 9 % of the total respondents.

Table 8 identifies the number of participants in the three groups in Taiwan and the U.S. Six hundred and thirty-four questionnaires were returned from respondents in both countries, 474 (74.8%) from Taiwan and 160 (25.2%) from the U.S. Most questionnaires (551 or 86.9%) were collected from managers who are part-time business students. The remaining 13.1% of the questionnaires were collected directly from companies. The next section describes the data collection procedures for the three groups.

Table 8
Data Sources

Resources	Taiwan	U.S.	Total	Percentage
Universities	430	121	551	86.9
Fortune/Common Wealth 500	8	18	26	4.1
Private Network	36	21	57	9.0
Total	474	160	634	100

Universities' Students

This group of respondents are full time managers who attend a university in the U.S. or Taiwan part-time. Data collection procedures were slightly different in the two countries. In Taiwan, an invitation to participate in the research was sent to four University business program directors, requesting their permission to conduct the study and asking that they distribute the questionnaires to their business students who also are full time employees. The researcher went to Taiwan to distribute and collect the questionnaires. In the U.S., the researcher sent an email request to 12 course instructors in the business school asking their permission to collect data from doctoral students. The researcher went to the classes on the agreed date and first made a 15-minute presentation to introduce the organizational culture model and the purpose of the study. Thereafter, participants completed the questionnaires and returned them directly to the researcher.

Fortune 500/Common Wealth 500 Companies

The 2002 Fortune 500/Common Wealth 500 company names were collected from the April 2003 issue of the magazines. The Common Wealth 500 is the Taiwanese counterpart of the US's Fortune 500. The researcher selected 260 companies by a stratified random sampling method to receive the questionnaire. Two hundred of those were from the U.S. and 60 from Taiwan. An invitation to participate in the research was sent to CEOs in these companies with a questionnaire and a return envelop with first class return postage. The mailing was distributed at the end of March 2003. The deadline was set at April 30, 2003. A follow-up letter was sent to the companies that did not initially respond, in order to increase the survey response rate. Twenty-six questionnaires were returned to the researcher. In addition, five companies declined to participate in the survey by mail. Therefore, the effective response rate was 10% for Fortune 500/Common Wealth companies, with 18 from the U.S. and 8 from Taiwan.

Personal Contacts

The researcher took advantage of his personal networks in the two countries to include more companies in this study. There were 57 questionnaires from 12 companies who agreed to participate in the study. CEOs or senior managers of these companies were invited to take part in the study and asked by the researcher for their full support to involve their companies in the study. Twelve companies agreed, and questionnaires were sent to a contact person at these companies to distribute to company managers. Within these companies there were 1 to 25 managers who completed the questionnaires. These companies sent their completed questionnaires by mail to the researcher. The questionnaires from each company were averaged together to obtain an aggregate company. The results produced 634 responses from 580 companies in the U.S. and Taiwan.

Data Collection Methods

The 634 respondents provided completed questionnaires to the researcher in one of three methods: (1) in person directly to the researcher, (2) by mail, or (3) via the Internet. Most of the data were collected by the researcher in face-to-face discussion with university respondents. Mailed surveys went to other company representatives with stamped return envelope to make it more convenient for respondents to return the questionnaires. The study also took advantage of Internet technology. The researcher placed the questionnaire into an on-line format and posted it on a website designed for the purpose of providing an alternative to the mail. This approach is not widely utilized in the research setting. However, it was effective for participants who prefer a non-paper version of the questionnaire.

Table 9 presents the distribution of returns by the three methods. Five hundred twenty five questionnaires or 82.8 % of the total were collected from part-time students at the five universities in the U.S. and Taiwan. In addition, 104 questionnaires (16.4%) were sent back to the researcher directly from invited companies. Five questionnaires were collected through an on-line version of the questionnaire posted in the Internet. Some questionnaires were returned incomplete, making data-screening procedures necessary. Before screening these 634 questionnaires, some decision rules were developed. The next section describes these data screening rules as well as the final samples.

Table 9
Collection Methods

Methods	Taiwan	U.S.	Frequency	Percentage
Paper & Pencil directly returned to the Researcher	430	95	525	82.8
Mail	42	62	104	16.4
Internet	2	3	5	.8
Total	474	160	634	100

Data Screening Rules and Processes

Since incomplete questionnaires could bias the results, the researcher applied data screening techniques using two decision rules to discard questionnaires.

Rule 1: Questionnaires completed by non-management respondents were excluded from the study. Management respondents included CEOs/CFOs, Senior managers, middle managers and line managers.

Rule 2: Any questionnaire with missing data for the dependent (the eight performance items) and independent (the 60 OCS items) variables was excluded from the data analysis. A questionnaire with missing values could bias the research results. In addition, it also could distort the practical sample size. Therefore, statistical tests based on sample size, such as the significance level, could be distorted.

According to Hair et al. (1998), missing data results for two reasons, one is action on the part of the respondent and the other is issue external to the respondent. A respondent might refuse to answer some of the questionnaire items due to company policy or to perceptions regarding the sensitive nature of the questions. An issue external to the respondent could simply be a data entry error, or data collection problems. Therefore, before removing questionnaires with missing values, the researcher first examined the entire data file to correct any possible data entry errors by comparing the original questionnaires to the data entries in SPSS software. After this verification process, questionnaires with missing values associated with independent or dependent variables were deleted. This rule follows Hair's (1998) suggestions. He also recommended that cases with missing values on dependent variables be automatically excluded, and suggests that cases with missing values on variables other than dependent variables be excluded on an optional basis. This study removed all the questionnaires with missing values in

dependent or independent variables. In addition, questionnaires that appeared to be answered in a regular pattern (e.g. number three was selected as the only response for all items) were dropped from the analysis.

Final Sample

The composition of the final sample retained for analysis was 410 respondents representing 356 companies in the USA and Taiwan. The effective response rate is 64.67% (410/634). Table 10 describes various demographic categories. Taiwan was the major source, comprising 70 % of the usable responses. Denison's model has been empirically supported in the U.S. for years. It, therefore, was important to obtain a large Taiwanese sample, in order to verify the generalizability of Denison's culture and effectiveness model in that culture. The sample profile matches this specific objective. Below are the details on the participant and company profiles.

Participants Profiles

There are 410 usable questionnaires to test the corporate culture and corporate performance linkage. Of the participants, 83.2% handed a completed questionnaire directly to the researcher after receiving the questionnaire in class. The remaining 16.8 % of the respondents returned their surveys through mail or the Internet.

Respondents with bachelor degrees or less education comprised 62.2 % of the sample. Master degree respondents made up 23.2 % of the sample. U.S. respondents had more education than the Taiwanese respondents. Eighty percent of the Taiwanese responses had bachelor degrees or less education, but only 19 % of the U.S. respondents had this same level of educational background. Most of the U.S. respondents (78.5 %) held a master's degree and more, but only 7.3 % of the Taiwanese respondents had this same level of educational background.

Table 10

Participants Profile of the Final Sample (Percentage)

Country	TTL	Taiwan	U.S.
Participants (410)	100	70.5	29.5
Gender			
Female	55.4	63.7	35.5
Male	42.7	34.3	62.8
Prefer not to respond	2.0	2.1	1.7
Age of the respondents			
Under 20	6.3	9.0	0
20-29	26.3	36.7	1.7
30-39	36.8	40.1	28.9
40-49	16.3	8.7	34.7
50-59	10.5	4.2	25.6
Over 60	1.0	1.4	3.3
Prefer not to respond	2.7	-	5.8
Levels of Respondents			
Line management	40.0	43.3	32.2
Middle management	39.0	41.2	33.9
Senior management	6.3	3.1	14.0
CEO/Executive	4.0	1.7	9.1
Owner	4.1	2.8	7.4
Prefer not to respond	6.6	8.0	3.3
Respondent's educational level			
Under bachelor degree	42.4	58.5	4.1
Bachelor degree	19.8	21.8	14.9
Master degree	23.2	6.6	62.8
Doctorate degree	5.1	.7	15.7
Other	7.1	10.0	2.5
Prefer not to respondent	2.4	2.4	-
Years with Organization			
Less than 1	14.6	16.9	9.1
1-2	11.5	11.1	12.4
2-4	17.1	19.7	10.7
4-6	14.4	13.8	15.7
6-10	12.4	13.1	10.7
10-15	13.2	12.8	14.0
>15	12.2	8.7	20.7
Prefer not to respond	4.6	3.8	6.6
Sample Collection Methods			
P & P Questionnaire return			
Directly to researcher	83.2	88.9	69.4
Mail	14.6	11.1	23.1
Internet	2.2	-	7.4

Middle and line managers composed 80 % of the sample. The remaining 14.4 % of respondents were higher-level managers, such as, senior managers, CEOs and owners. Approximately 7 % of the respondents preferred not to complete this item. The U.S. sample had a higher percentage of top managers than the Taiwanese sample. The U.S. sample had 30.5 % responses from top managers, whereas only 7.6 % of the Taiwanese responses were from top managers.

Most respondents were between 20 and 39 years of age (63.1 %). Taiwanese respondents were younger than U.S. respondents. Most of the Taiwanese respondents were concentrated into the 20-39 year category; most of the U.S. respondents were ranged from 40 to 59 years old. The differences is most likely the result of the samples obtained at the universities. The U.S. university samples were collected from doctoral students. The Taiwanese sample s were collected from bachelor level students.

Company Profile

After the screening process was complete, 356 companies from 74 industries in Taiwan and the U.S. were constructed as the source of sample companies used in the study, 247 (70 %) from Taiwan, and 109 (30 percent) from the U.S. Appendix D shows the 74 industries represented by the 356 companies in the study. The industries with the largest representation include: Services (commercial/consumer), banks (regional), manufacturing (specified), electronics (instruments), computers (hardware), and insurance (life/health). The components of the industry match the industries distributions in both countries. Service and health industries are spread through both countries. For Taiwan, computer, electric and manufacturing industries compose the main economic structure of this developed country.

The responses collected from the five universities made up 90% of the final data set. Eleven companies or 3.4 % of the companies were received after the researcher contacted the CEOs of these companies. Twenty-six Fortune/Common Wealth 500 companies or 6.5 percent of the total companies in year 2002 lists presents the big companies in U.S. and Taiwan.

Different sizes of enterprises were involved in this study. As for the firm size, 43% of the 356 companies have more than 500 employees. Small (10-99 employees) and medium (100-499 employees) enterprises composed 54.3 % of the total companies. Ten small size companies or 2.8 % of the total company samples were involved in this study. Compared with Taiwan, the U.S. sample had a higher percentage of large companies (64.2 %). In other words, the Taiwan sample had more smaller sized companies than the U.S. sample.

Table 11
Company profiles of final samples (percentage)

Country	*TTL*	*Taiwan*	*USA*
Company (356)	*100.0*	*69.4*	*30.6*
Firm Size			
Micro (Less than 10)	2.8	3.2	1.8
Small (10-99)	26.5	34.8	7.4
Medium (100-499)	27.8	28.3	26.6
Large (more than 500)	43.0	33.4	64.2
Samples Resources			
Universities	90.2	95.1	78.0
Fortune/commonwealth company	6.5	1.6	17.4
Private contact	3.4	3.2	4.6

Data Coding and Analysis Unit

Data coding was performed using the 1987 Standardized Industrial Classification Code developed and used in USA. The industries participating in this study are described at Appendix D.

The unit of analysis is the company. The study explores the relationship between corporate culture and corporate performance within companies. Data from the same company are aggregated into a total for the company. The next section describes the results of data examination.

Data Characteristics

Before applying analysis techniques, the characteristics of the data are examined to determine if they meet the assumptions to use multivariate techniques to test the six hypotheses. This section examines the characteristics of the distribution.

To apply multivariate analysis, normal distribution of data is required, and the histogram is widely used for this determination. The histogram is drawn based on the frequency of the data values. Thus, if the data are normally distributed, the normal curve can be superimposed on the distribution. Figures 5 and 6 describe the corporate culture distributions in both countries. The scores were obtained by averaging the four culture-score traits for each country. Graphically, they both represented a normal distribution. However, the U.S. data appeared to be more adaptive to the requirements of multivariate techniques than did Taiwan's. The results of the graphical data distribution examination on four culture traits are displayed in Appendix E. The results show that data for the four corporate culture traits approximate to be a normal distribution.

Figure 5.

Culture-Taiwan

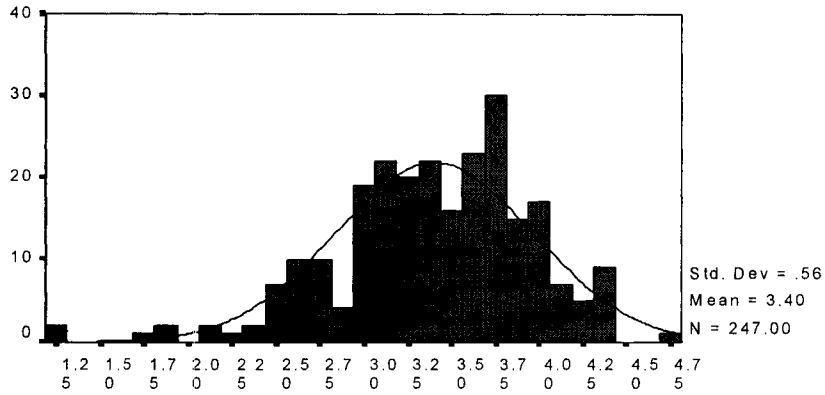
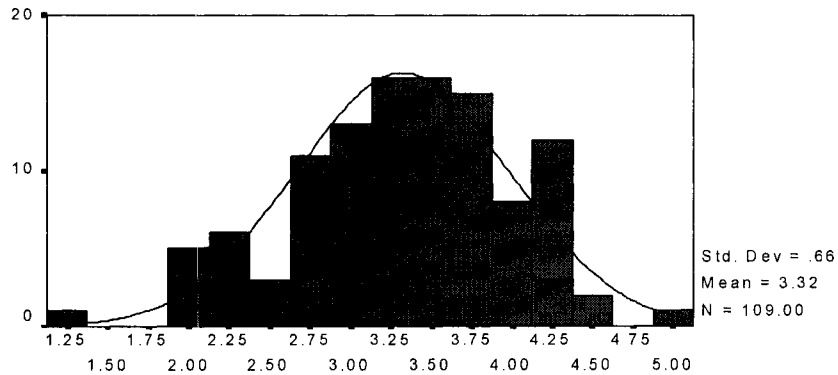


Figure 6

USA-Culture



Assumptions of Multivariate Analysis

This study uses multivariate techniques to test the six hypotheses. Multivariate techniques place great demands on understanding, interpreting and articulating of the results based on relationships that are ever increasing in complexity; therefore, one must exam data before applying multivariate techniques. This study used two multivariate techniques-Factor Analysis and Multiple Regression Analysis.

The three main procedures for applying multivariate techniques are: (1) testing the assumptions, (2) interpreting the model, and (3) verifying results. Thus, the data were examined to ensure that the assumptions underlying multivariate analysis were met before using factor analysis to identify the culture traits or dimensions of the Chinese questionnaire and multiple regression analysis to examine relationships between dependent and independent variables.

Testing the assumptions is critically important in multivariate analysis because the relationships between variables are more complicated than in bivariate analysis. The assumptions for multivariate analysis are: (1) normality of the error term, (2) homoscedasticity of the residuals, (3) linearity of the error terms, and (4) independence of the error terms. If the data do not meet these assumptions, they need to be transformed before applying multivariate techniques.

Normality of the Error Term

The assumption that the data are normally distributed is the most fundamental one in multivariate analysis. Normality can be demonstrated when the shape of the data distribution approximates the normal distribution. The assessment of the assumption is critical because if the data's variation from the normal distribution is sufficiently large, all statistical results would be invalid. There are two ways to assess normality; graphically and statistically. One graphical tool is the histogram, which is often used to test the normality of error terms. Figure 7 shows the residual distributions of one of the dependent variables, overall organization performance. The shape of the residual distributions is bell shaped. Thus, it is approximated to be a normal distribution.

The normal probability plot was also used to test normality on the culture traits. This approach compares the cumulative distribution of actual data values with the cumulative

distribution of a normal distribution. The approximate extent to a normal distribution can be visually judged based on how close the residual line is to the diagonal line. If the residual line overlaps the diagonal line, a perfect normal distribution is indicated. Appendix F displays the graphical distribution results of the four culture traits. The normal probability charts for adaptability and consistency's indicate approximate normality. The charts for mission and involvement culture traits show positively skewed distributions.

Figure 8 depicts the normal probability plot of overall organization performance. The cumulative residual line is a little beyond and downward toward the diagonal line. It also shows that the residual distribution approximates the normal distribution.

In summary, the data distribution graphically matches the assumption of normality.

Figure 7: Histogram of Standardized Residual

Dependent Variable: Overall Organization Performance

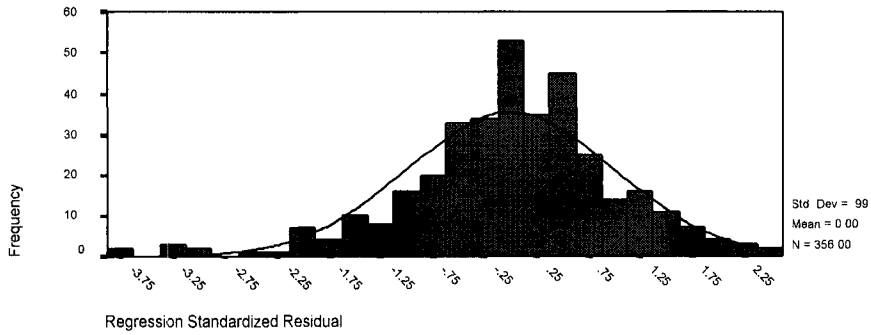
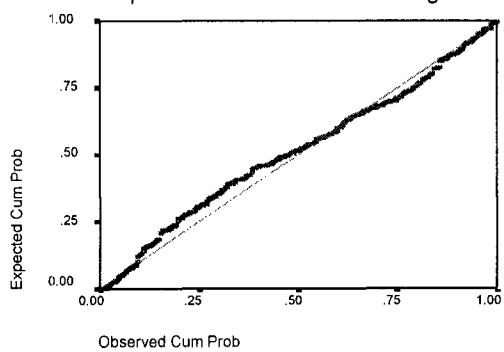


Figure 8: Normal P-P Plot of Standardized Residual

Dependent Variable: Overall Organization Performanc



Normality of the error term can also be examined statistically. The skewness and kurtosis values of the four culture traits and overall organization values were used to test the degree of departure from the normal distribution in the combined sample and in the two countries (Hair et al., 1998). Table 12 reports the skewness and kurtosis values in the three samples. Almost all the variables show negative skewness, except for the mission trait in the combined sample. Its distribution is skewed to the left. The other distributions are skewed to the right. Generally speaking, the U.S. sample showed less skewness and kurtosis than Taiwan's. This indicates that the U.S. data are more normally distributed. Also, the U.S. data displayed a flatter distribution than Taiwan's data. The details of Table 12 are included as Appendix G.

Table 12
Normality Statistic Test

	Samples	Involvement	Consistency	Adaptability	Mission	Overall Performance
Skewness	TTL sample	-.667	-.369	-.412	.570	-.767
	Taiwan	-.766	-.441	-.485	-.664	-.796
	U.S.	-.450	-.385	.050	-.434	-.668
Kurtosis	TTL	.556	.333	.085	.374	.456
	Taiwan	1.025	.552	.751	.907	.377
	U.S.	-.061	.009	-.693	-.436	-.615

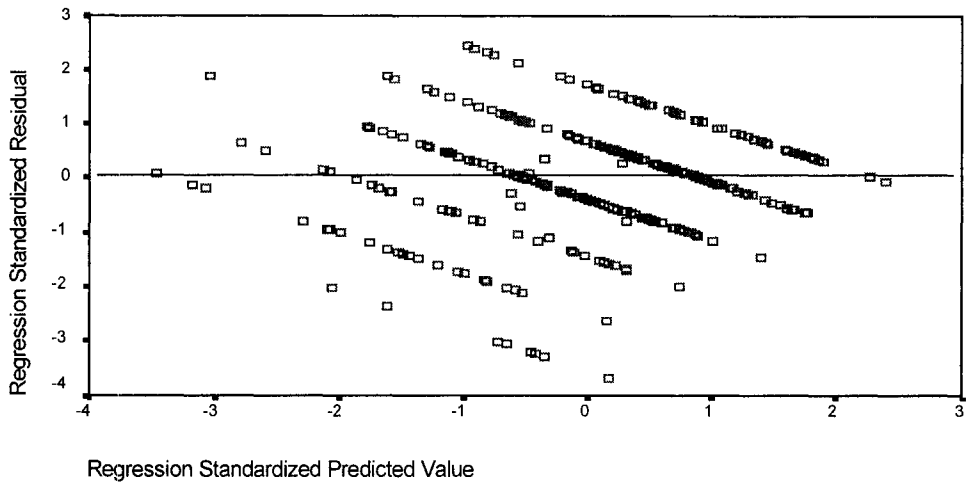
Homoscedasticity of the Residuals

In regression analysis, each set of independent variables can predict certain values. According to Hair and Black (1998), the residuals for all predicted values should remain constant in regression analysis. This assumption for regression analysis also requires that the residuals remain constant for all predicted values. Figure 9 depicts the spread of residuals against each predicted value and indicates that there is no more variation around large values of predicted values (corporate performance) than around small values of predicted values. The spread of residuals does not increase with increasing independent variables' predicted values. There is

random dispersion of dependent variable variances. Also, residuals around the horizontal straight line through 0 are randomly spread. It thus can be concluded that the equal variance assumption is met, and the data characteristics meet the homescedasticity assumption.

Figure 9. Scatterplot of Residuals

Dependent Variable: Overall Organization Performance

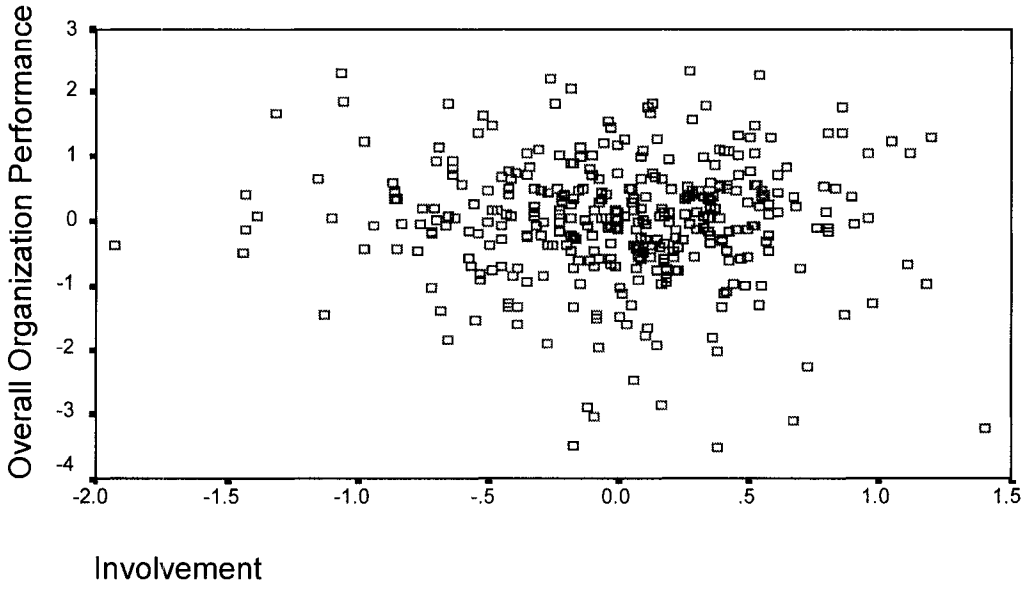


Linearity of the Error Terms

The linearity of the relationship between dependent and independent variables represents the extent that a change in the dependent variable is associated with the independent variable (Hair. et al., 1998). This section examines the linearity between the organizational culture traits and performance indicator through partial regression plots. Figure 10 presents the partial regression plot for involvement and overall organization performance. The pattern of residuals was not curvilinear; thus indicating a linear relationship between involvement and overall corporate performance variable. The partial plots for the other three traits (recorded in Appendix H) also show a lack of a curvilinear pattern. Thus, the assumption of linearity was met.

Figure 10. Partial Regression Plot

Dependent Variable: Overall Organization Performance



Independence of the error terms

To use multivariate techniques for predictor research, the predicted values of dependent variables should be independent. This can be examined by plotting residuals against predicted values (Hair et al., 1998). If the residuals are independent, the pattern should appear random and similar to the null plot of residuals. Figure 9 presents the scatterplot of regression predicted value and standardized residual. It indicates that a variety of predicted values produced a variety of residuals. Therefore, the residuals (error terms) can be regarded as independent.

Factor Analysis

The two purposes of factor analysis are summarization and data reduction. Factor analysis can reduce number of items used in an original scale. They define the underlying structure of a data matrix by identifying the separate dimensions of a set of items and determining the extent to

which each item is explained by the dimensions. The researcher must know how the variables are interrelated to better interpret the results. Thus, factor analysis can assist in selecting a representative subset of variables (items) or even in creating new variables as replacements for the original variables while still retaining their original character. Factor analysis is an interdependence technique in which all items are simultaneously considered, each related to all others, while still employing the concept of the variate, the linear composite of variables.

This study utilizes factor analysis for the Chinese translation to identify the items that best measure Denison's four culture traits. Factor analysis provides the basis for incorporating the original items in scales with items that are based on each factor in the Chinese translation. Through factor analysis, the researcher can gain a clear understanding of how items can be extracted to construct valid measures of the corporate culture trait.

Factor analysis was used to validate the Chinese translation of two questionnaires, which are corporate culture and performance. The rest of this section describes the factor analysis results in three sections. First, the assumptions used to conduct the factor analysis are described. Second, the application of factor analysis to identify the items for measuring the constructs is reported. Third, the reliability estimates of the new scales are reported.

Assumption of Factor Analysis

The critical assumptions underlying factor analysis are more conceptual than statistical (Hair & Black, 1998). Some degree of correlation is desirable because the objective is to identify interrelated sets of items/variables. However, the items should not have correlation coefficients above .90 as they could produce a multicollinearity effect (Hair et al., 1998). Correlation coefficients among all 60 items ranged from –.428 to .718. Thus, the Taiwan data used for factor analysis do not have a multicollinearity effect.

Next, the study would need to test the significance of correlation among variables and the Bartlett's test of sphericity was used for this. Table 13 shows the results. The Chi-Square of 9301.799 shows that the coefficients among the items/variables were significant. Another measure to quantify the degree of intercorrelations among the items/variables and the appropriateness of factor analysis is the measure of sampling adequacy (MSA). The MSA score in this study is .937, which was above the acceptable level of .50 (Hair et al., 1998).

Table 13: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.937
Bartlett's Test of Sphericity	Approx. Chi-Square	9301.799
	df	1770
	Sig.	.000

Application of factor analysis

Factor analysis was performed on the 289 Taiwanese returned questionnaires because they used the Chinese translation of the questionnaire (as described in Chapter III). Factor analysis was not performed on the U.S. returned questionnaires because the English version has already been demonstrated to have validity, most recently reported by Cho (2000) as can be seen in Appendix C. Cho's analysis of 36,848 responses verified the construct validity of the 60 organizational culture items in Denison's four factors of organizational culture. Each of the four cultural factors is measured with 15 items composed of three sub-scales. Cho's work supported these measures. In Appendix B, Table 1 shows that the four 15-item OC scales in Denison's questionnaire are distributed into three factors, with three sub-scales composed of five items. The Taiwanese 289 responses were factor analyzed with Varimax rotation. The results of the rotated component matrix were then used to determine which items best measure corporate culture.

Before interpreting the results of the rotated component analysis, some terms and data conditions are discussed. The cases entered into the factor analysis numbered 289. Two criteria

relate to sample size in factor analysis. Normally, the preferable sample size is 100 or more. A more acceptable sample size is 10 times as many observations as there are items/variables to be analyzed. With 60 items and 289 observations, the number of items/variables is less than ideal. Thus, the factor analysis was expected to extract 12 components to meet the 12 Denison's variables. Thus, the ratio of sample size to variable in this factor analysis is about 24 to 1, which is above the acceptable ratio, 10-to-1. The sample size provides a good chance to minimize the chance of "overfitting" the data.

Principal component analysis was used to extract the component factors in this study. The prior knowledge suggests that the principal component analysis can derive factors that contain some specific error variance. Principal component analysis is moderate when factors are used to predict or maximize the variance explanation on the original set of variables.

Eigenvalues (squared factor loadings) also can be used to help select the number of factors. Hair et al. (1998) states, " The rationale for the latent root criterion is that any individual factor should account for the variance of at least a single variable if it is to be retained for interpretation (p. 103). Thus, eigenvalues are set at 1 and above in this study. The terms assisted in picking factors whose eigenvalues are greater than 1 as significant ones.

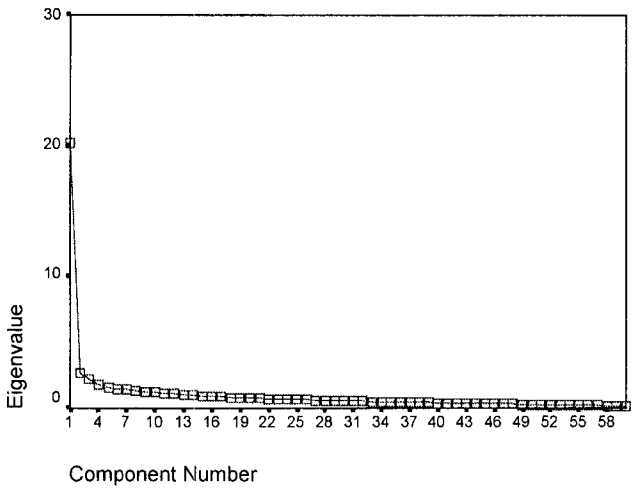
The varimax rotation is used to extract component factors because it clearly separates factors by minimizing the sum of variances of required loadings of the factor matrix (Hair, et. al., 1998). Thus, the loadings of each variable can be used to identify the underlying structures of variables.

A .40 factor loading was used to assess the underlying dimension. Items with .30 loadings would be considered valid to measure an underlying variable if necessary. This flexible principle can adjust for the possible lack of component extraction results. According to Hair (1998), factor loadings are the correlation coefficients of each variable with the factor. Loadings depict the degree of correspondence between an item/variable and a factor. Loadings also indicate the

representation of factors to variables (Hair et al., 1998). Also, when lower loadings considered are added to the interpretation based on other considerations, the acceptable level could be increased and significant.

The rotated component matrix for the Taiwanese respondents appears in Appendix I. Figure 11 shows a screen plot, in which 13 components were extracted to account for 63.49 % of the total variance of the culture concept with the eigenvalues of 1 and above. All data in "total variance explained" is in Appendix I.

Figure 11. Scree Plot



The percentage of variance criterion is based on achieving a specified cumulative percentage of total variance extracted by successive factors. In social science, 60 % of the total variance can be regarded as satisfactory, according to Hair, et. al. (1998). Thus, 63 % of the variance from the extracted 13 components was satisfactory. The items that were based on one dimension that were also one of the four culture factors selected as appropriate measures.

The rotated component matrix for Taiwan respondents was distributed into 13 components. As mentioned above, factor loadings greater than + .30 are considered acceptable. However, a

more rigorous criterion of +.40 was used in this study. The logic matched the criteria of factor loading mentioned by Hair et al. (1998). According to Hair et al.(1998), in a sample of 250 or greater respondents, factor loadings of .35 and above are significant (p. 112). Also, loadings greater than $\pm$ .40 are considered acceptable; and the higher loadings greater than .40 are considered strong and practically significant (Hair et al., 1998, p. 111). The results of the rotated factor matrix were compared with those reported by Cho (2000); the perception of mission factors almost met Denison's design. Fourteen out of 15 (items 46-60) items labeled as the first factor corresponded to the 15 items that assess "mission"; these were retained as an adequate measure of mission. The factor loadings ranged from .586 to .743 (items 46-49, 51-57, and 59-60). Only item 58 was excluded from measuring the mission culture in this study. Item 50(-.524) also corresponded with the mission trait; however, its description was negative compared with the other four items under the same scale. So, reverse coding was necessary to measure the participants' responses to item, 50.

Factor analysis also indicated that five items used to measure the four cultural dimensions needed to be reverse coded. These five items had a passive design, so responses to them should be reverse coded to get a true perception. Therefore, "agree" on these items should be interpreted to "disagree". These five items are listed below.

Item 29 " Working with someone from another part of this organization is like working with someone from a different organization.

Item 34 " Attempts to create change usually meet with resistance."

Item 39 " The interests of the customer often get ignored in our decisions."

Item 43 " Lots of things "fall between the cracks."

Item 50 " our strategic direction is unclear to me."

The items loading on the first component corresponded to the mission trait as obvious and strong. However, the other three cultural dimensions components were not clear. Thus, the 15 items assessing mission were removed from factor analysis; the remaining 45 items were run to obtain a clearer picture of the underlying dimension. The factor loadings of the second rotated component matrix were compared to Denison's findings on culture dimensions to confirm the relationship between items and scales.

The second rotated component matrix table, which included the remaining 45 items, appears in Table C of the Appendix I. This table yielded the three remaining cultural dimensions. Lastly, involvement was measured by seven items whose factor loadings ranged from .406 to .660 at most. Consistency was measured by nine items whose factor loadings ranged from .355 to .870. The adaptability trait was measured by nine items whose factor loadings ranged from .356 to .822. Mission had the strongest similarity to Denison's original measure. Mission trait was measured by 14 items ranging from -.524 to .743. The results indicated that the perception of mission, in an organization, reached highly common agreement in both countries and in Denison's study. Fourteen items used in the original Denison model were perceived by the participants and used to measure the mission trait. The details of the results of factor analysis were retained at Appendix J. The reliability test, in the next section, presents the last stage of factor analysis, which is results verification.

Results of Verification-Reliability Test

The items chosen to measure the four organizational culture factors in the English version were used in the Chinese version so that both the English and Chinese questionnaires contained the same items. Then, reliability estimates were obtained. According to Hair, et al.(1998),

"Reliability is an assessment of the degree of consistency between multiple measurements of a variable." (p. 117). This study used Cronbach's alpha to measure the reliability of the items extracted for the four variables. Cronbach's alpha is widely used to estimate the consistency of an entire scale. (Hair et al., 1998)

Table 14
Reliability Test Results

	Cronbach Alpha			Standardized Cronbach Alpha		
	TTL	Taiwan	USA	TTL	Taiwan	USA
Involvement	.9343	.9325	.9324	.9349	.9324	.9339
Consistency	.674	.6412	.77	.6765	.6437	.7707
Adaptability	.8009	.7997	.8128	.802	.8005	.8133
Mission	.847	.8518	.8396	.8462	.8513	.8397

Table 14 presents the results of the reliability test for the detected measure items. The details are recorded in Appendices K, L and M. The Cronbach alpha was used to judge whether the measured items were effective or not. The acceptance level of Cronbach alpha should be .70 or it can be reduced to .60 (Hair, et. al., 1998, p. 118). The Cronbach alpha values for the four cultural dimensions ranged from .6412 to .9343. These are all within the acceptance ranges and the high Cronbach alpha suggests that the scale is likely to be reliable with regards to the internal consistency of the items.

The selective items for each culture trait could be used to measure the culture trait. The next section presents the hypotheses testing results using ANOVA, and Multiple regression analysis.

Hypotheses Testing and Results

Hypothesis 1 tests whether there are differences in organizational culture traits and corporate performance for Taiwan and the U.S.

Hypothesis 1_0: There is no difference between Taiwan and the U.S. on the four organizational culture traits and corporate performance.

Hypothesis 1_a: There is a difference between Taiwan and the U.S. on culture traits and corporate performance.

Tables 15 and Table 16 present the results of the One Way ANOVA and descriptive statistics, respectively. There are significant differences between respondents from the two countries on three variables: Corporate performance (F = 4.086, p = .04), involvement (F = 6.037, p = .014) and adaptability (F = 16.743, p = .000). There are no differences for consistency (F = 3.557, p = .06) and mission (F = .056, p = .813). Thus, the null hypothesis can be partially rejected for corporate performance, involvement and adaptability.

The means in Table 15 show that U.S. respondents rate themselves higher on corporate performance, consistency, and mission, but lower on involvement and adaptability.

Table 15
Descriptive

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Corporate Performance	Taiwan	247	2.9632	1.0585	6.735E-02	2.8306	3.0959	.00	5.00
	USA	109	3.2127	1.1062	.1060	3.0027	3.4228	.00	5.00
	Total	356	3.0396	1.0780	5.713E-02	2.9273	3.1520	.00	5.00
Involvement	Taiwan	247	3.5683	.7232	4.602E-02	3.4776	3.6589	1.00	5.00
	USA	109	3.3580	.7900	7.567E-02	3.2080	3.5080	1.00	4.86
	Total	356	3.5039	.7495	3.972E-02	3.4258	3.5820	1.00	5.00
Consistency	Taiwan	247	3.2789	.6052	3.850E-02	3.2030	3.3547	1.00	4.89
	USA	109	3.4171	.7050	6.753E-02	3.2832	3.5509	1.33	4.89
	Total	356	3.3212	.6396	3.390E-02	3.2545	3.3878	1.00	4.89
Adaptability	Taiwan	246	3.3302	.4960	3.162E-02	3.2680	3.3925	1.56	4.44
	USA	109	3.0620	.7091	6.792E-02	2.9274	3.1966	1.56	4.89
	Total	355	3.2479	.5822	3.090E-02	3.1871	3.3087	1.56	4.89
Mission	Taiwan	247	3.4240	.7440	4.734E-02	3.3308	3.5173	1.00	5.00
	USA	109	3.4451	.8444	8.088E-02	3.2848	3.6055	1.21	5.00
	Total	356	3.4305	.7750	4.108E-02	3.3497	3.5113	1.00	5.00

Table 16
ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Corporate Performance	Between Groups	4.707	1	4.707	4.086	.044
	Within Groups	407.803	354	1.152		
	Total	412.510	355			
Involvement	Between Groups	3.344	1	3.344	6.037	.014
	Within Groups	196.088	354	.554		
	Total	199.432	355			
Consistency	Between Groups	1.444	1	1.444	3.557	.060
	Within Groups	143.765	354	.406		
	Total	145.210	355			
Adaptability	Between Groups	5.434	1	5.434	16.743	.000
	Within Groups	114.571	353	.325		
	Total	120.005	354			
Mission	Between Groups	3.376E-02	1	3.376E-02	.056	.813
	Within Groups	213.193	354	.602		
	Total	213.226	355			

Table 16 presents the ANOVA analysis on Taiwan and U.S. groups. There are differences between the two countries on adaptability ($F = 16.74$, $p < .001$) and involvement ($F = 6.04$, $p = .01$). Consistency ($F= 3.56$, $p = .06$) is close to significant. This is no difference on mission in the two countries. As for corporate performance ($F = 4.09$, $p = .04$), there are differences in the two countries' participants.

Hypotheses 2

The four culture traits (involvement, consistency, adaptability, and mission) are positively related to corporate effectiveness in the U.S. and Taiwan.

Hypothesis 2_{a0}: Involvement, consistency, adaptability, and mission are negatively related or not related to corporate effectiveness in the U.S.

Hypothesis 2_a: Involvement, consistency, adaptability, and mission are positively related to corporate effectiveness in the U.S.

Table 17
Organizational Culture and Corporate Effectiveness in the U.S.

	Budget Achievement	Sales/ Revenue Growth	Market Share	Profitability/ ROA	Quality of Products & Services	New Product Development	Employee Satisfaction	Overall Organizational Performance
Involvement	.233**	.263**	.186*	.235**	.351**	.233**	.619**	.544**
Consistency	.393**	.300**	.226**	.274**	.442**	.349**	.625**	.646**
Adaptability	.222*	.200*	.138	.282**	.398**	.400**	.582**	.603**
Mission	.450**	.439**	.300**	.366**	.489**	.408**	.600**	.719**

**. Correlation is significant at the 0.01 level (1-tailed).
*. Correlation is significant at the 0.05 level (1-tailed)

Table 17 presents the Pearson correlations for the four culture traits and the eight corporate effectiveness indicators in the U.S. Consistency and mission were found to be positively related to all the effectiveness indicators at the 0.01 significance level. Involvement was positively related to all eight effectiveness indicators at the 0.01 significant level, except for market share at the 0.05 level. Adaptability was positively related to seven of the eight effectiveness indicators, five at the .01 level (profitability/ROA, quality of products & services, new product development, employee satisfaction, and overall organizational performance) and two at the 0.05 level. Adaptability was found not to be related to market share ($p = .138$). Thus, all the four culture traits were found to be strongly and positively related to employee satisfaction ($.582 \leq r \leq .625$) and to overall organizational performance ($.544 \leq r \leq .719$). The four culture traits had weaker correlations with market share ($.138 \leq r \leq .300$). Table 17 shows that mission had the strongest correlation with effectiveness ($.300 \leq r \leq .719$), followed by consistency ($.226 \leq r \leq .646$), adaptability ($.138 \leq r \leq .603$), and involvement ($.186 \leq r \leq .619$). In summary, almost all of culture traits were significantly and positively related to all eight effectiveness indicators except

for two which were adaptability and market share. Therefore, the null hypothesis is partially rejected for U.S. companies.

Hypothesis 2_{b0}: Involvement, consistency, adaptability, and mission are negatively related or not related to corporate effectiveness in Taiwan.

Hypothesis 2_{b}: Involvement, consistency, adaptability, and mission are positively related to corporate effectiveness in Taiwan.

Table 18
Organizational Culture and Corporate Effectiveness in Taiwan

	Budget Achievement	Sales/ Revenue Growth	Market Share	Profitability/ ROA	Quality of Products & Services	New Product Development	Employee Satisfaction	Overall Organizational Performance
Involvement	.292**	.364**	.264**	.330**	.305**	.294**	.436**	.396**
Consistency	.391**	.436**	.307**	.398**	.454**	.401**	.488**	.478**
Adaptability	.279**	.351**	.259**	.298**	.351**	.342**	.378**	.375**
Mission	.350**	.455**	.388**	.417**	.435**	.404**	.506**	.526**

**. Correlation is significant at the 0.01 level (1-tailed).

Table 18 presents the Pearson correlation coefficients for the four culture traits and the eight effectiveness indicators in Taiwan. All the culture traits were found to be significantly and positively related to the eight effectiveness indicators at the .01 level. Mission showed the strongest relationship ($.350 \leq r \leq .526$), followed by consistency ($.391 \leq r \leq .478$), involvement ($.292 \leq r \leq .396$), and adaptability ($.279 \leq r \leq .375$). Therefore, the null hypothesis is rejected. Involvement, consistency, adaptability, and mission are positively related to corporate effectiveness in the Taiwan.

Hypothesis 2_{c0}: Involvement, consistency, adaptability, and mission are negatively related or not related to overall corporate effectiveness in both USA and Taiwan.

Hypothesis 2_c: Involvement, consistency, adaptability, and mission are positively related to overall corporate effectiveness in both USA and Taiwan.

Table 19
Correlation Between Culture Traits and Corporate Effectiveness-Taiwan and U.S.

	Budget Achievement	Sales/ Revenue Growth	Market Share	Profitability/ ROA	Quality of Products & Services	New Product Development	Employee Satisfaction	Overall Organizational Performance
Involvement	.253**	.319**	.221**	.287**	.293**	.265**	.483**	.427**
Consistency	.399**	.386**	.286**	.356**	.456**	.384**	.537**	.533**
Adaptability	.220**	.271**	.180**	.270**	.318**	.346**	.428**	.423**
Mission	.383**	.449**	.356**	.399**	.448**	.406**	.537**	.584**

** Correlation is significant at the 0.01 level (1-tailed).

Table 19 presents the Pearson correlation coefficients for the four culture traits and corporate effectiveness indicators for the combined sample (Taiwan and the U.S.). The four cultural traits were positively and significantly related to corporate effectiveness indicators at the .01 level. Generally speaking, mission still showed the strongest correlation ($.356 \leq r \leq .584$) to all the corporate effectiveness indicators, followed by Consistency ($.286 \leq r \leq .537$), involvement ($.221 \leq r \leq .483$) and adaptability ($.280 \leq r \leq .428$) . Therefore, the null hypothesis is rejected. Involvement, consistency, adaptability, and mission are positively related to overall performance in the U.S and Taiwan.

The next four hypotheses (3 to 6) focus on the extent to which the results of this study fit Denison's (1995) model in terms of the relationships of two of the four organizational culture factors (involvement, consistency, adaptability, mission) to specific performances as described in

Hypotheses 3 through 6. Thus, multiple regression analysis was used to determine if the two hypothesized organizational culture factors, in the presence of the two other organizational culture factors, were related to the specified performance outcome. A brief introduction of multiple regression analysis was initiated first, and then the regression results were presented and applied to the hypothesis.

The objective of multiple regression analysis is to use the independent variables whose values are known to predict the single dependent value selected by the researcher. Thus, regression analysis was useful to apply in this study. Regression analysis should be used only when both the dependent and independent variables are metric. The four assumptions required for multivariate analysis were tested for linearity of the phenomenon measured, constant variance and independence of the error terms, and normality of the error term distribution. The results showed the assumptions and requirements for regression analysis.

Hypotheses 3 to 6 were used to test the linkages of the two culture dimensions to the core specific effectiveness indicators used in Denison's (1995) model. To obtain a complete picture of the linkages, the study uses eight regression equations to test the four hypotheses. There were also eight regression analyses initiated for Taiwan, and eight for the U.S. to verify the linkages. The four culture traits were entered as independent variables in the regression equations to determine if the hypothesized organizational culture traits were related to the specific effectiveness measure in the presence of the four traits.

As all independent variables and dependent variables were positively inter-correlated, regression analysis was used to confirm the strength of the linkage. The Stepwise approach was used to enable the equation to detect the best factors to predict each performance indicator. This approach is one of the most popular sequential approaches to variable selection. (Hair et al., 1998, p. 178) Each variable is considered for inclusion prior to developing the equation. The

independent variable that can explain the most variance of the dependent variable is selected first, and the approach continues to find the next strongest independent variable accounting for the variance of the dependent variable until the best solution is found. Thus, the stepwise approach can help researchers to find the best factors to predict each performance indicator.

This study uses 356 company samples, to achieve a statistical significance with a power of .80. The researcher expects to detect R^2 values in excess of 3 to 7 % at a significance level of .01 or in excess of 4 to 5 percent at a significance level of .05. Thus, the study will detect R^2 values at a significance level of .05.

The following describes the results of the multiple regression analysis on the four cultures traits (independent variables) and the eight performance indicators (dependent variables). In addition, when checking the influence of demographic factors to corporate effectiveness, company size was found to be significant (Sig. = .001). Further information is contained in Appendix N. Thus, company size also is added to the independent variables to check the influence of company size on corporate performance.

Budget Achievement

The stepwise regression results show that collinearity is not present in the individual variables. The adjusted R^2 is .184. ; the F is 27.748 ($p < .001$). The betas associated with the two independent variables were significant: consistency ($t = 3.129$, $p = .001$), and mission ($t = 2.564$, $p = .001$). Thus, consistency and mission are related to budget achievement. The regression equation is as follow:

Budget achievement = -1.240 + .608 (Consistency) + .46 (Company Size) + .409 (Mission)

Sales/Revenue Growth

This section describes the results of regressing culture traits on sales/revenue growth. The regression results show that collinearity is not present in the individual variables (VIF = 1.016 < 10). The adjusted R square is .230, which indicates that the model accounted for 23 % of the variance in sales/revenue growth; the $F_{(2, 353)}$ is 52.8 39($p < .001$). The beta associated with one independent variable is significant: mission ($t = 9.092$, $p = .001$). Therefore, the mission is positively related to sales/revenue growth. The regression is as follows:

Sales/revenue growth = -.347 + .813 (mission) + .142 (company size)

Market Share

The stepwise regression results show that collinearity is not present in the independent variables. The adjusted R^2 is .167, which indicates that the model accounts for 16.7 % of the variance in market share; the F is 36.458 ($p < .001$). The beta associated with one independent variable is significant: mission ($t = 6.76$, $p = .001$.) The mission culture trait is positively related to market share. The equation for market share is as follows:

Market share = 6.854E-02 + 0.641 (Mission) + 0.18 (company size).

Profitability/ROA

The stepwise regression results shows that collinearity is not present in the independent variables. The adjusted R square is .174, which indicates that the individual variable accounts for 16.7 percent of the variance in profitability/ROA; the F is 38.2 ($p < .001$). The beta associated

with one independent variable is significant: Mission (t =7.815, p = .001). The mission trait is positively related to profitability/ROA. The equation is as follow:

Profitibility/ROA = -.311 + .763 (Mission) + .124 (Company Size).

Quality of Product and Services

This section presents the results of the relationship analysis between the four culture traits and the quality of product and service variable. The stepwise regression results shows that collinearity is not present in the individual variables (VIF < 10). The adjusted R square is .236; the F is 37.535 (p < .001). The betas associated with the two independent variables are significant: consistency (t = 3.549, p = .001), and mission (t =3.382, p = .001), In the four culture traits, consistency and mission traits are positively related to quality of product and services. In addition, the level of the quality is varied based on the different company sizes. The regression equation to is as follows:

Quality of product and services = (8.931E-02) + 0.503 (consistency) + 0. 393 (mission) + (7.206E-02)(company size)

New Product Development

This section presents the results of regressing the four culture traits on new product development. The stepwise regression results shows that collinearity is not present in the individual variables (VIF = 2.373 < 10). The adjusted R square is .173; the F is 38.239 (p < .001). The betas associated with three independent variables are significant: mission (t = 3.617, p = .001), and consistency (t =2.418, p = .001). Mission and Consistency are positively related to

new product development in a company. Company size is not significant on this new product development. The regression model is as below:

New Product Development = -.312 + .517 (Mission) + .419 (Consistency)

Employee Satisfaction

This section presents the results of the relationship between the four culture traits and employee satisfaction. Three of the four culture traits are related to employee satisfaction. These were mission, consistency and involvement. The ranges of VIF are from 2.189 to 2.739, which are less than 10. Thus, collinearity is not present in the individual variables. The adjusted R square is .330; the F is 59.242 ($p < .001$). The betas associated with the three independent variables are significant: mission ($t = 3.474$, $p = .001$), consistency ($t = 3.562$, $p = .001$), involvement ($t = 2.106$, $p = .001$). Consistency was the strongest predictor of the three culture traits, followed by mission and involvement. The regression equation to predict the extent of employee satisfaction is as follows:

Employee Satisfaction = -1.024 + 0.419 (mission) + 0.515 (consistency)
+ 0.235 (involvement)

Overall Company Performance

This section presents the results of the predictors to overall company performance. Two culture traits influence overall performance based on samples from Taiwan and the U.S. Mission and consistency predict the whole company performance. The stepwise regression results shows that collinearyity is not present in the individual variables based on the fact that VIF ranged from

1.029 to 2.402 which are less than ten. The adjusted R square of .364 indicates the regression model had 36.4 % of accuracy on predicting employee satisfaction. The F is 68.766 ($p < .001$). The betas associated with the three independent variables were significant: mission ($t = 2.564$, $p = .001$), and consistency ($t = 3.129$, $p = .001$). Mission and consistency were positively related to whole company performance. The regression model is as follows:

$$\text{Whole company performance} = -0.333 + 0.648\ (\text{mission}) + 0.356\ (\text{consistency}) + (6.584\text{E-}02)(\text{company size}).$$

Table 20 summarizes the regression results for the eight dependent performance measures. The strongest organizational trait culture is mission trait. Mission is positively related to all the performance indicators in this study. The second strongest culture trait is consistency. Consistency is positively related to the five performance variables, which are budget achievement, quality of product and service, new product development, employee satisfaction, and whole company performance. Involvement is related to employee satisfaction only. Adaptability is not related to any corporate performance assessed in this study.

Table 20
Regression Analysis Summary

	Involvement	Consistency	Adaptability	Mission
Budget achievement		X		X
Sales/revenue growth				X
Market share				X
Profit/ROA				X
Quality of product and service		X		X
New product development		X		X
Employee satisfaction	X	X		X
Whole company performance		X		X

Next, the above regression results are applied to hypotheses 3 to 6.

Hypothesis 3 is as follows:

Hypothesis 3_0: The externally focused organizational culture traits (mission and adaptability) are not related or are negatively related to sales growth and market share.

Hypothesis 3_A: The externally focused organizational culture traits (mission and adaptability) are positively related to sales growth and market share.

Based on the regression results in Table 20, null Hypothesis 3 can be partially rejected. Only mission is positively related to sales growth and market share.

Hypothesis 4 is as follows:

Hypothesis 4_0: The internally focused organizational culture traits (involvement and consistency) are not related or negatively related to quality and employee satisfaction.

Hypothesis 4_1: The internally focused organizational traits (involvement and consistency) are positively related to quality and employee satisfaction.

Based on the regression results in Table 20, involvement is positively related to employee satisfaction but not related to quality of product and service. Consistency is positively related to quality and employee satisfaction variables. Therefore, the null hypothesis 4 is partially rejected.

The Hypothesis 5 covers the predictive power of stable culture variables. The original hypothesis 5 is as follows:

Hypothesis 5_0: The stable focused organizational traits of mission and involvement are not related or negatively related to quality, ROI and sales growth.

Hypothesis 5_1: The stable focused organizational traits of mission and involvement are positively related to quality, ROI and sales growth.

Based on the regression results in Table 20, mission trait is related to all the performance indicators assessed in this study. Involvement is not related to the above three effectiveness indicators. Therefore, the null hypothesis 5 is partially rejected.

The Hypothesis 6 covers the flexible focused culture traits of involvement and mission. The original sets of the hypothesis 6 is as follows:

Hypothesis 6_0: The flexible focused organizational traits of involvement and mission are not related or positively related to product/service innovation.

Hypothesis 6_1: The flexible focused organizational traits of involvement and mission are positively related to product/service innovation.

Based on the regression results in Table 20, involvement is not related to product/service innovation variable. Mission trait is positively related to product/service innovation. Therefore, the null hypothesis 6 is partially rejected.

Table 21 summarizes the results of the hypotheses testing. Two hypotheses are rejected and the remaining hypotheses are partially rejected.

Table 21
Summary of Hypotheses Testing Results

Hypothesis	Results
1	null hypothesis is partially rejected.
2a	null hypothesis is partially rejected.
2b	null hypothesis is rejected
2c	null hypothesis is rejected
3	null hypothesis is partially rejected
4	null hypothesis is partially rejected
5	null hypothesis is partially rejected
6	null hypothesis is partially rejected

Assessing Multicollinearity

The correlation coefficients for the independent variables ranged from 581 to .761, indicating that all the independent variables are positively correlated. However, the coefficients are below .90; thus, the effect of multicollinearity was not existent in this study's independent variables (Hair et. al., 1998).

Table 22: Inter-correlation Matrix, Independent Variables

	Involvement	Consistency	Adaptability	Mission
Involvement				
Consistency	.688**			
Adaptability	.581**	.598**		
Mission	.695**	.761**	.639**	

** Correlation is significant at the 0.001 level (2-tailed).

Validation of the Results

Sub-samples could be used to test the hypotheses results. The sample was divided into two sub-samples based on country. The regression results for Taiwan and the U.S. separately are depicted below, and the SPSS results are recorded in Appendices O and Appendix P. The regression results in the two sub-samples are used to verify the results gained from the total samples. Chapter V discusses.

Table 23
Regression Results in Taiwan and U.S.

Country	Effectiveness Indicators	Regression Equation
Taiwan	Budget Achievement	= -8.40 + 1.054 (Consistency)
U.S.		= -1.504 + .907 (Mission) + .264 (Company Size)
Taiwan	Sales Growth	= -.335 + .538 (Mission) +.469 (Consistency)
U.S.		= -1.041 + .854 (Mission) + .231 (Company Size)
Taiwan	Market Share	= .361 + .760 (Mission)
U.S.		= .216 + .300 (Company Size) + .55 (Mission)
Taiwan	Profitability/ROA	= -6.213E –02 + .835 (Mission)
U.S.		-.975 + .721 (Mission) + .273 (Company size)
Taiwan	Quality of Product and Service	=.156 + .612 (Consistency)
U.S.		= 1.25 + .714 (Mission)
Taiwan	New Product Development	= -.396 + .437 (Mission) + .524 (Consistency)
U.S.		= .359 + .489 (Mission) + .528 (Adaptability)
Taiwan	Employee Satisfaction	= .623 + .548 (Mission) +.504 (Consistency)
U.S.		= -1.497 + .463 (Consistency) +.476 (Involvement) + .450 (Adaptability)
Taiwan	Overall Organization Performance	=.401 +.849 (Mission)
U.S.		= .428 +. 701 (Mission) + .441 (Consistency)

Summary

This chapter examined the data characteristics on respondents and performance used in the multivariate analyses to test the hypotheses. Several multivariate analysis techniques- factor analysis, ANOVA, multiple regression analysis- were used and discussed. The assumptions of multivariate analysis were tested and no multicollinearity was found in the sample data.

Factor analysis identified the underlying dimensions of the variables of the Chinese translation used by Taiwanese respondents. In Denison's design, each of the four culture traits were measured by 15 items. After factor analysis, the items that best measured each culture trait were selected in order to develop revised scales for the study. The reliability estimates obtained with the Cronbach's Alpha were above the minimally required .70 level, except one scale which was above .60. Thus, the new scales used to measure each culture trait were effective to measure the four culture traits. The results of testing the six hypotheses are as follows:

Hypothesis 1 was partially rejected. Three variables were found to be significantly different in both countries, which were quality of products and services, and involvement and adaptability. Three variables were slightly different but not significant. These were budgeting achievement, market share, and consistency. Mission trait showed no difference between the two countries. The perception of mission trait was very strong and proved to be a strong predictor in the statistical tests. The other variables had significance levels ranging from .174 to .527.

For Hypothesis 2, two of the sub-hypotheses were rejected, and one was partially rejected. Hypothesis 2 tested the coefficient relationship between culture traits and corporate effectiveness. The results of the U.S. samples showed similar as well as different relationships to the Taiwan and the combined samples. Similarity appeared on the strength extent of culture traits to corporate effectiveness. All three sub-hypotheses of the Hypothesis 2 indicated that mission trait showed the strongest predictability to corporate effectiveness, followed by consistency, involvement and adaptability. However, although the Taiwan sample and the combined sample depicted a positive relationship between culture traits and corporate effectiveness, the U.S. sample showed a different result. In the U.S. samples, the adaptability trait was not related to market share.

Hypotheses 3 to 6 were partially rejected. Mission was the strongest predictor of the performance indicators. Consistency was second most effective predictor of the performance indicators.

The above results indicate that organizational culture is positively related to corporate performance, but not in all the ways that Denison's organizational culture model depicts. Still all factors were positively related to performance indicators. However, the match of predictor to corporate performance indicators was partially different from Denison's research findings. The

perception of mission traits strongly influenced the corporate performance indicators. Consistency was also an important influence on the corporate performance indicators. Adaptability, however, had a weak relationship to the corporate performance indicators. Chapter V concludes the study by summarizing and discussing results and suggesting directions for future research.

CHAPTER V

DISCUSSION, IMPLICATIONS, AND CONCLUSION

This chapter concludes the study by highlighting the results and implications of these results, and by suggesting future directions for research studies on corporate culture and corporate performance. This chapter includes the following sections: 1) research results and conclusions, 2) implications for researchers and practitioners, 3) limitations of the study, and 4) recommendations for future research.

Research Results and Conclusions

This study analyzed data on firms in Taiwan and the U.S.; data were analyzed both separately and together. This section compares general results and Denison's findings, and discusses the similarities and differences between the samples of the two countries.

Although some researchers may dispute the relationship between corporate culture and corporate performance, this study provides additional empirical proof that a linkage exists. The most challenging part of collecting data was getting responses from the larger companies in both countries. A total of 260 questionnaires were sent out to current CEOs; 23 completed questionnaires returned to the researcher. All respondents were full-time managers from 356 companies in 74 industries. Next, the study shows the similarities and differences in corporate culture and whole corporate performance in both countries. The four culture traits are listed and described in a range from "significant difference" to "significant no-difference".

Hypothesis 1 examined differences between Taiwan and U.S. respondents and found differences in their perceptions of their companies' adaptability ($F = 16.743$, $p = .000$) and involvement ($F = 6.037$, $p = .014$). Perceptions of consistency were close to significance ($F = 3.557$, $p = .06$). There was no difference in perceptions of mission ($F = 0.56$, $p = 0.813$). Thus,

we conclude that perceptions of consistency and mission are the same in the two countries. Regarding overall corporate performance, there was no evidence of significant differences.

Taiwan's firms were rated higher on involvement and adaptability than U.S. firms in this study. Regarding involvement, Denison (1995) views it as reflecting managers' sense of ownership and responsibility. Higher involvement means that members are more committed to their work and to the organization and are given more responsibility to manage their own work. Members are encouraged to actively provide input into decision-making as a way to increase the quality of decision-making in the company. In a high-involvement organization, the contrast between management and non-management is generally much lower (Fisher, 1997) than in a low-involvement organization. In addition, employee participation in the decision-making process is automated; thus, the implicit control systems based on internal value system can more effectively facilitate coordination and integration. Lastly, integration results in the emergence of effectiveness in the whole organization. (O'Reilly, 1989; Saffold, 1988) Thus, the results indicate that Taiwanese firms' employees perceive greater participation in decision-making and a stronger sense of ownership in their companies than employees in U.S. firms. Taiwanese participants are more willing to take more responsibility for their company's growth.

In Denison's model, three sub-scales measure involvement: empowerment, team orientation, and capability development. The descriptive statistics in Appendix Q suggest that Taiwan is lower in empowerment and higher in team orientation and capability development scales than is the U.S. This indicates that Taiwanese firms may be more oriented to a team working style and are willing to spend more money on enhancing employees' skills, but they give employees less responsibility than do U.S. firms.

Taiwanese firms are also rated higher in adaptability than are U.S. firms. In Denison's (1995) theory, adaptability reflects the organization's internal ability to respond to environmental

changes by facilitating internal organizational changes to create values for its customers. (Denison & Neale, 1996) To enhance adaptability, an organization must develop and strengthen the norms and beliefs that support its ability to detect and interpret signals from external environments and transform them into internal cognitive, behavioral, and structural changes. Taiwan's higher adaptability could come from its more export-oriented market, which makes it more important for Taiwanese firms to adapt to competitive markets by creating change within their internal control systems.

Three sub-scales measure aspects of adaptability: Creating change, customer focus, and organizational learning. Taiwanese firms appear to rank higher on the three subscales than U.S. firms. These trends could be explained by the fact that Taiwanese firms encourage and approve of innovation. Each subunit of a Taiwanese firm cooperates to create change and solve any problems resulting from change. Taiwanese firms have a higher customer focus because they use customer feedback, on a daily basis, to adjust action. In addition, Taiwanese employees are more oriented to understanding customers' thoughts and are more willing to contact customers. The higher organizational learning scale in Taiwanese firms indicates that firms do not see failure in negative terms. They regard failure as a way to learn to avoid failure in the future. And, all the subunits of Taiwanese firms have a common agreement on the ways to treat failure.

In Denison's theory, consistency is defined as the extent of members' participation in organizational activities and decisions. (Denison & Neale, 1996) An organization with high consistency is expected to have strong core values, to reach agreement easily, and to assess a high degree of integration and coordination. However, highly consistent cultures could show the greatest resistance to change and adaptation.

Taiwanese firms show lower consistency than U.S. firms. Further analysis of the three sub-scales of consistency found that Taiwanese firms were weaker on core value and "coordination

and integration" scales. However, Taiwanese firms show higher orientation on the agreement scale (see Appendix Q). Taiwanese firms' core value strength was weaker than in U.S. firms. Lastly, there was no significant management style in Taiwanese companies. Unlike American employees, Taiwanese employees did not denote evidence of their awareness of clear and visible ethical codes to follow. On the matter of agreement, Taiwanese firms were higher in agreement than U.S. firms. This indicates that employees in Taiwanese firms are more likely to follow the orders and decisions coming directly from those higher in the hierarchy than U.S. firms' employees. Corporate culture also could have more of an impact on employees in Taiwanese firms than in U.S. firms. Finally, on the coordination and integration subscale, Taiwan was weaker than the U.S. This indicates that the operating approaches in Taiwan are not as consistent as in the U.S. Taiwanese employees reported less coordination and communication across divisions and levels. And, Taiwanese firms could have more trouble aligning strategies at different levels. In summary, the explanation for this trend could be that, in comparison to U.S. firms, Taiwanese firms do not provide clear value standards to facilitate coordination among a variety of functions and departments.

The mission statement has been the preeminent tool used by senior managers worldwide during the last 10 years (Bart, 1999). Basically, mission trait perception is similar in both countries. Mission trait can establish stability within an organization by emphasizing the organization's central purpose. Stability, however, can pose a negative effect on the organization. An organization with a strong mission trait could lack situational adaptability and change. The function of the mission trait is to clarify the organization's operating purpose and meaning, and to serve as a basis for the organization and its members in determining a course of action. This study found the mission trait to be similar in both countries, and its existence to be highly

applicable and generalizable. Therefore, a significant finding of this study is the similarity of mission trait in both Taiwan and the U.S. (F= .056, Sig. = .813).

The Taiwanese firms' high levels of both adaptability and involvement, compared to U.S. firms, point to the strength of Taiwanese firms on the flexibility dimension. On the other hand, U.S. firms had higher means for consistency and mission than Taiwanese firms. It may be that U.S. firms prefer stable and formal systems to run their businesses. Taiwanese firms may rely more on informal systems in order to maintain their flexibility. This suggests that Taiwanese firms may be more oriented toward reorganizing project teams to respond to rapid and unforeseen change. Taiwanese management could be more inclined to spend money on training employees to match the company's strategic actions. However, the management could still control the main decision-making power given that their empowerment extent is weaker. U.S. companies have stronger mean scores on empowerment, core value, coordination and integration, strategic direction and intent, and the goals and objectives scales.

The ANOVA results support differences in two culture traits (adaptability and involvement). This finding contradicts Denison's theory, and may hinder the universal applicability of Denison's theory.

Hypothesis 2 tests the relationship between corporate culture and corporate effectiveness. The basic purpose of the correlation analysis is to determine how strong the relationships are between two variables. The second hypothesis investigated the relationship between each culture trait and corporate effectiveness in the combined Taiwan and U.S. samples.

Each of the four cultural traits showed significant positive associations with a wide range of both subjective and objective measures of organizational effectiveness. A significant relationship between adaptability and market share did not appear in U.S. firms in this study. This result is connter to Denison's (1995) findings. Denison (1995) states, "Adaptability was the extent for

employees to link their organizations to external environments." Effective organizations have a unique way of transforming external information into the sources for stimulating employees' adaptive abilities to increase market share. In all the samples, four culture traits were positively related to overall corporate performance; In both countries, mission had the strongest correlation to corporate performance and it was higher in U.S. firms than in their Taiwanese counter parts. Consistency demonstrates the second strongest correlation to corporate performance. U.S. companies' consistency culture had a stronger relationship with corporate performance than did Taiwanese companies. Adaptability culture in the U.S. indicated a stronger relationship to corporate performance than in Taiwan. The adaptability construct was the third strongest factor influencing corporate performance. Involvement was the weakest factor related to corporate performance in both countries. Involvement culture was more strongly related to corporate performance in Taiwan than in the U.S. There were similar correlations for the combined sample. Mission (.566) and involvement (.548) had higher correlations with corporate performance, while involvement and adaptability shared the same coefficient (.436).

Denison (1983/1990/1996) predicts that companies with high scores on the four culture traits also would score higher on performance overall. The results of this study, no matter whether they are for Taiwanese or U.S. cases, support the findings that there are positive correlations between the four culture traits and corporate performance. This finding is consistent with Denison's model.

Individual Performance Indicators

Table 24 summarizes the regression results from the data from Taiwan, the U.S., the combined Taiwan/U.S. sample, and Denison's study. The details of the regression results are presented in Appendixes O and P.

Table 24
Significant regression betas for Denison's model with current study results
Samples with significant betas are mated in the column for the culture traits

	Involvement	Consistency	Adaptability	Mission
Budget Achievement		TW S		US S
Sales/Revenue Growth		TW	D	US TW S D
Market Share			D	US TW S D
Profit/ROA		D		US TW S D
Quality of Product and Service	D	TW S D		US TW S
New Product Development		S	US D	US TW S
Employee Satisfaction	US S D	US TW S D	US	TW S
Whole Company Performance		US S		US TW S

Note: US = U.S.; TW= Taiwan; S = U.S. + Taiwan; D = Denison

Budget Achievement

Normally, budget achievement refers to meeting the budget projected for the year. Budget achievement requires motivation, planning and coordination, and performance evaluation. Many multinational companies review budget performance to assess a manager's performance. During the budget development process, senior management takes the lead to ensure that subordinates establish numbers that comply with the overall company budget. Therefore, budgets often serve as a commitment or "performance contract" between a subordinate and a superior. The nature of the contract is that, if managers achieve the target budget, their performance will be deemed satisfactory (or better). However, since budgeting is often established from the top down, employees at the lower levels are not aware of how their work fits into the overall corporate strategy. (Libby & Lindsay, 2003)

Consistency (r = .399) and mission (r = .383) were positively related to budgeting achievement. As mentioned earlier, consistency can provide members with a clear core value to facilitate the internal integration and collaboration among departments to reach agreement. Also,

mission can provide members with an understanding of the organization's operation and purpose. These two culture traits are stable - oriented variables. High consistency and mission were sufficient for budgeting achievement in a company. Budget development needs to be linked to a company's long-term strategy, and senior managers need to convey to employees the budget performance goals and expectations for the coming year. In addition, consistency is the more important factor in judging the results of budgeting achievement. The consistency trait represents an internal orientation in terms of organizational culture. Controlling the budget and establishing integration and coordination among departments and people with different functions are very important to meeting the budget goal. The results of this study show that the balance between the external (mission) and the internal (consistency) factors could be a critical key to achieving budget goals.

Taiwanese and U.S. companies show different predictors of budget achievement. In Taiwan, consistency culture was the only predictor of budget achievement ($R^2 = .153$). This finding indicates that Taiwanese companies perceive consistency as an important factor for professionals in collaborating company functions to achieve budget goals and objectives. In the U.S., mission was the only predictor of budget achievement ($R^2 = .203$). This result demonstrates a difference between the two countries' companies. It appears that Taiwanese companies require lower levels of management and more collaboration and agreement when executing budget timelines and schedules. U.S. firms, on the other hands, develop their budgets based on long-term strategies and company vision. This trend could also reflect the fact that U.S. firms, more than Taiwanese companies, use budgeting as a guide for measuring employee performance.

In summary, consistency and mission was used to predict budget achievement with a .174 coefficient of determination. As mentioned in Chapter IV, both predictors are significant at the

.01 level of significance in the combined sample. However, the predictors of budget achievement cannot be generalized because the two countries had different results.

Sales/Revenue Growth & Profitability/ROA

Sales/profit maximization has been used in neoclassical economics. (Copeland & Weston, 1979; Van Horne, 1980) Although sales maximization cannot guarantee the maximization of profit, it still is important to a company because it matches the major strategic objectives of companies. (Merikas, Bruton & Vozikis, 2002) Generally speaking, sales growth is reached by capturing a large market share through increasing numbers and/or usage rates of customers, by attracting competitors, or by customers or by persuading non-users to buy their product. (Pearce, 1984)

In Denison's studies, statement, sales/revenue growth is an externally oriented performance factor requiring a complement of stability and flexibility in the operational system. Denison states that a balance of two culture traits supports sales/revenue growth. These are mission (external focus; facilitates stability) and adaptability (external focus; facilitates flexibility).

This study partially supports Denison's findings on the predictors of sales/revenue growth. Mission was the only predictor of sales/revenue growth, with an R^2 of .202 for the combined sample, which was evident in U.S. firms. Taiwanese firms showed slightly different results. Taiwanese cases indicated that mission and consistency could be used to predict sales/revenue growth. In U.S. firms, mission was the only predictor of sales/revenue growth (R^2 = .193). Another predictor reported by Denison, adaptability, was not found to be related to sales/revenue growth in this study.

Mission culture was the only predictor of profitability/ROA. Denison found that profit/ROA could be predicted by the stable focus culture traits of mission and consistency. The mission trait

had the greatest and only impact on the profit/ROA indicators in Taiwan, U.S. and the combined samples throughout this study. The result partially supports Denison's findings.

In summary, mission's positive relationship to sales/revenue growth supports the fact that sales growth strategy was adapted to a company's strategic objectives; thus, companies with clear mission components, such as clear strategic direction and objectives, will be able to achieve more satisfactory sales growth and also make more profit.

Market Share & Quality of Products and Services

There is a positive relationship between market share and the quality of products and services. The concept of quality is both objective and subjective. Hard numbers, such as, sales return rate, customer complaint frequency, etc. can detect the quality of a product. Customers more subjectively judge the quality of service. Certain products with higher market share could be perceived as being of higher quality. However, some researchers found that perceived quality decreases when market share increases. (Boulding et al., 1993; Hellofs & Jacobson, 1999) In addition, higher price can create an image of high quality products. (Scitovsky, 1945) Price and image are interrelated. Market share can influence consumers' perceptions of quality through the creation of positive network externalities. Through the effect of positive network externalities, consumers incur psychological benefits from using brands that are popular, which can create conditions leading to improved quality. This continuous process results in increasing market share.

Market share could produce negative effects on the quality of products and services. Perceptions of the quality of products and services result from consumers' expectations. Certain products with higher market share could produce higher expectations in consumers' minds. With increasing market share, even if the quality of products and services is the same as perceived,

quality could be lower. Also, larger market share could produce an image of lower quality of customer services.

Regarding the market share indicator, mission was the only predictor in the combined samples. The result partially supports Denison's findings that market share is supported by adaptability and mission traits combined. Companies in Taiwan and the U.S. also match this finding.

As for the predictors of quality of product and service, consistency and mission culture traits were detected regarding their predictability of the quality of products and services. Denison found that the quality of products and services could be supported by the involvement and consistency culture traits and employee involvement was regarded as a way to maintain the quality of products and services.

New Product Development

New product development and its successful market introduction are crucial to the survival and success of business enterprises. (Huang, Soutar & Brown, 2002) Previous studies have shown that new products make up one-third of companies' financial growth. (Booz, Allen & Hamilton, 1982; Wind, Mahajan & Bayless, 1990) New product development includes the process of conceiving and creating a new product. (Crawford, 1991; Urban & Hauser, 1993) Previous researchers found that new product performance relied on the integration effect of processes, resources, and strategies. (Cooper & Kleinschmidt, 1995) As new product development requires many resources and must fit a company's strategies, the most successful new products are often initiated by top management. (Utterback et al. 1976) Also, in the process of new product development, the dedication of business innovators often plays an important role in integrating the new product concept into actual development. The possible interactions within

an organization imply that successful new product development would need to comply with the mission statement, as well as require the innovators' involvement.

The new product development process could result in different outcomes in diverse national/corporate cultures. Griffin (1992) notes that quality function deployment (QFD), a Japanese technique, generally failed in the United States, possibly because of a less-than-optimal fit with the American culture.

The study's findings differ from Denison's in several aspects. He found that new product development could be predicted by the two flexible oriented culture traits of involvement and adaptability. In this study, mission and consistency culture traits were positively related to new product development in the integration samples. The study found that the stable focus predictors - consistency and mission - could support new product development. Top management decides on a direction for new product development, which can fit into the company's strategy and future vision. Business innovators from different departments should be able to cooperate well and share their valuable feedback as a team.

The results of the U.S. sample partially supported Denison's findings. Adaptability and mission were predictors of new product development. The predictability of adaptability was the same as in Denison's findings. This could be explained by a practice of U.S. companies rely on customer feedback as a source of input on new product development. Thus, the process of new product development in U.S. firms is a combination of top management's initiation and customers' feedback. Regular changes during development of the new products often occur and are accepted by top management in U.S. companies.

Taiwanese results for mission and consistency were the same as in the combined sample. New product development in Taiwanese firms is influenced by the companies' strong culture.

Change, during new product development, is not seen as more important than change following development of the new product.

Employee Satisfaction

Employee satisfaction is defined as employees' psychological affective orientation toward their employment relationship with their companies. (Herndon et al., 2001; Price & Mueller, 1986; Brown et al., 1993) Employee satisfaction can lead to higher service quality and profitability by enhancing customer satisfaction. When customer satisfaction is enhanced, customers are willing to seek more services from the company. In turn, companies' revenues and profits can be raised. When this process is proven to be successful for these types of companies, employees learn from the process and continue the work patterns or policies that have been shown to increase customer satisfaction. Employee commitment and satisfaction with their companies is enhanced when there is increased revenue and profitability. This assumes that satisfied employees are a basis for producing satisfied customers. The literature seems to indirectly support the importance of adaptability to employee satisfaction.

Other researchers did not find a relationship among employee satisfaction, customer satisfaction, and profitability. (Loveman, 1998) Others found no relationship between customer satisfaction and employee satisfaction. In the 1980s, Deming (1986) proposed the importance of "human capital" to a company's success. He argued that increasing employee ownership and job satisfaction would increase returns in profitability and quality. This statement seems to put more emphasis on the role of consistency and involvement than employee satisfaction.

This study's findings on employee satisfaction partially support Denison's findings. According to Denison and Mishra (1995), involvement and consistency, which are internal oriented variables, support employee satisfaction. This study found three of the four cultural

traits to be related to employee satisfaction, which were mission, consistency, and involvement (R^2 = .336). Employees are more satisfied when they are part of the decision making process. For instance, the concept of empowering workers can develop a group of reasonably content employees who are trained to deliver the best service possible. A satisfied employee is one who is involved in decision-making, who receives adequate training and benefits, and who has an effective general manager. This study also found mission to be an important predictor of employee satisfaction. Employees are more satisfied when they are involved in designing strategy and setting goals. Top managers should share the company vision with employees whenever possible. In Denison's theory, mission and involvement are contradictory traits. (Denison & Mishra, 1995) If mission is clear to employees, employees may not need to eagerly take part in the company's decision making. In this study, the three culture traits found to predict employee satisfaction are the internal oriented and control focus traits of Denison's model. Therefore, to enhance employee satisfaction, it seems important to work to improve the internal environment and keep the whole company in a stable situation.

The results show that Taiwan and the U.S. have different predictors of employee satisfaction. In the U.S. firms, three-culture traits-consistency, involvement, and adaptability - are important predictors of employee satisfaction. The U.S. cases partially support Denison's findings on the predictors of employee satisfaction. Adaptability was also significant; however, adaptability did not occur in Taiwanese cases in this study. Taiwanese firms showed results that differed from the findings of Denison. In Taiwan, mission and consistency cultures are important predictors of employee satisfaction. These findings could indicate the difference in employee satisfaction in the U.S. and Taiwan. American companies encourage employees to share their diverse and different ideas in order to facilitate company decision-making. U.S. companies could be more willing to invest additional funds to facilitate employees' innovation ability. Taiwanese

companies, on the other hand, could place greater emphasis more on common agreement and coordination in the company decision-making procedures.

Overall Organization Performance

This study found that the stable oriented culture traits of mission and consistency were related to overall organization performance. U.S. firms had the same results. For Taiwanese firms, mission was the only predictor to overall organization performance.

Implications

Organizational researchers and practitioners have not reached agreement on how organizational culture predicts performance. This study supports a relationship between corporate culture and corporate performance. It also provides managers with a detailed understanding of some of the processes that drive behavior in organizations. Further, this study's findings on the performance implications of culture provide insight for managers. Clearly, personal experience and anecdotal information is not a sufficient foundation on which to build normative contingent theories of organizational effectiveness. The more studies involving varying companies and cultures, the greater the understanding will be concerning practical situations that occur in the real business world.

Limitations

There are some limitations that need to be mentioned. First is the mixed sampling approach. The study initiated a convenience sampling approach and stratified sampling approach. Previous studies show that the response rate to mail surveys is generally between 20% to 30%, although many researchers have lower response rates of under 10%. As time and the budget were limited,

in order to include as many industries and companies in the study as possible, this study took advantage of the convenience sampling approach to collect survey data through personal networks and university students with full-time jobs in companies. Thus, full-time managers attending business schools were recruited from university systems. This kind of convenience sample could produce a bias when making conclusions. To reduce this bias, the study also recruited company samples from published company catalogues. Under this consideration, 260 company samples out of the 1000 large companies in Taiwan and the U.S. were randomly selected for participation in this study. This sampling strategy provided two advantages. First, it included a range of sizes of companies to allow greater generalization of the findings and to compensate for any bias resulting from the convenient sampling approach. Second, it added large Fortune 500 companies to this research study. Previous research studies have had limited success in securing Fortune 500 company participation. This study has secured significant participation from Fortune 500 companies, leading to a better understanding of the culture-performance linkage within the largest companies in both countries. It is a good start.

The second limitation comes from time and budget constraints. Observations of corporate culture might provide better in-depth results by surveying or studying different layers of units and employees throughout the organizations. However, due to a limited budget and time, this exploratory study used the mail survey approach to collect data from CEOs and managers from diversified companies.

A third possible limitation comes from collecting data through e-mail. Use of e-mail surveys is new and untested, and not much is known about its strengths and weaknesses. However, recent events have raised concerns about routinely opening mail. In addition, e-mail is growing at an incredible speed in use and popularity.

The fourth limitation comes from the construct of unique company cases in this study. In most of the company samples used, there is only a single respondent from each company. Although only staff from management levels participated in this study, having single respondents could produce bias in describing their companies. However, the study found that the perception of managers can indeed reflect a company's culture situation. Further, managers and CEOs are regarded as key people who best know the overall company performance. Thus, although a single respondent from each company may not necessary be ideal for research purposes, the results are useful perceptions of managers from diverse companies. To increase each company's willingness to respond, the study first worked to secure CEO participation. It asked busy CEOs to assign the questionnaire to senior managers if they did not have time to complete it. In order to secure as many members as possible from the management staff from the same company, an on-line questionnaire was posted on a website specified for this dissertation study. If any invited company was willing to have more staff participate, management staff could link to the website (http://www.kuohuang.com) to complete the on-line questionnaire and send it back to the researcher via e-mail.

The fifth limitation of the study was of having to rely on a culture and effectiveness model. The concepts and definitions of corporate culture are still diverse and multi-visional. This study uses the single model to stand for the concept of corporate culture. This usage could be inappropriate.

Future Research

For future research, there are some orientations that can be followed. A longitudinal study is recommended. A time series study would be useful for understanding lead and lag times for corporate culture and corporate performance. Denison (1982) found that the corporate culture

could have a lag effect on corporate performance. In his dissertation study in 1982, he found that the lag effect would be from two to three years. Thus, to better understand the influence of corporate culture on corporate performance and effectiveness, future researchers should conduct longitudinal studies. It would be helpful for future researchers to work with one or two large companies over two or three years or more. For example, company participants could be surveyed or interviewed annually at a specific time for three consecutive years.

Future studies could include national culture to extend the generality of the culture and effectiveness model. Hofstede (2001) investigated four dimensions of national culture by surveying IBM's branch offices spread throughout 64 countries during the 1980s. In his findings on national culture differences in 64 countries, the U.S. and Taiwan displayed cultural differences. For instance, Taiwan was higher in power distance, lower in uncertainty avoidance, lower in individualism (higher in collectivism), and lower in masculinity compared to the U.S. (Hofstede, 2001). Future research could collect culture and effectiveness data from companies located in some of the countries listed in Hofstede's national culture study and examine the linkages among national culture, corporate culture and effectiveness. This kind of research would add greater generalizability to the study of culture and effectiveness linkages.

A comparison group study would provide variable insight. According to Fisher (1997), even simple survey studies that utilize comparison studies can extend what we know about culture and performance linkages by examing the culture variance between high and low performance companies. Additional studies should compare the perception of performance with objective performance data. It could be more difficult to collect both subjective performance data and objective performance data for the same company; this would require working with sensitive financial data. However, the results would be well worth the effort if such research could discover the gap between managers' perception of company performance and actual objective

performance. From this study's viewpoint, a good sample to work from would be the managers' perceptions on objective reflected performance indicators such as, ROI and ROS.

It would be especially useful to select a specified industry culture and effectiveness. Representative samples of organizations should be included in any future empirical studies of organizational climates. (Glick, 1985) This study suggests that future researchers, who are interested in the linkage between corporate culture and corporate performance, should focus on only one industry. Limited focus will provide more specific conclusions and relationships. In matching unique needs to diverse industries, it would be more useful to discover the relationship between culture and effectiveness for each industry. Thus, single industry studies are necessary and encouraged.

Fortune 500 companies can be targeted as the main samples for future empirical research. Through empirical study, academicians can trim their models to the practical study of specific companies. This study successfully collected 18 completed questionnaires from CEOs/senior managers of Fortune 500 companies. There was even one company that was willing to share its culture survey results with this dissertation study. It will be a big step forward if future researchers can secure the involvement of most of the Fortune 500 companies in a culture and effectiveness study.

Summary

The current study added another country, Taiwan, to the body of research on Denison's culture and effectiveness studies. The Taiwanese sample was almost three times as large as the U.S. sample. This strategy was designed for compensating with the possible pitfalls from Denison and Mishra's study in 1995. Denison and Mishra (1995) sampled only U.S. companies, so they might not have found enough predictability on the culture dimension. This study recruits

U.S. samples to achieve two benefits. First, general results can be gained by multi-country samples. Secondly, the results of comparisons on similarities and differences between the two countries can add more knowledge to existing research findings.

To avoid pitfalls common to survey sampling, the researcher initiated controls, such as including homogeneous populations (universities and Fortune 500 companies), pilot testing of the Chinese version of the questionnaire, the use of a pre-tested questionnaire, etc.

Universities provided the major source of respondents for this study. Collecting questionnaires with the assistance of course instructor enabled a high response rate. Although this approach cannot obtain the complete involvement of any from certain company, the researcher still was able to collect in-depth data through face-to-face interactions. Fortune 500 companies provided the second major source of respondents. Satisfactory responses were received from large company populations. The researcher mailed invitation letters (see Appendix S) to each surveyed company's CEO to ask for participation. Out of 260 requests, 26 responded, provided a 10 % response rate. Although most of the companies declined to participate (see appendix S), some companies were more than willing to provide further follow-up information.

The findings of this study are provisional, but indicative of the assumption that corporate culture may produce different effects in different countries. This study contributes to the existing research in several ways. First, this study expands the Denison model to Taiwan. Compared to Denison's findings, there are similarities and differences in the culture – effectiveness relationship between the two countries. Mission was found to be a strong predictor of corporate performance. Whether it was the U.S., Taiwan, or the combined sample for generalization purposes, mission had the strongest relationship to corporate effectiveness. This finding indicates that mission statements are easily understood by employees, and they effect work behaviors and norms in achieving corporate goals. This study also found that adaptability was positively related

to employee satisfaction in U.S. firms. This result adds something new to the previous extensive research on the model.

Some of Denison's findings are not supported in this study. The predictability of the adaptability trait to sales growth and market share was not supported. The predictability of consistency to the profit/ROA indicator was not supported. And, the predictability of the involvement trait to quality of product and service was not supported.

Some of Denison's findings are fully supported by this study. The predictabilities of the mission trait to the three financial indicators - sales/revenue growth, market share and profit/ROA - are fully supported by this study. The predictability of the consistency trait to employee satisfaction was completely supported.

Some relationships could not be predicted by the model. For instance, in Taiwan's case, consistency was detected to be a predictor of sales/revenue growth. In the U.S., adaptability was found to be a predictor of employee satisfaction.

The effectiveness indicator added to this study - budget achievement - showed differences between the two countries. In the U.S., mission was the only predictor; In Taiwan, consistency was the only predictor. This could indicate different business philosophies in the companies of these two countries. U.S. firms were more externally focused; whereas, Taiwanese firms appeared to be more internally focused and to have more stable oriented working environments.

The two research questions in this study were completely answered. Generally, the results of this study support Denison's finding that corporate culture is positively related to a firm's effectiveness. This study extended Denison's model to Taiwanese firms, and found similarities and differences. More studies with more companies from countries with diversified national cultures should be undertaken. Future efforts will make the results of research into corporate culture and effectiveness even more persuasive and practical in meeting business needs.

Nonetheless, the study is open to a number of fair criticisms. One criticism concerns the strength of the findings. This study used convenience sampling to secure additional respondents, mainly from universities. These samples did not represent any specific group. While the researcher used mailed surveys to collect data from companies directly, the external validity of the findings could be limited. However, given a limited research budget, and the need to avoid a low response rate, these two approaches provided an adequate size sample and balanced the bias risk. It was a worthwhile trade-off to facilitate this study.

A more serious problem concerns the cross-sectional design of the study. Denison's (1982) dissertation found that corporate culture could have a two-to-three year lag effect on corporate performance. His findings implied that the study of culture and effectiveness should be done with longitudinal designs. One way to study the relationship would be to cooperate with certain companies to track the dynamic progress of their culture and effectiveness over a longer term. However, although the cross-sectional design in this study cannot establish causations, it still is valuable in that it supports most of Denison's findings, and it applied Denison's model to Taiwan for the very first time.

In one sense, the findings confirm the importance of corporate culture to corporate performance. This study provides a good basis for in-depth studies focused on a single industry or on additional countries and cultures.

Appendix A

Empirical Studies on the Organizational Culture-Performance Link since 1990

Empirical Studies on the Organizational Culture-Performance Link

Reference	Organizational Culture Dimension	Performance Measurement	Organizations Involved	Respondents Involvement	Evidence for the culture-performance link
Denison (1990)	(a) involvement, (b) consistency, (c) adaptability (d) mission	Average over 6 years of (a) return on sales, (b) return on investment, (c) income/sales, (d) income/investment ratio	34 large U.S. firms from 25 different industries	43,474 employees within 6,6711 groups	1. Involvement is positively related to short-and long term performance 2. Consistency is positively related to short-term performance, but negatively related to long-term performance
Rousseau(1990c)	(a) team-or satisfaction- oriented norms, (b) security-oriented norms	Amount of money raised for community	32 large units of a U.S. nationwide voluntary service organization	263 paid staff members	Little emphasis on security-oriented norms is significantly related to high performance
Calori & Samin(1991)	Work related values(12 dimensions) and management practices (17 dimensions/culture strength)	Average over 3 years of (a) return on investment, (b) return on sales, (c) growth	5 French firms with a single business, in mature industries pursuing a differentiation strategy	280 managers and employees, excluding frontline workers	1. Many values and their corresponding management practices were related to company growth 2. Strength of culture is positively related to high growth 3. Only a few values and practices were related to profitability
Gordon & DiTomaso(1992)	(a) Strength of culture, (b) adaptability, (c) stability	6 years: (a) growth of assets, (b) growth of premiums	11 U.S. insurance companies	850 managers	Culture strength and adaptability are both predictive of short-term performance
Kotter & Heskett(1992)	(a) strength of culture (b) strategy-culture fit (c) adaptability	Average over 11 years of (a) yearly increase in net income, (b) yearly return on investment (c) yearly increase in stock price	207 U.S. firms from 22 different industries	600 top managers	There is a positive but moderate relationship between culture strength and long-term economic performance
Marcoulides & Heck (1993)	(a) organizational structure (b) organizational values (c) task organization (d) organizational climate (e) employee attitude	(a) gross revenue/product value ratio (b) market share, (c) profit, (d) return on investment	26 greatly varying U.S. firms	392 employees	All culture dimensions have some direct or indirect effect on performance
Denison & Mishra (1995)	(a) involvement (b) consistency (c) adaptability, (d) mission	(a) perceived performance, (b) objective performance as average over 3 years of return on assets and sales growth	764 firms in five different U.S. industries	764 top managers	1 For large firms profitability is best predicted by stability traits such as mission and consistency. 2 Sales growth is best predicted by flexibility traits such as involvement and adaptability 3 All cultural traits were positively related to return on assets, which mission as the strongest predictor
Petty et al. (1995)	(A) teamwork (B) trust and credibility, (C) performance improvement and common goals, (D) organizational functioning	(A) operations, (B) customer accounting, (C) support services (D) employee safety and health (E) marketing	12 service units within a U.S. firm in the electric utility industry	832 employees	Much teamwork is associated with high performance

Koene (1996)	(A) process vs. results orientation, (B) employee vs. job orientation, (C) professional vs. parochial orientation, (D) open vs. closed culture, (E) tight vs. loose control, (F) normative vs. pragmatic	(A) store performance, (B) cost performance (C) personnel performance	50 company-owned Dutch supermarket stores of a large retail chain	1,228 employees	Employee orientation and openness influence performance both directly and indirectly through their impact on the climate variables general communication and task communication.
Sorensen (2002)					1 the status of the external environments will decide the effect of strong culture on firm performances 2. In relative stable environments, strong culture firms have more reliable performance 3. In volatile environments, the effect of strong culture is not significant.
Thomas E. Sawner (	Parson's functional prrequisities Sashkin's organizational culture assessment questionnaire	Non-financial measures Inspection, safety, and personnel indicators	Air National Guard units		

Addition to Ashkanasy's comparison table in Neal M. Ashkanasy; Celeste P.M. Wilderom; Mark F. Peterson (2000). " Handbook of organizational culture & climate." Sage Publications, Inc., 2000. p. 198-199.

Appendix B

Denison's Organizational Culture & Effectiveness Questionnaire

Dimensions, Scales and items of Denison's Organizational Culture Questionnaire.

Dimension	Scale	Item
Involvement	Empowerment	1. Most employees are highly involved in their work. 2. Decisions are usually made at the level where the best information is available. 3. Information is widely shared so that everyone can get the information he or she needs when it's needed. 4. Everyone believes that he or she can have a positive impact. 5. Business planning is ongoing and involves everyone in the process to some degree.
	Team Orientation	6. Cooperation across different parts of the organization is actively encouraged. 7. People work like they are part of a team 8. Teamwork is used to get work done, rather than hierarchy. 9. Teams are our primary building blocks. 10. work is organized so that each person can see the relationship between his or her job and the goals of the organization
	Capability Development	11. Authority is delegated so that people can act on their own. 12. The " bench strength" (capability of people) is constantly improving. 13. There is continuous investment in the skills of employees. 14. The capabilities of people are viewed as an important source of competitive advantage. 15. Problems often arise because we do not have the skills necessary to do the job.
Consistency	Core Values	16. The leaders and managers " practice what they preach." 17. There is a characteristic management style and a distinct set of management practices. 18. There is a clear and consistent set of values that governs the way we do business. 19. Ignoring core values will get you in trouble. 20. There is an ethical code that guides our behavior and tells us right from wrong.
	Agreement	21. When disagreement occur, we work hard to achieve "win-win" solutions. 22. There is a "strong" culture. 23. It is easy to reach consensus, even on difficult issues. 24. We often have trouble reaching agreement on key issues. 25. There is a clear agreement about the right way and the wrong way to do things.
	Coordination and Integration	26. Our approach to doing business is very consistent and predictable. 27. People from different parts of the organization share a common perspective. 28. It is easy to coordinate projects across different parts of the organization. 29. Working with someone from another part of this organization is like working with someone from a different organization. 30. There is a good alignment of goals across levels.

Dimension	Scale	Item
Adaptability	Creating Change	31. The way things are done is very flexible and easy to change. 32. We respond well to competitors and other changes in the business environment. 33. New and improved ways to do work are continually adopted. 34. Attempts to create change usually meet with resistance. 35. Different parts of the organization often cooperate to create change.
	Customer Focus	36. Customer comments and recommendations often lead to changes. 37. Customer input directly influences our decisions. 38. All members have a deep understanding of customer wants and needs. 39. The interests of the customer often get ignored in our decisions. 40. We encourage direct contact with customers by our people.
	Organizational Learning	41. We view failure as an opportunity for learning and improvement. 42. Innovation and risk taking are encouraged and rewarded. 43. Lots of things " fall between the cracks". 44. Learning is an important objective in our day-to-day work. 45. We make certain that the "right hand knows what the left hand is doing."
Mission	Strategic Direction & Intent	46. There is a long-term purpose and direction. 47. Our strategy leads other organizations to change the way they compete in the industry. 48. There is a clear mission that gives meaning and direction to our work. 49. There is a clear strategy for the future. 50. Our strategic direction is unclear to me.
	Goals & Objects	51. There is widespread agreement about goals. 52. Leaders set goals that are ambitious, but realistic. 53. The leadership had "gone the record" about the objectives we are trying to meet. 54. We continuously track our progress against our stated goals. 55. People understand what needs to be done for us to succeed in the long run.
	Vision	56. We have a shared vision of what the organization will be like in the future. 57. Leaders have a long-term viewpoint. 58. Short-term thinking often compromises our long-term vision. 59. Our vision creates excitement and motivation for our employees. 60. We are able to meet short-term demands without compromising our long-term vision.

Appendix C

Cho, Hee-Jae's (2000) the Validity and Reliability of the Organizational Culture Questionnaire

4 Indexes & 12 scales	Items	N	Mean	SD	α (for inter-items)	α (from 15 interitems)	α (from 3 scales)
Involvement						**.90**	**.87**
Empowerment	5	36542	3.19	.73	.77		
Team Orientation	5	36542	3.30	.80	.83		
Capability Development	5	36542	3.31	.71	.70		
Consistency						**.88**	**.83**
Core Values	5	36542	3.45	.67	.70		
Agreement	5	36542	3.12	.68	.75		
Coordination and Integration	5	36542	3.00	.73	.78		
Adaptability						**.87**	**.81**
Creating Change	5	36542	3.06	.70	.76		
Customer Focus	5	36542	3.36	.69	.73		
Organizational Learning	5	36542	3.06	.73	.75		
Mission						**.92**	**.89**
Strategic Direction & Intent	5	36542	3.34	.80	.85		
Goals & Objectives	5	36542	3.38	.71	.80		
Vision	5	36542	2.97	.71	.78		

Source: Cho, Hee-Jae (2000). The Validity and Reliability of the Organizational Culture Questionnaire. International Institute for Management Department.

Cho's (2000) Rotated factor matrix: Factor loadings by maximum likelihood method for the " Involvement" Scale Data

Items	Factor1	Factor 2	Factor 3	Final Communality
1	.24	**.39**	.23	.26
2	.32	**.58**	.25	.49
3	.29	**.60**	.26	.51
4	.36	**.46**	.28	.42
5	.35	**.42**	.31	.39
6	**.43**	.39	.30	.42
7	**.59**	.42	.28	.61
8	**.61**	.33	.20	.52
9	**.68**	.21	.24	.56
10	**.40**	.45	.29	.45
11	.38	.37	**.31**	.38
12	.31	.30	**.31**	.38
13	.21	.22	**.69**	.57
14	.29	.26	**.59**	.50
15	.06	.18	**.20**	.08
Variance explained by Each factor (Weighted)	4.87	4.32	3.81	

Source: Cho, Hee-Jae (2000). The Validity and Reliability of the Organizational Culture Questionnaire. International Institute for Management Department.

Rotated factor matrix: Factor loadings by maximum likelihood method for the " Consistency" Scale Data

Items	Factorl	Factor 2	Factor 3	Final Communality
16	**.43**	.27	.39	.41
17	**.44**	.15	.12	.23
18	**.64**	.28	.24	.55
19	**.44**	.06	.04	.20
20	**.58**	.10	.17	.38
21	.41	.24	**.48**	.46
22	.49	.21	**.23**	.36
23	.24	.29	**.63**	.54
24	.13	.24	**.58**	.42
25	.47	.31	**.31**	.41
26	.47	**.32**	.18	.35
27	.27	**.60**	.17	.47
28	.15	**.70**	.24	.57
29	.12	**.57**	.24	.40
30	.37	**.54**	.24	.49
Variance explained by Each factor (Weighted)	4.28	4.04	3.03	

Source: Cho, Hee-Jae (2000). The Validity and Reliability of the Organizational Culture Questionnaire. International Institute for Management Department.

Rotated factor matrix: Factor loadings by maximum likelihood method for the " Adaptability" Scale Data

Items	Factor1	Factor 2	Factor 3	Final Communality
31	**.58**	.12	.21	.40
32	**.50**	.27	.21	.37
33	**.65**	.22	.22	.52
34	**.41**	.05	.34	.29
35	**.51**	.19	.21	.34
36	.23	**.75**	.11	.62
37	.15	**.84**	.11	.74
38	.33	**.27**	.40	.34
39	.18	**.44**	.46	.43
40	.32	**.21**	.19	.18
41	.55	.13	**.20**	.36
42	.57	.15	**.19**	.39
43	.33	.11	**.58**	.46
44	.50	.11	**.18**	.29
45	.47	.11	**.48**	.46
Variance explained by Each factor (Weighted)	5.02	5.13	2.42	

Source: Cho, Hee-Jae (2000). The Validity and Reliability of the Organizational Culture Questionnaire. International Institute for Management Department.

Rotated factor matrix: Factor loadings by maximum likelihood method for the " Mission" Scale Data

Items	Factor1	Factor 2	Factor 3	Final Communality
46	.36	**.57**	.33	.57
47	.34	**.37**	.19	.29
48	.44	**.58**	.35	.65
49	.33	**.79**	.28	.82
50	.30	**.59**	.31	.53
51	.44	.38	**.38**	.48
52	.44	.26	**.43**	.45
53	.15	.27	**.73**	.62
54	.25	.24	**.56**	.43
55	.53	.33	**.37**	.52
56	**.56**	.41	.31	.57
57	**.51**	.38	.31	.51
58	**.39**	.15	.05	.17
59	**.58**	.31	.30	.53
60	**.61**	.22	.20	.46
Variance explained by Each factor (Weighted)	6.12	8.00	4.80	

Source: Cho, Hee-Jae (2000). The Validity and Reliability of the Organizational Culture Questionnaire. International Institute for Management Department.

Appendix D

ISC Coded Industries In This study

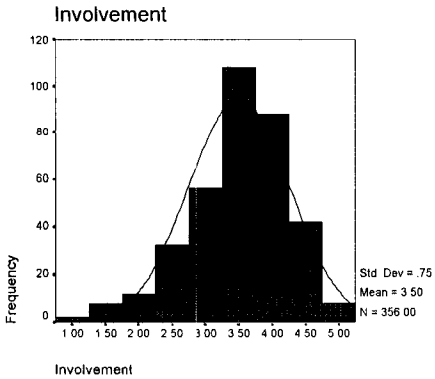
1001 Agricultural Products
1006 Construction
1010 Aluminum
1020 Gold/Precious Metals Mining
1030 Steel
1040 Containers/Packaging (Paper)
1050 Paper & Forest Products
1060 Metal Mining
1070 Chemicals
1071 Chemicals (Diversified)
1072 Chemicals (Specialty)
2040 Automobiles
2050 Auto Parts & Equipment
2060 Building Materials Group
2100 Hardware & Tools
2120 Home Building
2130 Lodging-Hotels
2140 Household Furnishing & Appliance
2170 Leisure Time (Products)
2175 Consumer (Jewelry/Novalities)
2180 Publishing
2190 Publishing (Newspaper)
2215 Gambling Lottery & Pari-mutuel
2220 Retail Specialty (Apparel)
2230 Retail Specialty (Dept Store)
2250 Retail Stores (Gen Merchandise Chain)
2254 Retail (Discounters)
2255 Retail (Computer/Electronic)
2256 Retail (Home Shopping)
2257 Retail (Building Supplies)
2260 Retail (Specialty)
2265 Distributors (Durables)
2270 Footwear
2290 Textile (Apparel)
2291 Textile (Home Furnishing)
2292 Textile (Specialty)
2300 Photograph/Imaging
2400 Services (Marketing/ Advertising)
2410 Services (Commercial/Consumer)
3010 Beverage (Alcoholic)
3020 Beverage (Non-Alcoholic)
3030 Broadcasting (TV, Radio & Cable)
3035 Distributors (Food/Health)
3040 Foods
3050 Tobacco
3060 Household Products (Non-Durable)
3065 House ware

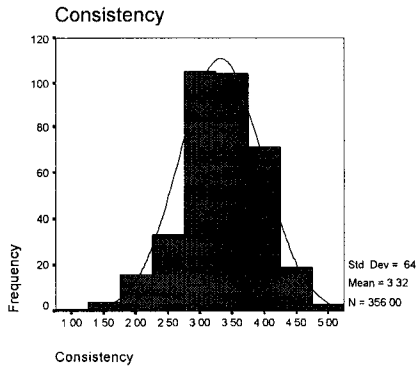
3070 Personal Care
3080 Entertainment
3100 Specialty Printing
3140 Retail Stores (Drug Stores)
3200 Service (Employment)
3210 Services (Facile /Environment)
3220 Services (Payroll Process)
3230 Services (Rentals)
3240 Retail Stores (Food Chains)
3250 Restaurants
3510 Healthcare Diversified
3520 Health Care (Drugs)
3530 Health Care (Drugs/Pharms)
3540 Health Care (Hospital Mgmt)
3550 Health Care (Long-Term Care)
3570 Health Care (Managed Care)
3580 Health Care (Special Service)
3590 Biotechnology
3663 Digital Encoding
4010 Oil & Gas (Refining & MKG)
4020 Oil & Gas (Drilling & Equipment)
4040 Oil (International Integrated)
4050 Oil (Domestic Integrated)
4060 Oil & Gas (Exploration/Prod)
4783 Transportation
5010 Investment Banking/Brokerage
5020 Savings & Loan Companies
5025 Banks (Regional)
5030 Banks (Major Regional)
5040 Banks (Money Center)
5060 Consumer Finance
5070 Insurance Brokers
5080 Insurance (Life/Health)
5090 Insurance (Mult-Line)
5100 Insurance (Property/Casualty)
5110 Financial (Diversified)
5150 Investment Management
6010 Office Equipment & Supplies
6015 Truck & Parts
6020 Aerospace/Defense
6060 Containers (Metal & Glass)
6070 Electrical Equipment
6071 Engineering & Construction
6100 Manufacturing Diversified
6110 Manufacturing Diversified
6115 Metal Fabricators

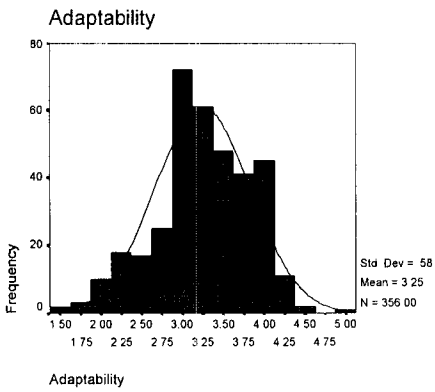
6120 Waste Management
8030 Communication Equipment
8040 Computers (Software Services)
8050 Computers (Hardware)
8051 Computer (Networking)
8052 Comptuer (Peripherals)
8053 Electronics (Component Dist.)
8070 Electronics (Instruments)
8080 Electronics (Semi-Conductors)
8090 Electronics (Defense)
8100 Equipment (Semi-Conductors)
8200 Services (Computer Systems)
8299 School & Educational Service
8300 Services (Data Processing)
8610 Cellular/Wireless Telecomms
8620 Telephone
8630 Telephone Long Distance
8721 Accounting, Auditing & Bookkeeping
8748 Business Consulting Services
9010 Electronic Companies
9020 Natural Gas (Distr-Pipe Line)
9040 Water Utilities
9100 Power Product (Indepent)
9199 General Government
9411 State Educational Departments
9500 Shipping
9510 Air Freight
9520 Railroads
9540 Truckers

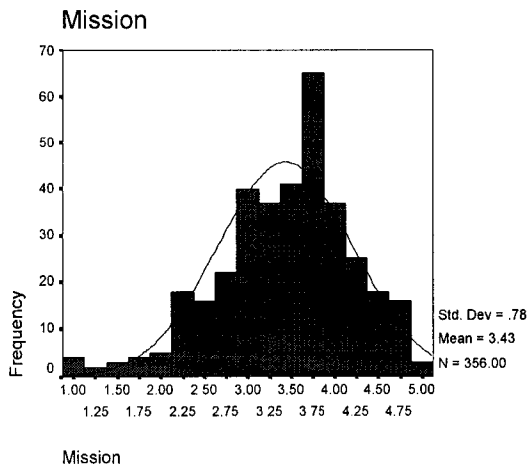
Appendix E

Data Examination: Data Graphical Distribution



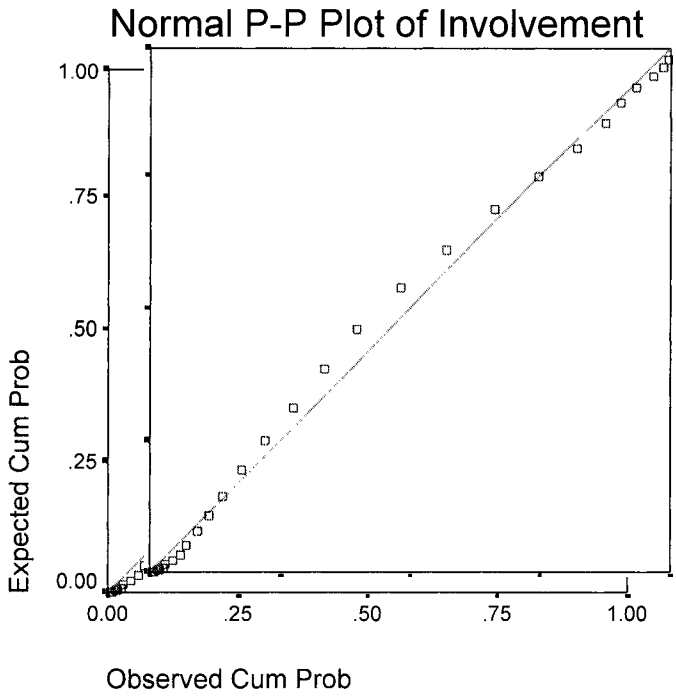


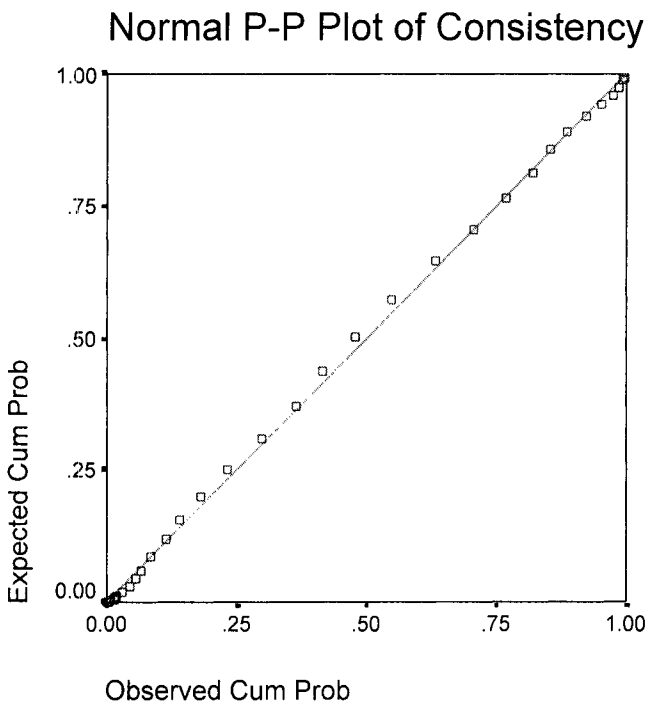


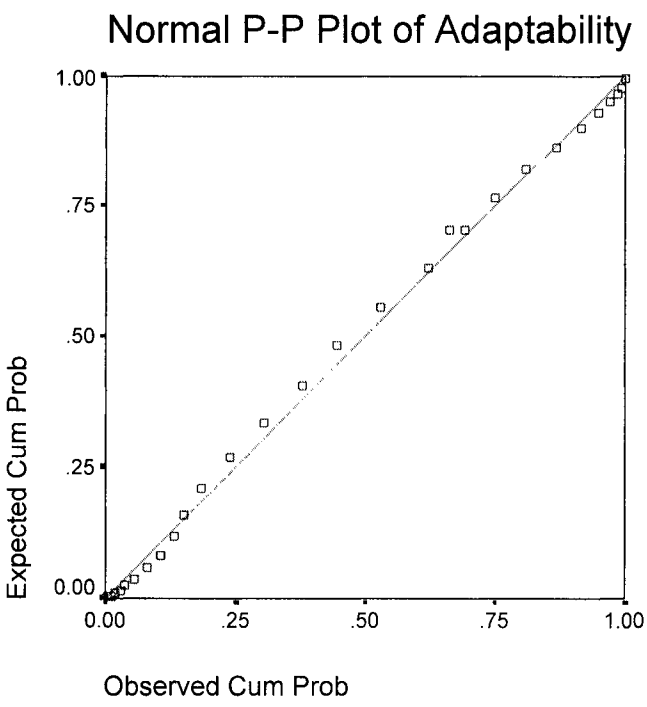


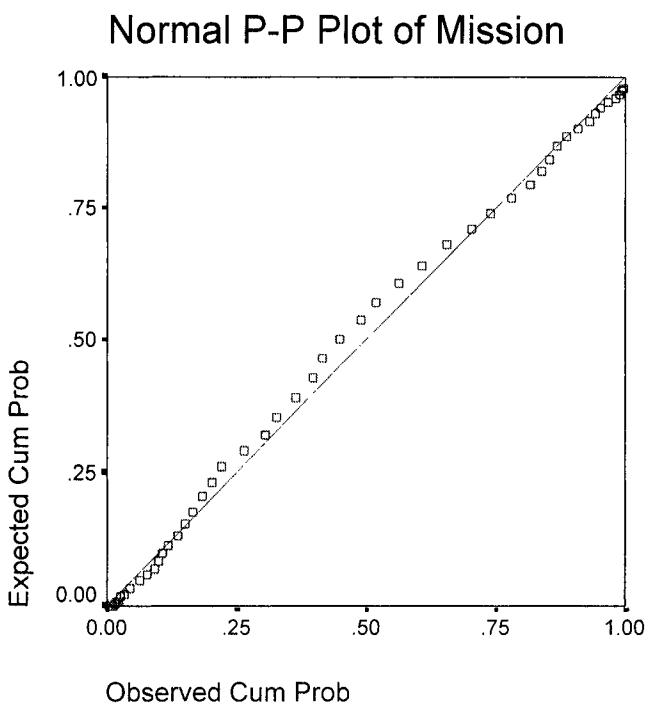
Appendix F

Four Culture Traits' Normal P-P Scatterplots









Appendix G

Statistic Data For Normality Tests

Descriptive Statistics

	N	Mean	Std.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Budget Achievement	356	2.7384	1.6733	-.492	.129	-.957	.258
Sales/Revenue Growth	356	3.07	1.47	-.694	.129	-.326	.258
Market Share	356	3.06	1.51	-.641	.129	-.463	.258
Profitability/ROA	354	2.85	1.56	-.516	.130	-.682	.259
Quality of Products and Services	356	3.43	1.26	-.978	.129	.908	.258
New Product Development	356	2.85	1.49	-.474	.129	-.682	.258
Employee Satisfaction	356	2.95	1.30	-.414	.129	-.262	.258
Overall Organization Performance	356	3.36	1.18	-.767	.129	.456	.258
Involvement	356	3.5039	.7495	-.667	.129	.556	.258
Consistency	356	3.3212	.6396	-.369	.129	.333	.258
Adaptability	356	3.2488	.5816	-.412	.129	.085	.258
Mission	356	3.4305	.7750	-.570	.129	.374	.258
Valid N (listwise)	354						

Descriptive Statistics(Taiwan)

	N	Mean	Std.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Budget Achievement	247	2.6048	1.6374	-.461	.155	-1.001	.309
Sales/Revenue Growth	247	3.04	1.39	-.735	.155	-.064	.309
Market Share	247	2.96	1.46	-.560	.155	-.475	.309
Profitability/ROA	245	2.80	1.49	-.528	.156	-.559	.310
Quality of Products and Services	247	3.30	1.26	-.966	.155	.976	.309
New Product Development	247	2.81	1.44	-.525	.155	-.607	.309
Employee Satisfaction	247	2.90	1.29	-.527	.155	-.206	.309
Overall Organization Performance	247	3.31	1.20	-.796	.155	.377	.309
Involvement	247	3.5683	.7232	-.766	.155	1.025	.309
Consistency	247	3.2789	.6052	-.441	.155	.552	.309
Adaptability	247	3.3312	.4952	-.485	.155	.751	.309
Mission	247	3.4240	.7440	-.664	.155	.907	.309
Valid N (listwise)	245						

Descriptive Statistics (U.S.)

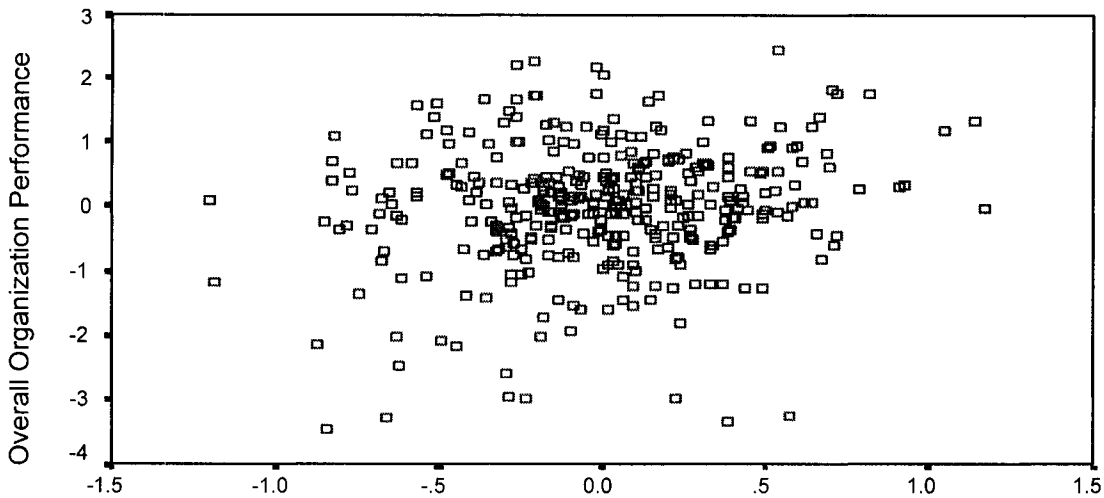
	N	Mean	Std.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Budget Achievement	109	3.0413	1.7215	-.645	.231	-.792	.459
Sales/Revenue Growth	109	3.14	1.66	-.673	.231	-.723	.459
Market Share	109	3.29	1.58	-.888	.231	-.219	.459
Profitability/ROA	109	2.98	1.69	-.552	.231	-.871	.459
Quality of Products and Services	109	3.71	1.23	-1.117	.231	1.073	.459
New Product Development	109	2.94	1.60	-.427	.231	-.833	.459
Employee Satisfaction	109	3.06	1.32	-.190	.231	-.463	.459
Overall Organization Performance	109	3.49	1.13	-.668	.231	.615	.459
Involvement	109	3.3580	.7900	-.450	.231	-.061	.459
Consistency	109	3.4171	.7050	-.385	.231	.009	.459
Adaptability	109	3.0620	.7091	.050	.231	-.693	.459
Mission	109	3.4451	.8444	-.434	.231	-.436	.459
Valid N (listwise)	109						

Appendix H

Partial Regression Plots of Four Culture Traits to Overall Organizational Performance

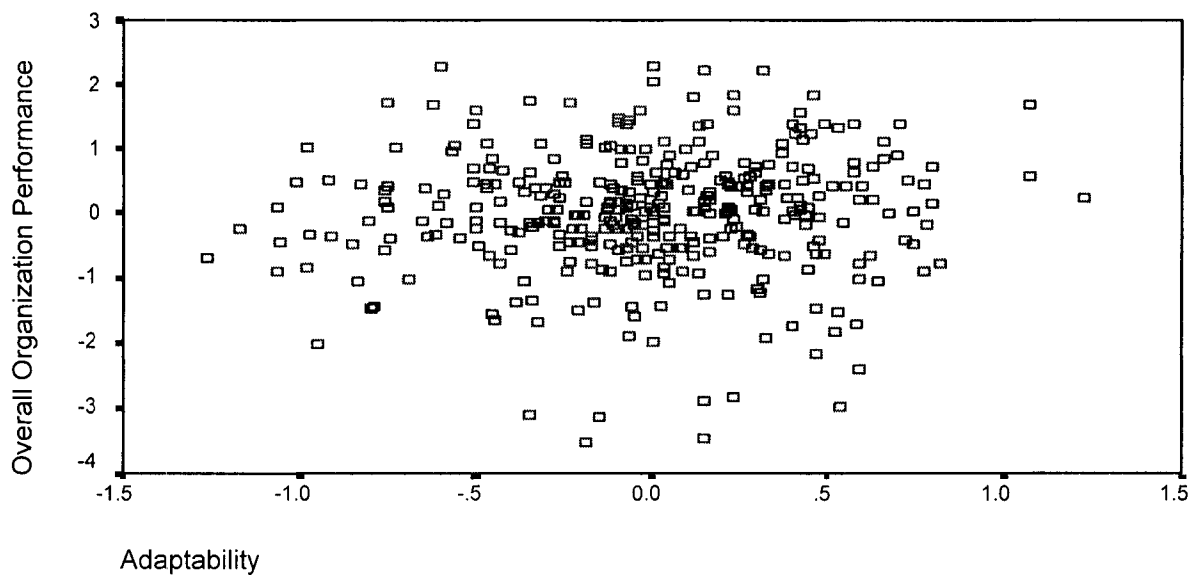
Partial Regression Plot

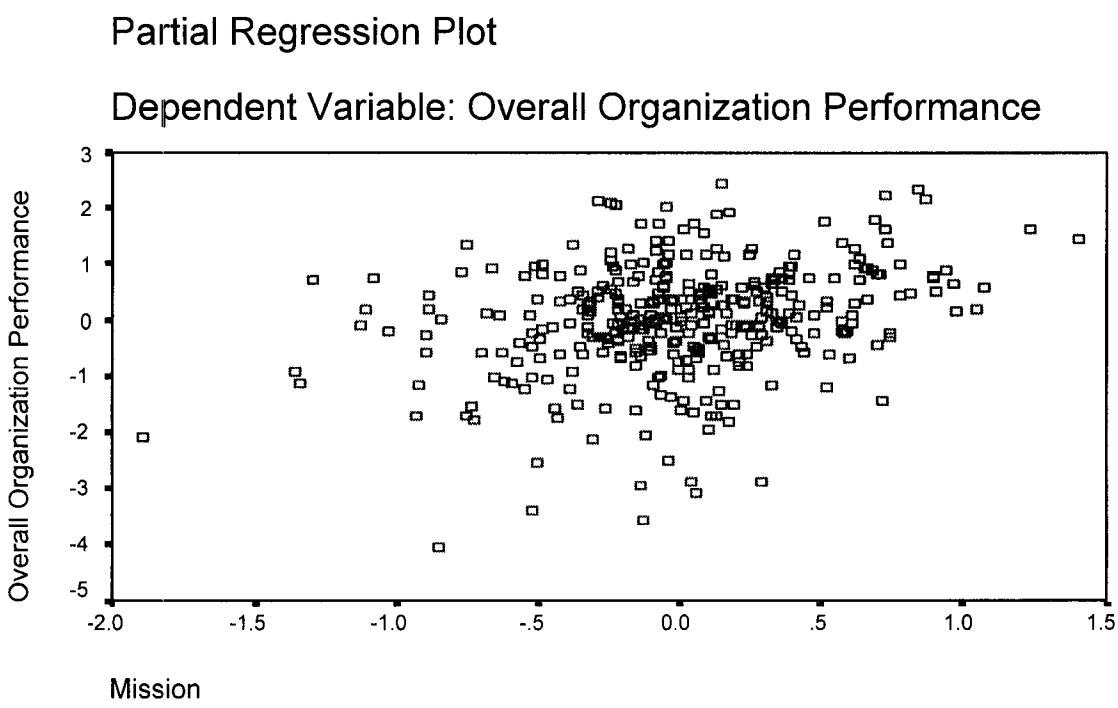
Dependent Variable: Overall Organization Performance



Partial Regression Plot

Dependent Variable: Overall Organization Performance





Appendix I

Rotated Factor Analysis Table (Taiwan)

Table A: Total Variance Explained

	Initial Eigenvalues			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	20.136	33.560	33.560	11.653	19.422	19.422
2	2.620	4.366	37.927	4.093	6.822	26.244
3	2.175	3.625	41.552	3.426	5.709	31.953
4	1.760	2.933	44.484	3.301	5.502	37.456
5	1.575	2.624	47.109	2.248	3.747	41.203
6	1.459	2.431	49.540	2.243	3.739	44.941
7	1.427	2.379	51.919	2.071	3.451	48.392
8	1.282	2.136	54.055	1.559	2.598	50.991
9	1.230	2.050	56.105	1.545	2.576	53.567
10	1.188	1.980	58.085	1.545	2.574	56.141
11	1.143	1.905	59.990	1.545	2.574	58.715
12	1.058	1.763	61.754	1.481	2.469	61.184
13	1.041	1.735	63.489	1.383	2.305	63.489

Extraction Method: Principal Component Analysis.

Table B: Rotated Component Matrix of Culture Traits

	Component												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Q49	.743	.179	4.399E-02	5.935E-02	9.972E-02	.174	4.976E-02	.148	-6.23E-02	-4.47E-02	5.786E-02	9.891E-02	-5.72E-02
Q51	.727	.246	7.114E-02	.115	3.047E-02	.114	-3.03E-03	-5.68E-02	-2.08E-02	4.668E-02	-5.49E-02	.104	-1.32E-03
Q46	.727	.119	.270	9.780E-02	3.401E-02	5.346E-02	-5.65E-03	-1.62E-02	-4.19E-02	7.522E-02	.129	.125	-4.26E-02
Q54	.725	.235	5.300E-03	.155	5.475E-02	-4.86E-02	4.394E-02	-2.72E-02	5.513E-02	-2.15E-02	7.272E-02	.118	-3.26E-02
Q59	.714	.107	.237	.133	.106	.103	.106	3.362E-02	-4.69E-02	.201	-4.77E-02	-1.54E-02	-1.67E-02
Q55	.698	.263	.192	.207	4.344E-02	-1.65E-02	.105	3.345E-02	2.825E-02	-1.32E-02	-4.50E-02	2.275E-02	1.234E-02
Q48	.694	.275	.174	.146	-1.52E-03	3.472E-02	4.222E-02	4.730E-02	-7.33E-02	-9.65E-02	.141	3.731E-02	-6.58E-02
Q56	.673	.266	6.263E-02	.204	.171	.214	7.331E-02	-3.92E-02	-5.54E-02	.126	3.251E-02	9.180E-02	.158
Q52	.668	.132	3.868E-02	.142	.129	5.705E-02	.150	.125	.119	4.815E-03	.197	3.199E-02	9.146E-02
Q57	.654	.235	.121	.155	.135	.159	.127	-8.17E-02	3.509E-02	4.604E-02	3.299E-02	.143	-5.83E-02
Q18	.637	.136	.396	6.226E-02	6.665E-02	.117	-4.32E-02	.200	-1.30E-02	.199	-9.52E-02	7.253E-02	3.063E-02
Q60	.628	.124	.119	.272	.151	3.034E-02	3.507E-02	-.146	6.877E-02	.246	-2.90E-02	-5.85E-02	3.631E-02
Q53	.625	-1.24E-03	.188	.174	-.112	.216	9.870E-02	.122	-8.73E-02	.191	.102	5.479E-02	-4.31E-03
Q17	.587	.258	.394	9.390E-02	3.148E-02	.121	-6.42E-02	9.060E-02	1.685E-02	.164	-7.30E-02	3.722E-02	1.528E-02
Q47	.586	4.246E-02	.193	.135	-4.30E-04	.133	3.012E-02	.139	-.140	-3.34E-02	.397	-.178	4.740E-02
Q26	.542	.104	.260	.177	.100	2.010E-02	5.031E-02	.373	-.117	1.397E-02	5.172E-02	.200	2.504E-02
Q32	.541	7.737E-02	3.219E-02	.204	.169	.261	.122	.317	-6.67E-02	4.451E-02	.253	-7.66E-02	-8.11E-02
Q50	-.524	-.105	-.138	.181	-.411	-.158	-3.27E-02	9.044E-02	.129	.117	-8.98E-02	-6.77E-02	.164
Q30	.482	-1.25E-02	.450	.322	4.988E-02	9.073E-02	2.352E-02	.290	-6.86E-02	-1.06E-02	3.425E-03	-2.65E-03	5.351E-02
Q33	.475	.166	.230	.158	.182	.200	.197	.279	-3.74E-03	.117	.158	-7.46E-02	-5.99E-02
Q10	.474	.336	.362	2.001E-02	3.927E-02	.170	3.015E-02	.199	.113	-.170	-4.91E-02	2.467E-02	1.677E-02
Q13	.453	5.720E-02	.352	.162	.173	.380	-4.27E-03	-9.27E-02	-1.01E-02	-3.74E-02	5.079E-02	9.824E-02	3.414E-02
Q5	.382	.320	.150	.293	1.176E-02	.165	-.114	-.177	-.187	.159	.377	-2.34E-02	.128
Q42	.374	.317	.219	.297	-7.30E-02	5.106E-02	.221	-4.43E-02	-.212	.124	.165	4.526E-02	-.163
Q38	.361	.200	.273	.325	-3.37E-02	.286	.308	-7.71E-02	-8.80E-02	5.425E-02	-6.25E-02	.186	.158
Q21	.348	.173	.157	.287	.313	.144	4.807E-02	-.195	.129	.258	2.373E-02	.189	3.771E-02
Q8	.190	.716	7.333E-02	.166	.138	.139	4.096E-02	.105	.158	-6.17E-03	5.628E-02	7.605E-02	.135
Q9	.375	.643	.257	-1.18E-02	5.452E-02	.134	4.511E-02	7.659E-02	1.253E-02	.139	7.125E-02	-2.58E-02	-3.61E-02
Q41	.364	.566	.182	.214	1.930E-02	-.128	.134	3.379E-02	-2.42E-02	1.122E-02	.110	9.057E-02	-.293
Q7	.391	.546	.176	5.733E-02	7.890E-02	.341	-3.93E-02	-8.45E-03	-7.17E-02	.109	-3.35E-03	4.026E-02	3.383E-02
Q44	.305	.533	.359	.191	-.112	2.653E-02	.109	-3.98E-02	-2.38E-02	4.622E-03	3.612E-02	-8.78E-02	-.138
Q1	.378	.516	-2.56E-02	7.669E-02	.122	.138	-.126	.201	-.113	9.355E-02	2.708E-02	.124	.287
Q11	.289	.245	.697	.112	5.389E-02	.129	5.647E-02	4.175E-04	-3.87E-03	.106	3.878E-02	.108	3.502E-03
Q12	.342	.363	.495	.176	3.020E-02	.175	.110	-1.86E-02	-.148	.107	.135	7.347E-02	-2.24E-02
Q20	.363	.203	.467	3.341E-02	.189	5.469E-02	5.641E-02	.220	.115	-2.75E-03	.168	3.331E-02	9.159E-02
Q45	.400	.112	.456	.320	-5.22E-02	3.711E-02	.101	4.349E-02	1.234E-02	-.114	.213	-4.50E-02	2.096E-02
Q23	.311	.198	.351	.294	.340	.176	4.522E-02	9.696E-02	.142	.158	-.104	.234	.117
Q27	.295	.174	9.664E-02	.648	.153	4.811E-02	-3.51E-02	5.976E-02	-1.15E-02	4.120E-02	-2.41E-02	.166	-1.91E-02
Q28	.245	-4.80E-03	.271	.619	.190	-8.38E-02	-6.16E-02	.181	-3.50E-02	-1.58E-02	5.531E-02	5.246E-02	.221
Q35	.406	.120	.214	.548	4.803E-02	4.446E-02	.172	3.061E-02	3.735E-03	.196	-6.60E-02	-.117	-.152
Q6	.287	.327	-.119	.535	3.317E-03	.264	-6.88E-02	4.055E-03	5.026E-02	-.225	3.800E-02	-3.03E-02	-.155
Q31	.112	.191	.295	.393	3.287E-02	.310	9.332E-02	.176	.226	3.037E-02	7.135E-02	5.630E-02	5.546E-02
Q34	-.116	-5.94E-02	4.214E-02	-.122	-.728	5.991E-02	7.997E-02	-.161	.150	9.506E-02	-2.29E-02	9.144E-02	3.660E-02
Q24	-.103	-3.19E-02	-.103	-.123	-.724	-5.16E-02	.183	5.428E-02	9.611E-02	-6.93E-02	5.660E-02	-8.88E-02	.142
Q2	.335	.210	.103	-1.85E-03	-.175	.556	-.135	.205	-.121	3.615E-03	-.175	.122	-8.89E-02
Q14	.156	.275	.128	9.518E-02	.161	.497	.192	1.891E-02	7.881E-02	-2.74E-02	.420	3.004E-02	-5.56E-02
Q3	.284	.201	.297	.362	-3.16E-02	.470	-.173	-2.97E-02	-.144	3.287E-02	3.191E-02	.119	-9.76E-02
Q16	.349	.122	.139	-2.45E-03	.100	.466	.269	-1.60E-02	.401	.104	5.765E-02	-1.64E-02	-2.02E-02
Q37	.148	5.477E-02	2.034E-02	-5.12E-02	-4.19E-02	9.488E-02	.827	5.374E-02	3.821E-02	1.572E-02	.102	-5.92E-03	9.006E-02
Q36	.119	-3.54E-03	3.167E-02	4.740E-02	-.172	-9.03E-02	.798	-2.98E-02	1.115E-02	.101	-4.62E-02	3.648E-02	-9.71E-02
Q25	.314	.323	.199	.157	5.398E-02	4.384E-02	5.787E-02	.587	7.270E-02	-1.75E-02	-3.37E-02	4.507E-02	-5.80E-02
Q39	-.252	-.139	-7.88E-02	.127	-.359	5.873E-02	-.192	.396	.124	.333	2.261E-02	-6.35E-02	.221
Q15	-4.83E-02	3.248E-03	1.070E-02	7.676E-02	-.200	-3.19E-04	-3.85E-02	-5.63E-03	.752	-5.89E-02	.206	-3.27E-02	-5.59E-02
Q43	-.254	-3.63E-02	-.106	-.210	-.263	-.103	.161	3.920E-02	.447	.176	-.107	.205	-2.23E-02
Q58	.209	.104	4.872E-02	-2.42E-02	-5.41E-02	-2.26E-03	.159	2.358E-03	2.376E-02	.747	9.147E-02	1.712E-02	-.146
Q4	.254	.375	.159	.254	5.515E-02	.235	-9.10E-02	.108	-.142	.396	.118	.132	.135
Q19	.141	3.933E-02	5.814E-02	-7.76E-02	-6.56E-02	-4.67E-02	2.071E-02	5.286E-03	.322	.136	.678	.164	3.287E-02
Q22	.312	-3.22E-02	.104	-2.91E-02	7.488E-02	.104	3.517E-02	-.103	3.907E-02	5.369E-02	-1.90E-02	.695	5.197E-02
Q40	5.761E-02	.216	4.565E-02	.290	-6.75E-02	4.595E-02	5.373E-02	.236	-8.35E-02	-4.96E-02	.252	.637	-.103
Q29	9.209E-03	3.100E-02	6.628E-02	7.440E-03	-.191	-6.54E-02	2.035E-02	-1.67E-02	-5.27E-02	-9.43E-02	3.287E-02	-1.03E-02	.839

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

a. Rotation converged in 17 iterations.

Table C: Rotated Component Matrix of Cutlure Traits excluding Mission items

	Component										
	1	2	3	4	5	6	7	8	9	10	11
Q18	.765	.243	.816E-02	.148	1.38E-02	2.54E-02	.207	7.82E-02	7.03E-03	4.26E-02	.339E-02
Q30	.704	.868E-02	.349	.918E-02	.123E-02	5.37E-02	1.73E-02	4.60E-02	.157E-03	.478E-02	.753E-02
Q17	.666	.361	.120	.157	3.02E-02	9.10E-03	.178	6.04E-02	.249E-02	3.43E-02	3.20E-02
Q26	.641	.131	.200	.614E-02	.196E-02	7.85E-02	.139	-.182	.141	8.08E-03	.347
Q20	.611	.251	.831E-02	.390E-02	.174E-02	-.188	.100	.107	.227	.325E-02	.540E-02
Q11	.569	.421	.191	.941E-03	.093E-02	1.87E-02	.196	.122	3.18E-02	.178E-02	-.223
Q10	.543	.384	.320E-02	.243	.137E-02	6.04E-02	.029E-02	.905E-02	2.86E-02	.854E-02	.121
Q33	.495	.232	.227	.295	.232	-.169	2.27E-02	.991E-02	.590E-02	2.59E-02	.163
Q45	.493	.204	.360	.677E-02	.165	3.24E-02	7.15E-02	.113E-02	.183	.801E-02	4.10E-02
Q32	.474	.911E-02	.248	.394	.167	-.172	4.34E-02	-.151	.209	8.94E-02	.255
Q13	.444	.196	.228	.368	.455E-02	-.193	.192	2.35E-02	.271E-02	.731E-02	-.182
Q23	.396	.267	.316	.138	.756E-02	-.254	.378	.220	-.160	.105	.790E-02
Q9	.346	.710	.705E-02	.176	.715E-02	7.16E-02	.051E-02	.846E-03	.786E-02	3.20E-02	.267E-02
Q8	.861E-02	.660	.146	.208	.579E-02	-.179	.818E-02	.152	.103	.179	.263
Q44	.295	.642	.269	.484E-02	.135	.192E-02	-.108	.255E-02	.635E-02	5.83E-02	7.67E-02
Q7	.248	.629	.107	.357	3.97E-02	-.103	.151	5.07E-02	4.16E-02	.765E-02	.518E-02
Q41	.257	.626	.254	-.107	.163	8.92E-02	.430E-02	1.31E-02	.144	-.273	.138
Q12	.439	.506	.270	.106	.121	2.75E-02	.133	7.29E-02	.589E-02	.206E-02	-.118
Q1	.255	.480	.241E-02	.212	-.127	9.92E-02	.173	-.178	.910E-02	.246	.320
Q42	.274	.450	.392	.332E-02	.243	.373E-02	.486E-02	-.160	.940E-02	-.134	6.45E-02
Q4	.268	.410	.319	.203	9.99E-02	.029E-02	.243	-.127	.101	.149	.117E-02
Q5	.239	.406	.373	.191	6.84E-02	4.14E-02	.987E-02	-.249	.357	.148	-.185
Q27	.256	.162	.621	.315E-02	3.27E-02	-.163	.200	3.33E-02	.185E-03	4.56E-02	.152
Q28	.404	.923E-03	.596	-.149	7.60E-02	-.200	.867E-02	.880E-02	.987E-02	.237	.113
Q6	.218E-02	.282	.564	.323	5.05E-02	6.58E-02	-.121	1.71E-02	.506E-02	-.135	.114E-02
Q35	.420	.192	.559	.057E-02	.201	6.46E-02	1.95E-03	.119E-02	-.101	-.137	2.75E-02
Q31	.211	.231	.464	.242	.429E-02	5.34E-02	.163E-02	.411	9.60E-02	.184	.106
Q3	.295	.296	.456	.405	-.154	.697E-02	.170	9.95E-02	2.70E-02	4.68E-02	9.49E-02
Q38	.332	.276	.356	.241	.316	.230E-02	.308	9.75E-02	7.00E-02	.138	4.69E-02
Q2	.296	.250	.341E-02	.544	-.132	.200	.130	-.144	-.154	9.55E-02	.164
Q16	.313	.148	.092E-02	.534	.263	7.92E-02	.133	.306	.149	5.61E-02	9.68E-02
Q14	.113	.285	.172	.488	.168	-.163	.030E-02	.782E-02	.372	1.99E-02	.046E-02
Q37	.413E-02	.425E-02	3.35E-02	.122	.822	.923E-02	.440E-03	.933E-02	.507E-02	.112	.696E-02
Q36	.768E-02	.326E-02	.011E-02	6.56E-02	.815	.159	.194E-02	1.23E-04	1.89E-02	9.77E-02	3.13E-02
Q34	-.105	4.07E-03	-.116	1.32E-02	.104	.741	.239E-02	.000E-02	.916E-02	5.49E-03	-.160
Q24	-.117	3.88E-02	-.133	3.00E-02	.213	.696	-.196	.529E-02	.884E-02	.127	.771E-02
Q39	1.59E-02	-.218	.117	4.55E-03	-.250	.520	4.82E-02	.220	5.69E-02	.206	.193
Q22	.186	.922E-02	.920E-03	.672E-02	.847E-02	5.71E-02	.761	.292E-03	.347E-02	2.77E-02	.006E-02
Q21	.238	.260	.292	.142	.350E-02	-.336	.355	.102	.315E-02	.599E-02	-.147
Q15	1.60E-02	3.07E-02	.858E-02	.908E-02	3.35E-02	.171	7.47E-02	.691	.328	5.59E-02	2.91E-02
Q43	-.205	7.51E-02	-.255	-.127	.140	.313	.201	.487	4.47E-02	5.53E-02	.666E-02
Q19	.120	.103	2.30E-02	.392E-02	.681E-02	.106	.101	.190	.763	.876E-03	.007E-02
Q29	.931E-02	.112E-02	2.15E-02	7.71E-02	.749E-02	.163	1.50E-02	3.98E-02	.413E-02	.870	2.12E-02
Q25	.454	.308	.150	.057E-02	.378E-02	4.55E-02	3.40E-02	.147	6.42E-02	4.47E-02	.547
Q40	1.55E-02	.191	.389	1.95E-02	.960E-02	.917E-02	.414	2.63E-03	.245	4.02E-02	.418

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

a. Rotation converged in 30 iterations.

Appendix J

Four Culture Traits' Measure Component Results

Results of Factor Analysis

Dimension	Scales	Common Agreement
Involvement	Empowerment	1. Most employees are highly involved in their work. (.480) 4. Everyone believes that he or she can have a positive impact. (.410) 5. Business planning is ongoing and involves everyone in the process to some degree. (.406)
	Team Orientation	7. People work like they are part of a team (.629) 8. Teamwork is used to get work done, rather than hierarchy. (.660) 9. Teams are our primary building blocks. (.71)
	Capability Development	12. The " bench strength" (capability of people) is constantly improving. (.506)
Consistency	Core Values	17. There is a characteristic management style and a distinct set of management practices. (.666) 18. There is a clear and consistent set of values that governs the way we do business. (.765) 20. There is an ethical code that guides our behavior and tells us right from wrong. (.611)
	Agreement	21. When disagreement occur, we work hard to achieve "win-win" solutions. (.355) 22. There is a "strong" culture. (.765) 23. It is easy to reach consensus, even on difficult issues. (.611)
	Coordination & Integration	26. Our approach to doing business is very consistent and predictable. (.641) 29. Working with someone from another part of this organization is like working with someone from a different organization. (.870) 30. There is a good alignment of goals across levels. (.704)

Dimension	Scales	Common Agreement
Adaptability	Creating Change	31. The way things are done is very flexible and easy to change. (.464) 34. Attempts to create change usually meet with resistance. (.741) 35. Different parts of the organization often cooperate to create change. (.559)
	Customer Focus	36. Customer comments and recommendations often lead to changes. (.815) 37. Customer input directly influences our decisions. (.822) 38. All members have a deep understanding of customer wants and needs. (.356) 39. The interests of the customer often get ignored in our decisions. (.520)
	Organizational Learning	42. Innovation and risk taking are encouraged and rewarded. (.392) 43. Lots of things " fall between the cracks". (.487)
Mission	Strategic Direction & Intent	46. There is a long-term purpose and direction. (.727) 47. Our strategy leads other organizations to change the way they compete in the industry. (.586) 48. There is a clear mission that gives meaning and direction to our work. (.694) 49. There is a clear strategy for the future. (.743) 50. Our strategic direction is unclear to me. (- . 524)
	Goals & Objects	51. There is widespread agreement about goals. (.727) 52. Leaders set goals that are ambitious, but realistic. (.668) 53. The leadership had "gone the record" about the objectives we are trying to meet. (.625) 54. We continuously track our progress against our stated goals. (.725) 55. People understand what needs to be done for us to succeed in the long run. (.698)
	Vision	56. We have a shared vision of what the organization will be like in the future. (.673) 57. Leaders have a long-term viewpoint. (.654) 59. Our vision creates excitement and motivation for our employees. (.714) 60. We are able to meet short-term demands without compromising our long-term vision. (.628)

* ( ) indicates factor loadings to underlying dimension.

Appendix K

Reliability Statistics Table for TTL Samples (USA + Taiwan)

Reliability-Involvement

```
****** Method 2 (covariance matrix) will be used for this analysis
******

_

  R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H
A)
```

Correlation Matrix

	Q1	Q4	Q5	Q7	Q8
Q1	1.0000				
Q4	.4101	1.0000			
Q5	.3123	.4591	1.0000		
Q7	.4227	.4602	.4337	1.0000	
Q8	.4069	.4161	.4014	.5985	1.0000
Q9	.3791	.3771	.4096	.5995	.6198
Q12	.3869	.4666	.3889	.4977	.3627

	Q9	Q12
Q9	1.0000	
Q12	.4343	1.0000

N of Cases = 410.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	24.5833	27.0643	5.2023	7

Reliability Coefficients 7 items

Alpha = .8470 Standardized item alpha = .8462

Reliability-Consistency

****** Method 2 (covariance matrix) will be used for this analysis ******

_

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	Q17	Q18	Q20	Q21	Q22
Q17	1.0000				
Q18	.6288	1.0000			
Q20	.3859	.4811	1.0000		
Q21	.3489	.3345	.2683	1.0000	
Q22	.2809	.3119	.3067	.2511	1.0000
Q23	.3652	.3872	.2205	.4423	.2363
Q26	.4689	.5312	.4173	.2949	.2757
Q29	.0718	.1241	.1012	.1471	.0542
Q30	.4560	.5115	.3441	.3574	.1763

	Q23	Q26	Q29	Q30
Q23	1.0000			
Q26	.3759	1.0000		
Q29	.0970	.1140	1.0000	
Q30	.3901	.4881	.1261	1.0000

N of Cases = 410.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	29.7843	32.9214	5.7377	9

Reliability Coefficients 9 items

Alpha = .8009 Standardized item alpha = .8020

Reliability-Adaptability

```
****** Method 2 (covariance matrix) will be used for this analysis
******

_

  R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H
A)
```

Correlation Matrix

	Q31	Q34	Q35	Q36	Q37
Q31	1.0000				
Q34	.1745	1.0000			
Q35	.3894	.2119	1.0000		
Q36	.1085	-.0410	.2583	1.0000	
Q37	.1598	.0219	.1948	.5963	1.0000
Q38	.3813	.1114	.4136	.2760	.2949
Q39	.0344	.2532	.1484	.1700	.2345
Q43	.1640	.2991	.2349	-.0056	-.0218

	Q38	Q39	Q43
Q38	1.0000		
Q39	.2290	1.0000	
Q43	.2642	.2463	1.0000

N of Cases = 410.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	25.8378	20.6091	4.5397	8

Reliability Coefficients 8 items

Alpha = .6740 Standardized item alpha = .6765

Reliability-Mission

****** Method 2 (covariance matrix) will be used for this analysis ******

_

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	Q46	Q47	Q48	Q49	Q50
Q46	1.0000				
Q47	.5050	1.0000			
Q48	.6336	.5701	1.0000		
Q49	.5931	.5556	.6952	1.0000	
Q50	.4326	.3365	.5223	.6141	1.0000
Q51	.4851	.3871	.5399	.5644	.4245
Q52	.4920	.3610	.5205	.5360	.4146
Q53	.5012	.4782	.4938	.4814	.3328
Q54	.5518	.4337	.5918	.5762	.4311
Q55	.5811	.4839	.5680	.5517	.4037
Q56	.5347	.4679	.5831	.6122	.4169
Q57	.5770	.4388	.5393	.5671	.4068
Q59	.5973	.4707	.5422	.5958	.4627
Q60	.4742	.3649	.4844	.4577	.3813

	Q51	Q52	Q53	Q54	Q55
Q51	1.0000				
Q52	.4644	1.0000			
Q53	.4289	.4698	1.0000		
Q54	.4693	.5317	.5494	1.0000	
Q55	.5406	.4623	.4955	.5446	1.0000
Q56	.5758	.5287	.4449	.5040	.6641
Q57	.4616	.5293	.4854	.5025	.5972
Q59	.5146	.4478	.4500	.4737	.6078
Q60	.4996	.4335	.3631	.4537	.5077

	Q56	Q57	Q59	Q60
Q56	1.0000			
Q57	.6104	1.0000		
Q59	.6588	.5846	1.0000	
Q60	.5662	.4671	.5812	1.0000

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

N of Cases = 410.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	47.8113	116.5761	10.7970	14

Reliability Coefficients 14 items

Alpha = .9343 Standardized item alpha = .9349

Appendix L

Reliability Statistics Results (Taiwan)

Reliability-Involvement-Taiwan

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	Q1	Q4	Q5	Q7	Q8
Q1	1.0000				
Q4	.4553	1.0000			
Q5	.3795	.4711	1.0000		
Q7	.4384	.4402	.4104	1.0000	
Q8	.4185	.4052	.3650	.5247	1.0000
Q9	.4682	.4198	.4131	.5872	.5575
Q12	.3787	.4869	.4396	.4919	.3783

	Q9	Q12
Q9	1.0000	
Q12	.5190	1.0000

N of Cases = 289.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	25.1419	24.9486	4.9949	7

Reliability Coefficients 7 items

Alpha = .8518 Standardized item alpha = .8513

Reliability-Consistency

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	Q17	Q18	Q20	Q21	Q22

Q17	1.0000				
Q18	.7167	1.0000			
Q20	.4839	.5177	1.0000		
Q21	.3574	.3590	.3726	1.0000	
Q22	.2519	.2646	.2174	.2729	1.0000
Q23	.4551	.4477	.3547	.4648	.3027
Q26	.5081	.5674	.4406	.3210	.2357
Q29	-.0051	-.0116	-.0421	.0266	-.0158
Q30	.4772	.5623	.4142	.3458	.1313

	Q23	Q26	Q29	Q30
Q23	1.0000			
Q26	.3972	1.0000		
Q29	.0042	-.0137	1.0000	
Q30	.4028	.5901	-.0746	1.0000

N of Cases = 289.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	29.5536	30.0535	5.4821	9

Reliability Coefficients 9 items

Alpha = .7997 Standardized item alpha = .8005

Reliability-Adaptability

****** Method 2 (covariance matrix) will be used for this analysis ******

_

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	Q31	Q34	Q35	Q36	Q37
Q31	1.0000				
Q34	.0980	1.0000			
Q35	.3493	.1444	1.0000		
Q36	.0211	-.1711	.2190	1.0000	
Q37	.1251	-.0929	.1812	.5665	1.0000
Q38	.3919	-.0239	.4398	.2614	.2682

Q39	-.0558	.2059	.0491	.0535	.1146
Q42	.3130	.1196	.4096	.2546	.1488
Q43	.1138	.2543	.1995	-.1095	-.1372

	Q38	Q39	Q42	Q43
Q38	1.0000			
Q39	.1338	1.0000		
Q42	.4486	.1217	1.0000	
Q43	.2174	.2098	.1755	1.0000

N of Cases = 289.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	29.9583	19.5801	4.4249	9

Reliability Coefficients 9 items

Alpha = .6412 Standardized item alpha = .6437

Reliability-Mission-Taiwan

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	Q46	Q47	Q48	Q49	Q50
Q46	1.0000				
Q47	.5354	1.0000			
Q48	.6507	.5905	1.0000		
Q49	.5809	.5538	.6647	1.0000	
Q50	.4119	.3400	.4140	.5759	1.0000
Q51	.5638	.4272	.6024	.6005	.4285
Q52	.5502	.4392	.5618	.5492	.3976
Q53	.5331	.5006	.4702	.4720	.3022
Q54	.5755	.4096	.5514	.5356	.4024
Q55	.5844	.4774	.5710	.5362	.3582
Q56	.5278	.4587	.5853	.6130	.4186

Q57	.6118	.4577	.5702	.5701	.3963
Q58	.2414	.1910	.1651	.2117	.0725
Q59	.6295	.4594	.5189	.6100	.4426
Q60	.5042	.3502	.4485	.4293	.3391

	Q51	Q52	Q53	Q54	Q55
Q51	1.0000				
Q52	.4866	1.0000			
Q53	.5352	.5038	1.0000		
Q54	.5757	.5363	.4970	1.0000	
Q55	.5675	.5209	.5367	.5811	1.0000
Q56	.6032	.5611	.4856	.5277	.6465
Q57	.5370	.5777	.4715	.4963	.6106
Q58	.1868	.1720	.2410	.1788	.1634
Q59	.5923	.4811	.5403	.5228	.6038
Q60	.5215	.4856	.4847	.5254	.5133

	Q56	Q57	Q58	Q59	Q60
Q56	1.0000				
Q57	.6584	1.0000			
Q58	.2613	.2461	1.0000		
Q59	.6535	.6344	.3110	1.0000	
Q60	.5726	.5102	.2547	.5722	1.0000

—

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

N of Cases = 289.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	51.1626	112.3867	10.6013	15

Reliability Coefficients 15 items

Alpha = .9325 Standardized item alpha = .9324

Appendix M

Reliability Statistics Results for U.S. Samples

Reliability-Involvement-USA

****** Method 2 (covariance matrix) will be used for this analysis ******

_

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	Q1	Q4	Q5	Q7	Q8
Q1	1.0000				
Q4	.3806	1.0000			
Q5	.3217	.3985	1.0000		
Q7	.4629	.4749	.4359	1.0000	
Q8	.4517	.4134	.4254	.7186	1.0000
Q9	.3628	.2434	.2876	.6034	.7159
Q12	.4353	.4197	.3072	.5118	.3299

	Q9	Q12
Q9	1.0000	
Q12	.2895	1.0000

N of Cases = 121.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	23.2269	29.8379	5.4624	7

Reliability Coefficients 7 items

Alpha = .8396 Standardized item alpha = .8397

Reliability-Consistency-USA

****** Method 2 (covariance matrix) will be used for this analysis ******

_

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	Q17	Q18	Q20	Q21	Q22
Q17	1.0000				
Q18	.4498	1.0000			
Q20	.1993	.4090	1.0000		
Q21	.3614	.3162	.1645	1.0000	
Q22	.3303	.4000	.4411	.2479	1.0000
Q23	.2419	.3358	.1319	.3639	.1757
Q26	.3836	.4542	.3613	.2738	.3449
Q29	.1968	.3435	.2938	.3949	.1756
Q30	.4236	.4279	.2634	.3848	.2836

	Q23	Q26	Q29	Q30
Q23	1.0000			
Q26	.4054	1.0000		
Q29	.3015	.3176	1.0000	
Q30	.3803	.3133	.4516	1.0000

N of Cases = 121.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	30.3445	39.7532	6.3050	9

Reliability Coefficients 9 items

Alpha = .8128 Standardized item alpha = .8133

Reliability-Adaptability-USA

```
****** Method 2 (covariance matrix) will be used for this analysis
******

_

  R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H
A)
```

Correlation Matrix

	Q31	Q34	Q35	Q36	Q37
Q31	1.0000				
Q34	.2483	1.0000			
Q35	.3758	.3036	1.0000		
Q36	.2338	.1870	.3193	1.0000	
Q37	.1622	.2020	.1889	.6463	1.0000
Q38	.2953	.3208	.3262	.2912	.3183
Q39	.0929	.3165	.2832	.3605	.4129
Q43	.3047	.3867	.3174	.1798	.1742

	Q38	Q39	Q43
Q38	1.0000		
Q39	.3597	1.0000	
Q43	.3611	.3138	1.0000

N of Cases = 121.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	24.3025	31.8399	5.6427	8

Reliability Coefficients 8 items

Alpha = .7700 Standardized item alpha = .7707

Reliability-Mission-USA

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Correlation Matrix

	Q46	Q47	Q48	Q49	Q50
Q46	1.0000				
Q47	.4524	1.0000			
Q48	.6149	.5410	1.0000		
Q49	.6187	.5609	.7557	1.0000	
Q50	.4708	.3308	.6945	.6868	1.0000
Q51	.3603	.3262	.4386	.5068	.4220
Q52	.3869	.2273	.4527	.5113	.4444
Q53	.4793	.4951	.6442	.5686	.4340
Q54	.5175	.4741	.6655	.6570	.4791
Q55	.5787	.4956	.5625	.5821	.4814
Q56	.5675	.4946	.5784	.6204	.4219
Q57	.5103	.4059	.4900	.5607	.4271
Q59	.5478	.4948	.5774	.5725	.5017
Q60	.4556	.4066	.5391	.5308	.4700

	Q51	Q52	Q53	Q54	Q55
Q51	1.0000				
Q52	.4254	1.0000			
Q53	.3673	.4867	1.0000		
Q54	.3359	.5366	.6585	1.0000	
Q55	.4950	.3571	.5027	.4996	1.0000
Q56	.5155	.4683	.5294	.5044	.7012
Q57	.3297	.4370	.5893	.5249	.5726
Q59	.3716	.3845	.3985	.4195	.6142
Q60	.4442	.3462	.3507	.4013	.5068

	Q56	Q57	Q59	Q60
Q56	1.0000			
Q57	.5215	1.0000		
Q59	.6606	.4906	1.0000	
Q60	.5299	.4016	.5883	1.0000

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

N of Cases = 121.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	47.3529	141.4676	11.8940	14

Reliability Coefficients 14 items

Alpha = .9324 Standardized item alpha = .9329

Appendix N

Significant Test of Demographic Factors to corporate performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.578	.334	.333	.98
2	.592	.350	.347	.97
3	.603	.363	.359	.96
4	.609	.371	.364	.96
5	.614	.378	.370	.95

a Predictors: (Constant), Mission
b Predictors: (Constant), Mission, Consistency
c Predictors: (Constant), Mission, Consistency, Company Size
d Predictors: (Constant), Mission, Consistency, Company Size, Gender
e Predictors: (Constant), Mission, Consistency, Company Size, Gender, Age Range

Coefficients

		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
Model		B		Beta		
1	(Constant)	.229	.221		1.034	.302
	Mission	.902	.063	.578	14.301	.000
2	(Constant)	-.187	.256		-.730	.466
	Mission	.670	.097	.430	6.884	.000
	Consistency	.365	.117	.194	3.107	.002
3	(Constant)	-.433	.268		-1.619	.106
	Mission	.664	.096	.426	6.883	.000
	Consistency	.339	.117	.180	2.909	.004
	Company Size	7.990E-02	.027	.117	2.910	.004
4	(Constant)	-.733	.300		-2.441	.015
	Mission	.650	.096	.417	6.753	.000
	Consistency	.362	.117	.192	3.102	.002
	Company Size	7.815E-02	.027	.114	2.858	.004
	Gender	.192	.089	.086	2.163	.031
5	(Constant)	-.630	.303		-2.080	.038
	Mission	.619	.097	.397	6.391	.000
	Consistency	.402	.118	.214	3.419	.001
	Company Size	9.005E-02	.028	.131	3.241	.001
	Gender	.249	.092	.111	2.697	.007
	Age Range	-8.581E-02	.040	-.091	-2.138	.033

a Dependent Variable: Overall Organization Performance

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Budget Achievement	Between Groups	3.661E-04	1	3.661E-04	.000	.984
	Within Groups	18.038	21	.859		
	Total	18.038	22			
Sales/Revenue Growth	Between Groups	.303	1	.303	.323	.576
	Within Groups	19.697	21	.938		
	Total	20.000	22			
Market Share	Between Groups	1.211	1	1.211	1.025	.323
	Within Groups	24.789	21	1.180		
	Total	26.000	22			
Profitability/ROA	Between Groups	.387	1	.387	.416	.526
	Within Groups	19.526	21	.930		
	Total	19.913	22			
Quality of Products and Services	Between Groups	5.721E-04	1	5.721E-04	.001	.975
	Within Groups	12.434	21	.592		
	Total	12.435	22			
New Product Development	Between Groups	5.149E-03	1	5.149E-03	.003	.954
	Within Groups	31.908	21	1.519		
	Total	31.913	22			
Employee Satisfaction	Between Groups	8.238E-02	1	8.238E-02	.093	.763
	Within Groups	18.526	21	.882		
	Total	18.609	22			
Overall Organization Performance	Between Groups	6.922E-02	1	6.922E-02	.116	.737
	Within Groups	12.539	21	.597		
	Total	12.609	22			

Appendix O

Regression Results of the Combined Sample

Summary of the Regression Results of Combined Sample

Dependent Variables	Model	Coefficient B	R^2	Adjusted R^2	S.E.	F
Budget achievement	Constant Consistency Company size Mission	-1.240 .608 .126 .409	.191	.184	1.5112	27.748
Sales/revenue Growth	Constant Mission Company size	- .347 .813 .142	.230	.226	.130	52.839
Market share	Constant Mission Company size	6.854E-02 .641 .180	.171	.167	1.37	36.458
Profitability /ROA	Constant Mission Company size	- .311 .763 .124	.179	.174	.141	38.2
Quality of products and services	Constant Consistency Mission Company size	8.931E-02 .503 .393 7.206E-02	.242	.236	1.1	37.535
New product development	Constant Mission Consistency	- .312 .517 .419	.178	.173	1.36	38.239
Employee satisfaction	Constant Mission Consistency Involvement	-1.024 .419 .515 .235	.106	.336	1.06	59.242
Overall organization Performance	Constant Mission Consistency Company size	- .333 .648 .356 6.584E-02	.94	.364	.94	68.766

Budget Achievement

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.399[a]	.159	.157	1.5368
2	.420[b]	.176	.171	1.5231
3	.437[c]	.191	.184	1.5112

a. Predictors: (Constant), Consistency

b. Predictors: (Constant), Consistency, Company Size

c. Predictors: (Constant), Consistency, Company Size, Mission

d. Dependent Variable: Budget Achievement

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	157.977	1	157.977	66.892	.000[a]
	Residual	836.035	354	2.362		
	Total	994.011	355			
2	Regression	175.100	2	87.550	37.739	.000[b]
	Residual	818.911	353	2.320		
	Total	994.011	355			
3	Regression	190.112	3	63.371	27.748	.000[c]
	Residual	803.899	352	2.284		
	Total	994.011	355			

a. Predictors: (Constant), Consistency

b. Predictors: (Constant), Consistency, Company Size

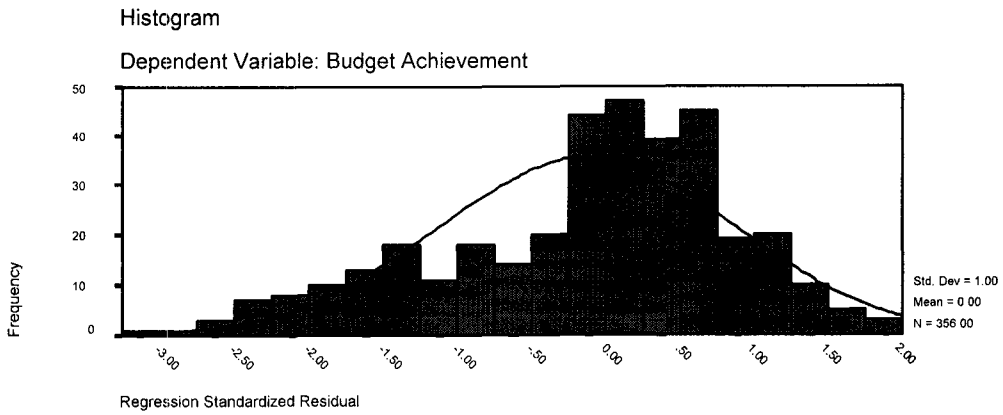
c. Predictors: (Constant), Consistency, Company Size, Mission

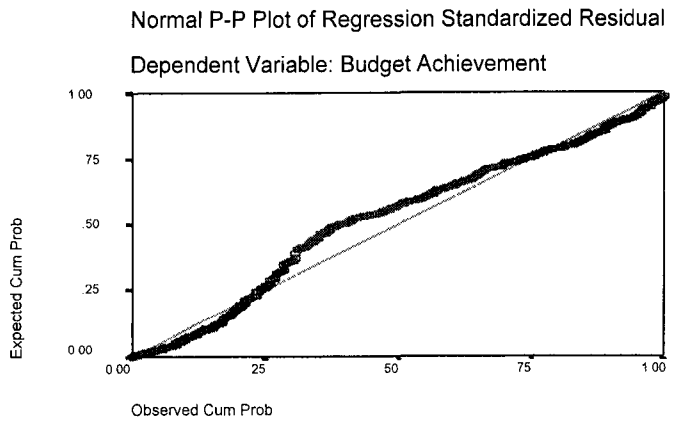
d. Dependent Variable: Budget Achievement

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.726	.431		-1.682	.093		
	Consistency	1.043	.128	.399	8.179	.000	1.000	1.000
2	(Constant)	-1.088	.448		-2.429	.016		
	Consistency	.985	.128	.376	7.685	.000	.972	1.029
	Company Size	.125	.046	.133	2.717	.007	.972	1.029
3	(Constant)	-1.240	.448		-2.767	.006		
	Consistency	.608	.194	.232	3.129	.002	.416	2.402
	Company Size	.126	.046	.134	2.748	.006	.972	1.029
	Mission	.409	.159	.189	2.564	.011	.421	2.373

a. Dependent Variable: Budget Achievement





Sales/Revenue Growth

Descriptive Statistics

	Mean	Std. Deviation	N
Sales/Revenue Growth	3.07	1.47	356
Company Size	4.42	1.78	356
Involvement	3.5039	.7495	356
Consistency	3.3212	.6396	356
Adaptability	3.2488	.5816	356
Mission	3.4305	.7750	356

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.449[a]	.202	.199	1.32
2	.480[b]	.230	.226	1.30

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Company Size

c. Dependent Variable: Sales/Revenue Growth

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	155.423	1	155.423	89.419	.000[a]
	Residual	615.305	354	1.738		
	Total	770.728	355			
2	Regression	177.573	2	88.787	52.839	.000[b]
	Residual	593.154	353	1.680		
	Total	770.728	355			

a. Predictors: (Constant), Mission

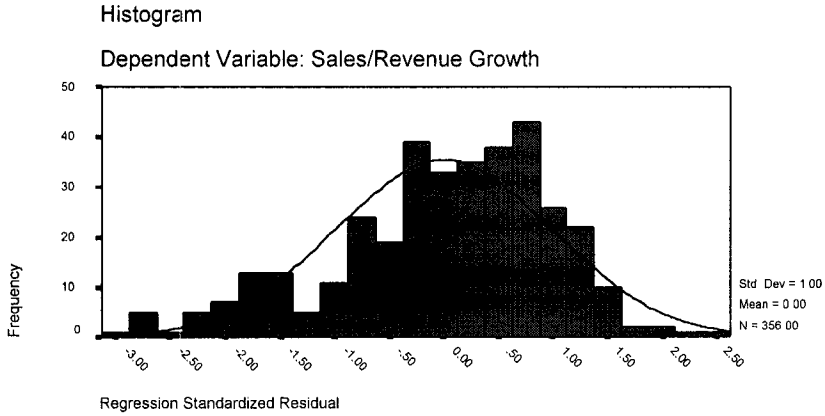
b. Predictors: (Constant), Mission, Company Size

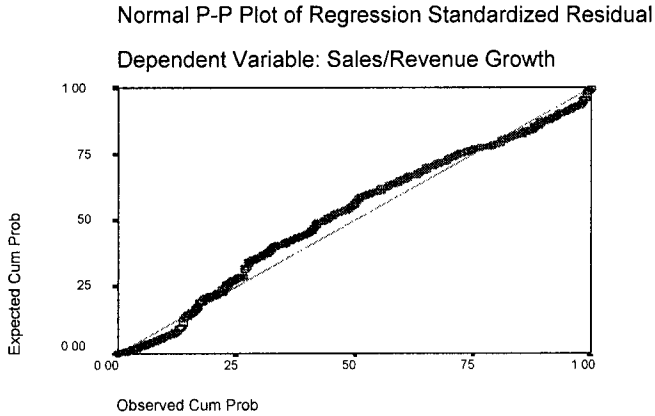
c. Dependent Variable: Sales/Revenue Growth

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.141	.318		.445	.657		
	Mission	.854	.090	.449	9.456	.000	1.000	1.000
2	(Constant)	-.347	.340		-1.021	.308		
	Mission	.813	.089	.428	9.092	.000	.985	1.016
	Company Size	.142	.039	.171	3.631	.000	.985	1.016

a. Dependent Variable: Sales/Revenue Growth





Market Share

Descriptive Statistics

	Mean	Std. Deviation	N
Market Share	3.06	1.51	356
Company Size	4.42	1.78	356
Involvement	3.5039	.7495	356
Consistency	3.3212	.6396	356
Adaptability	3.2488	.5816	356
Mission	3.4305	.7750	356

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.356[a]	.127	.125	1.41
2	.414[b]	.171	.167	1.37

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Company Size

c. Dependent Variable: Market Share

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	102.243	1	102.243	51.519	.000[a]
	Residual	702.536	354	1.985		
	Total	804.780	355			
2	Regression	137.776	2	68.888	36.458	.000[b]
	Residual	667.003	353	1.890		
	Total	804.780	355			

a. Predictors: (Constant), Mission

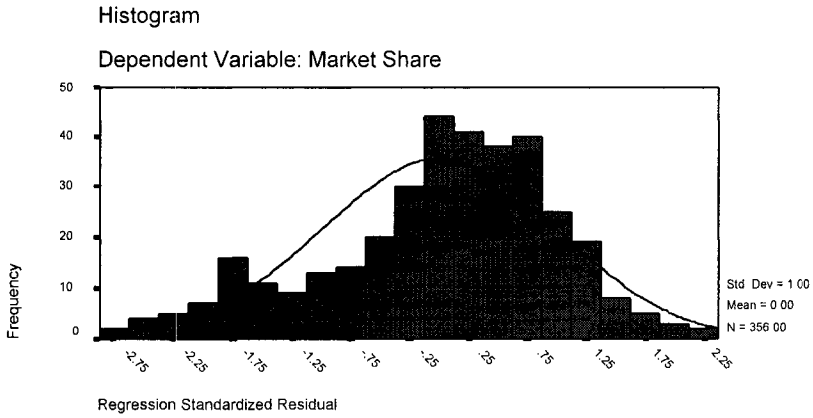
b. Predictors: (Constant), Mission, Company Size

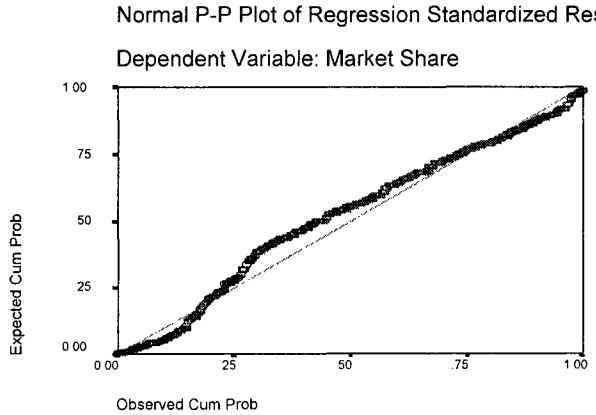
c. Dependent Variable: Market Share

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.687	.339		2.026	.044		
	Mission	.692	.096	.356	7.178	.000	1.000	1.000
2	(Constant)	6.854E-02	.360		.190	.849		
	Mission	.641	.095	.330	6.760	.000	.985	1.016
	Company Size	.180	.041	.212	4.336	.000	.985	1.016

a. Dependent Variable: Market Share





Profitability/ROA

Descriptive Statistics

	Mean	Std. Deviation	N
Profitability/ROA	2.85	1.56	354
Company Size	4.42	1.78	354
Involvement	3.5023	.7513	354
Consistency	3.3230	.6407	354
Adaptability	3.2520	.5816	354
Mission	3.4299	.7772	354

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.399[a]	.159	.156	1.43
2	.423[b]	.179	.174	1.41

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Company Size

c. Dependent Variable: Profitability/ROA

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	135.735	1	135.735	66.493	.000[a]
	Residual	718.552	352	2.041		
	Total	854.287	353			
2	Regression	152.708	2	76.354	38.200	.000[b]
	Residual	701.580	351	1.999		
	Total	854.287	353			

a. Predictors: (Constant), Mission

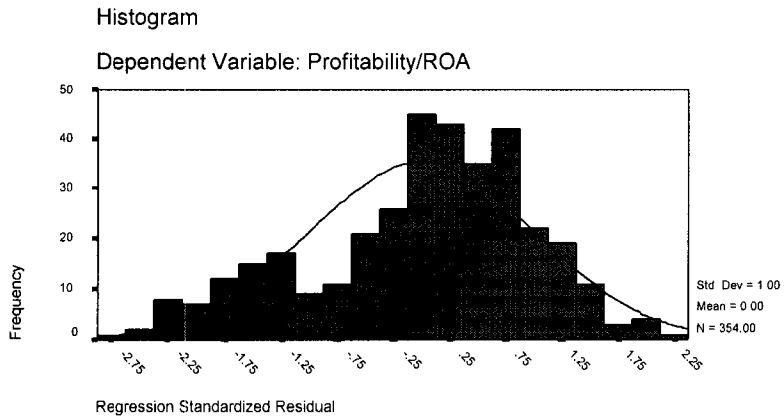
b. Predictors: (Constant), Mission, Company Size

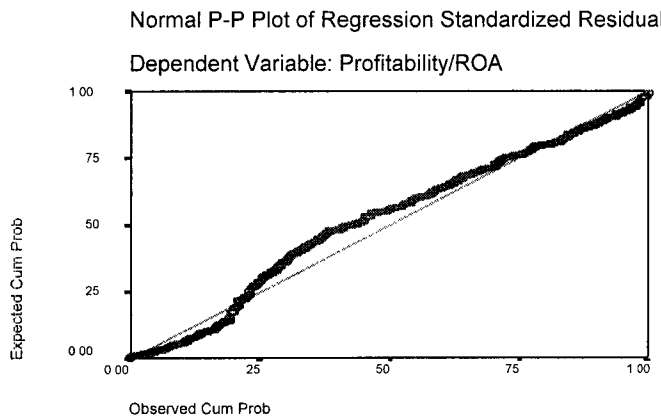
c. Dependent Variable: Profitability/ROA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.117	.344		.339	.735		
	Mission	.798	.098	.399	8.154	.000	1.000	1.000
2	(Constant)	-.311	.371		-.840	.402		
	Mission	.763	.098	.381	7.815	.000	.985	1.016
	Company Size	.124	.043	.142	2.914	.004	.985	1.016

a. Dependent Variable: Profitability/ROA





Quality of Products and Services

Descriptive Statistics

	Mean	Std. Deviation	N
Quality of Products and Services	3.43	1.26	356
Company Size	4.42	1.78	356
Involvement	3.5039	.7495	356
Consistency	3.3212	.6396	356
Adaptability	3.2488	.5816	356
Mission	3.4305	.7750	356

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.456[a]	.208	.206	1.12
2	.482[b]	.232	.228	1.11
3	.492[c]	.242	.236	1.10

a. Predictors: (Constant), Consistency

b. Predictors: (Constant), Consistency, Mission

c. Predictors: (Constant), Consistency, Mission, Company Size

d. Dependent Variable: Quality of Products and Services

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	117.373	1	117.373	92.887	.000[a]
	Residual	447.318	354	1.264		
	Total	564.691	355			
2	Regression	131.214	2	65.607	53.427	.000[b]
	Residual	433.476	353	1.228		
	Total	564.691	355			
3	Regression	136.863	3	45.621	37.535	.000[c]
	Residual	427.827	352	1.215		
	Total	564.691	355			

a. Predictors: (Constant), Consistency

b. Predictors: (Constant), Consistency, Mission

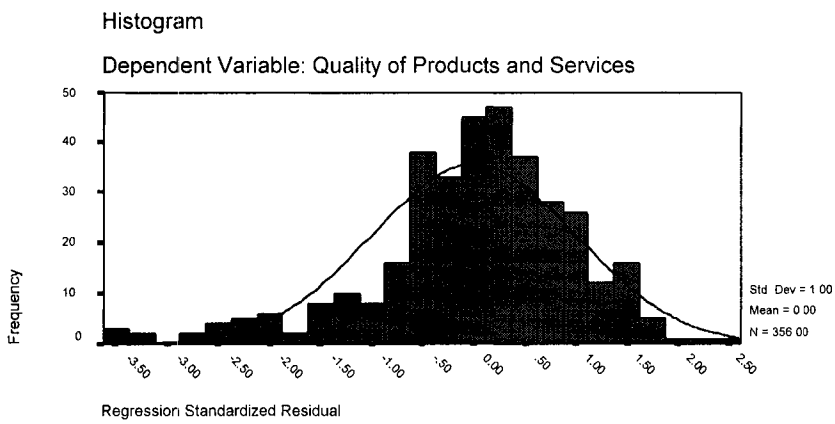
c. Predictors: (Constant), Consistency, Mission, Company Size

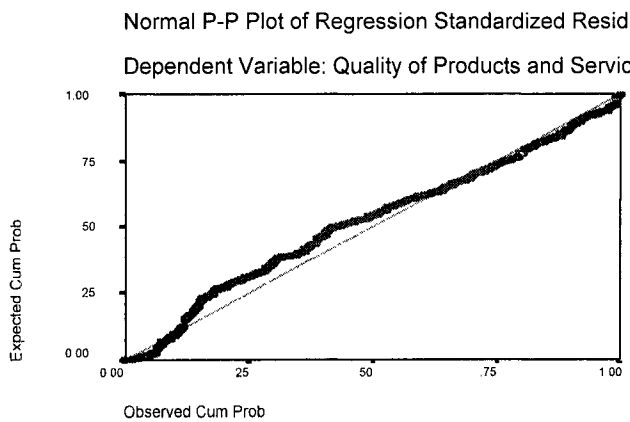
d. Dependent Variable: Quality of Products and Services

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.443	.315		1.403	.161		
	Consistency	.899	.093	.456	9.638	.000	1.000	1.000
2	(Constant)	.298	.314		.948	.344		
	Consistency	.537	.142	.272	3.794	.000	.421	2.373
	Mission	.392	.117	.241	3.357	.001	.421	2.373
3	(Constant)	8.931E-02	.327		.273	.785		
	Consistency	.503	.142	.255	3.549	.000	.416	2.402
	Mission	.393	.116	.242	3.382	.001	.421	2.373
	Company Size	7.206E-02	.033	.101	2.156	.032	.972	1.029

a. Dependent Variable: Quality of Products and Services





New Product Development

Descriptive Statistics

	Mean	Std. Deviation	N
New Product Development	2.85	1.49	356
Company Size	4.42	1.78	356
Involvement	3.5039	.7495	356
Consistency	3.3212	.6396	356
Adaptability	3.2488	.5816	356
Mission	3.4305	.7750	356

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.406[a]	.164	.162	1.36
2	.422[b]	.178	.173	1.36

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Consistency

c. Dependent Variable: New Product Development

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	129.703	1	129.703	69.674	.000[a]
	Residual	658.996	354	1.862		
	Total	788.699	355			
2	Regression	140.444	2	70.222	38.239	.000[b]
	Residual	648.255	353	1.836		
	Total	788.699	355			

a. Predictors: (Constant), Mission

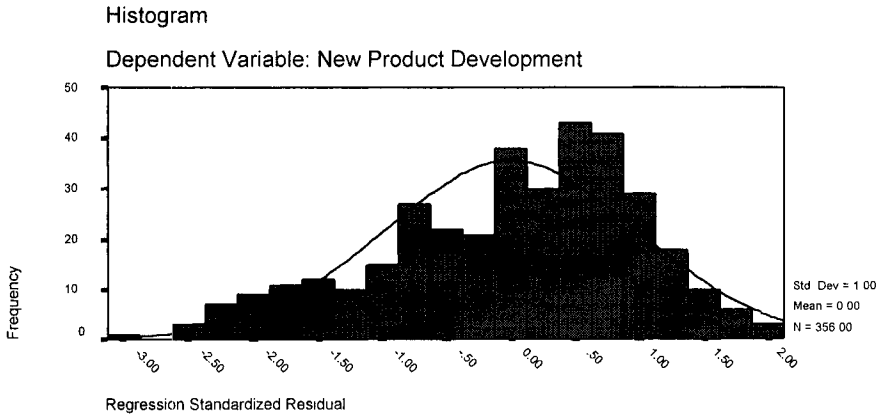
b. Predictors: (Constant), Mission, Consistency

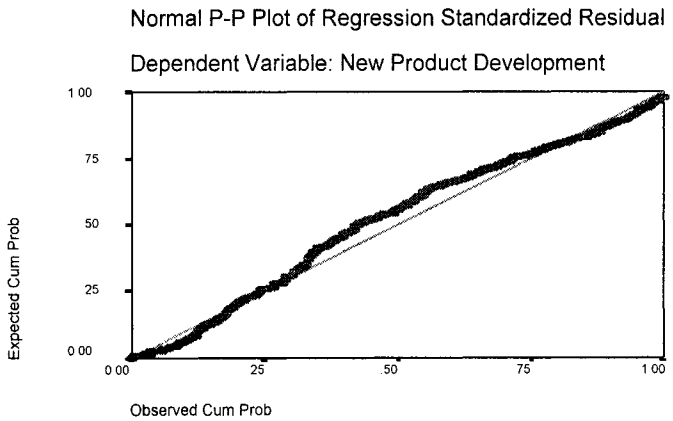
c. Dependent Variable: New Product Development

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.177	.329		.538	.591		
	Mission	.780	.093	.406	8.347	.000	1.000	1.000
2	(Constant)	-.312	.384		-.814	.416		
	Mission	.517	.143	.269	3.617	.000	.421	2.373
	Consistency	.419	.173	.180	2.418	.016	.421	2.373

a. Dependent Variable: New Product Development





Employee Satisfaction

Descriptive Statistics

	Mean	Std. Deviation	N
Employee Satisfaction	2.95	1.30	356
Company Size	4.42	1.78	356
Involvement	3.5039	.7495	356
Consistency	3.3212	.6396	356
Adaptability	3.2488	.5816	356
Mission	3.4305	.7750	356

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.537[a]	.288	.286	1.10
2	.572[b]	.327	.323	1.07
3	.579[c]	.336	.330	1.06

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Consistency

c. Predictors: (Constant), Mission, Consistency, Involvement

d. Dependent Variable: Employee Satisfaction

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	172.880	1	172.880	143.240	.000[a]
	Residual	427.252	354	1.207		
	Total	600.132	355			
2	Regression	196.322	2	98.161	85.810	.000[b]
	Residual	403.810	353	1.144		
	Total	600.132	355			
3	Regression	201.348	3	67.116	59.242	.000[c]
	Residual	398.784	352	1.133		
	Total	600.132	355			

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Consistency

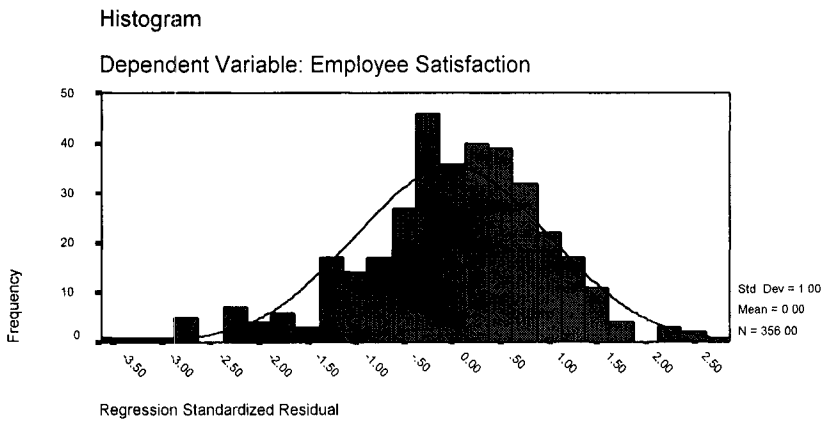
c. Predictors: (Constant), Mission, Consistency, Involvement

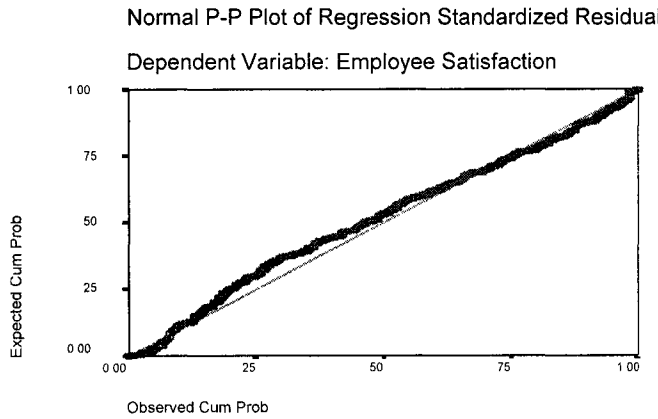
d. Dependent Variable: Employee Satisfaction

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.141	.265		-.531	.596		
	Mission	.900	.075	.537	11.968	.000	1.000	1.000
2	(Constant)	-.863	.303		-2.849	.005		
	Mission	.512	.113	.305	4.538	.000	.421	2.373
	Consistency	.619	.137	.304	4.527	.000	.421	2.373
3	(Constant)	-1.024	.311		-3.291	.001		
	Mission	.419	.121	.250	3.474	.001	.365	2.739
	Consistency	.515	.145	.253	3.562	.000	.373	2.683
	Involvement	.235	.112	.135	2.106	.036	.457	2.189

a. Dependent Variable: Employee Satisfaction





Overall Organization Performance

Descriptive Statistics

	Mean	Std. Deviation	N
Overall Organization Performance	3.36	1.18	356
Company Size	4.42	1.78	356
Involvement	3.5039	.7495	356
Consistency	3.3212	.6396	356
Adaptability	3.2488	.5816	356
Mission	3.4305	.7750	356

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.584[a]	.341	.340	.96
2	.600[b]	.360	.356	.95
3	.608[c]	.370	.364	.94

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Consistency

c. Predictors: (Constant), Mission, Consistency, Company Size

d. Dependent Variable: Overall Organization Performance

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	168.988	1	168.988	183.550	.000[a]
	Residual	325.916	354	.921		
	Total	494.904	355			
2	Regression	178.158	2	89.079	99.275	.000[b]
	Residual	316.746	353	.897		
	Total	494.904	355			
3	Regression	182.873	3	60.958	68.766	.000[c]
	Residual	312.031	352	.886		
	Total	494.904	355			

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Consistency

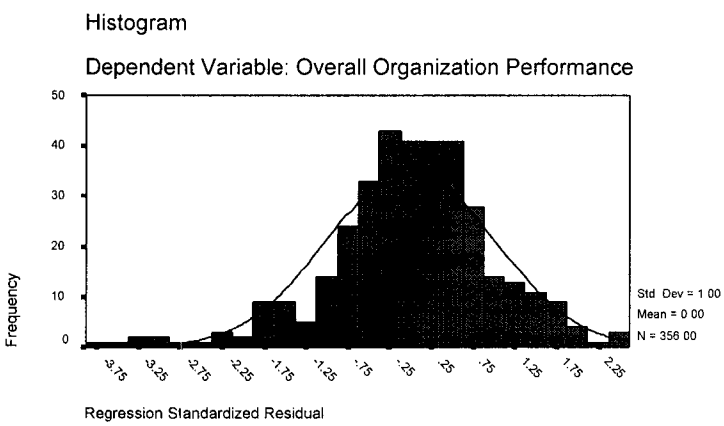
c. Predictors: (Constant), Mission, Consistency, Company Size

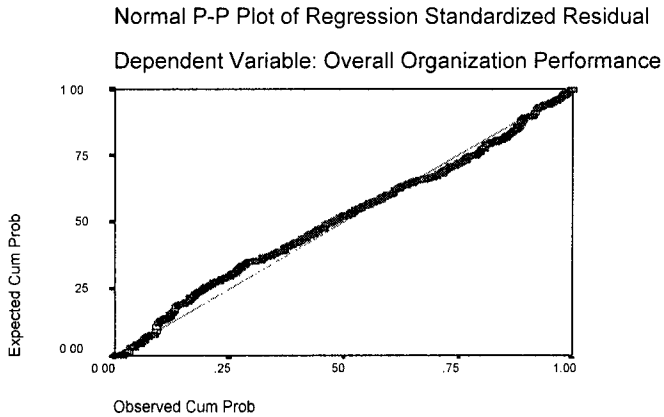
d. Dependent Variable: Overall Organization Performance

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.310	.231		1.341	.181		
	Mission	.890	.066	.584	13.548	.000	1.000	1.000
2	(Constant)	-.142	.268		-.530	.596		
	Mission	.647	.100	.425	6.478	.000	.421	2.373
	Consistency	.387	.121	.210	3.197	.002	.421	2.373
3	(Constant)	-.333	.279		-1.191	.234		
	Mission	.648	.099	.425	6.526	.000	.421	2.373
	Consistency	.356	.121	.193	2.939	.004	.416	2.402
	Company Size	6.584E-02	.029	.099	2.306	.022	.972	1.029

a. Dependent Variable: Overall Organization Performance





Appendix P

Regression Results of Taiwan

Descriptive Statistics

	Mean	Std. Deviation	N
Budget Achievement	2.6154	1.6322	246
Involvement	3.5671	.7245	246
Consistency	3.2796	.6063	246
Adaptability	3.3302	.4960	246
Mission	3.4257	.7451	246

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.391[a]	.153	.149	1.5101

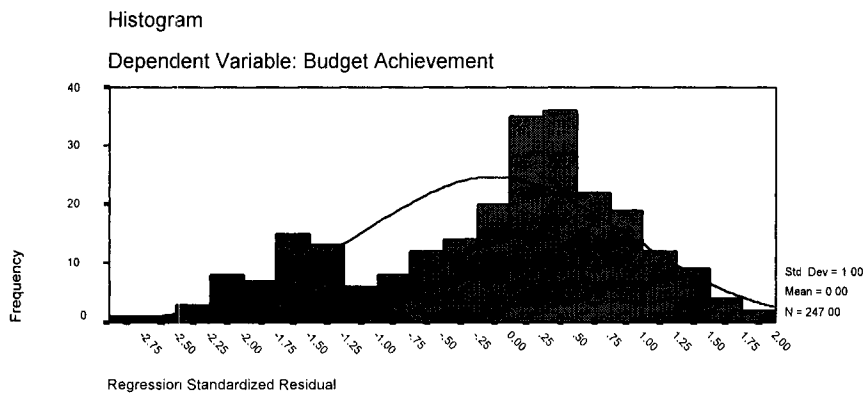
a. Predictors: (Constant), Consistency

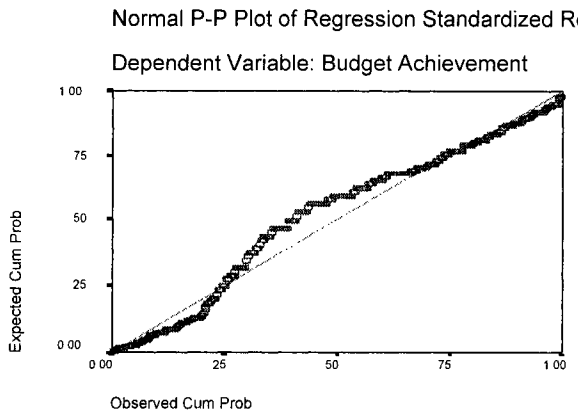
b. Dependent Variable: Budget Achievement

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	-.865	.530		-1.630	.104	-1.909	.180		
	Consistency	1.058	.159	.391	6.651	.000	.745	1.372	1.000	1.000

a. Dependent Variable: Budget Achievement





Sales Growth

Descriptive Statistics

	Mean	Std. Deviation	N
Sales/Revenue Growth	3.04	1.39	247
Company Size	4.00	1.68	247
Involvement	3.5683	.7232	247
Consistency	3.2789	.6052	247
Adaptability	3.3312	.4952	247
Mission	3.4240	.7440	247

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.455[a]	.207	.204	1.24
2	.478[b]	.229	.223	1.22
3	.492[c]	.242	.233	1.21

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Company Size

c. Predictors: (Constant), Mission, Company Size, Consistency

d. Dependent Variable: Sales/Revenue Growth

Correlations (Pearson Correlation)

	Sales/Revenue Growth	Involvement	Consistency	Adaptability	Mission
Sales/Revenue Growth	1.000				
Involvement	.368	1.000			

Consistency	.437	.688	1.000		
Adaptability	.355	.556	.617	1.000	
Mission	.454	.708	.796	.672	1.000

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	97.683	1	97.683	63.924	.000[a]
	Residual	374.388	245	1.528		
	Total	472.071	246			
2	Regression	108.031	2	54.015	36.204	.000[b]
	Residual	364.040	244	1.492		
	Total	472.071	246			
3	Regression	114.348	3	38.116	25.892	.000[c]
	Residual	357.722	243	1.472		
	Total	472.071	246			

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Company Size

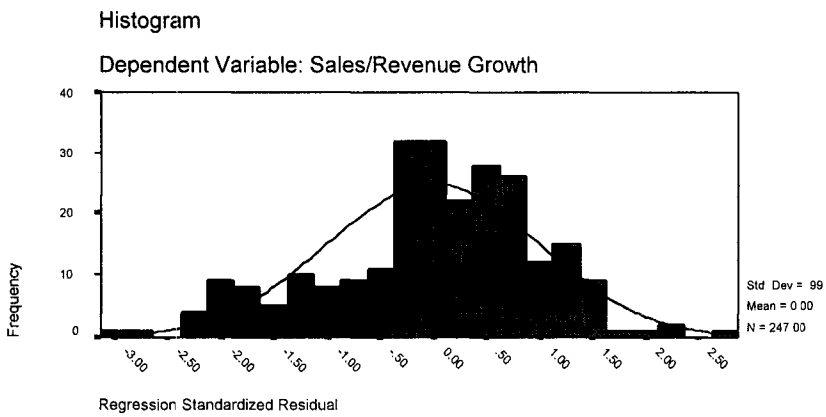
c. Predictors: (Constant), Mission, Company Size, Consistency

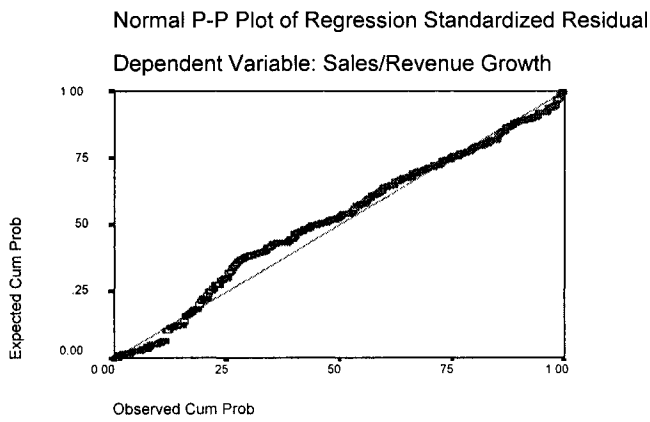
d. Dependent Variable: Sales/Revenue Growth

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.137	.371		.370	.712	-.594	.868		
	Mission	.847	.106	.455	7.995	.000	.638	1.056	1.000	1.000
2	(Constant)	-.186	.387		-.480	.632	-.947	.576		
	Mission	.797	.106	.428	7.488	.000	.587	1.006	.968	1.033
	Company Size	.124	.047	.150	2.634	.009	.031	.216	.968	1.033
3	(Constant)	-.639	.442		-1.445	.150	-1.510	.232		
	Mission	.515	.172	.277	2.990	.003	.176	.854	.364	2.744
	Company Size	.119	.047	.145	2.550	.011	.027	.211	.966	1.036
	Consistency	.438	.211	.191	2.072	.039	.022	.854	.366	2.736

a. Dependent Variable: Sales/Revenue Growth





Market Share

Descriptive Statistics

	Mean	Std. Deviation	N
Market Share	2.96	1.46	247
Company Size	4.00	1.68	247
Involvement	3.5683	.7232	247
Consistency	3.2789	.6052	247
Adaptability	3.3312	.4952	247
Mission	3.4240	.7440	247

Correlations

	Market Share	Involvement	Consistency	Adaptability	Mission
Market Share	1.000				
Involvement	.266	1.000			
Consistency	.307	.688	1.000		
Adaptability	.261	.556	.617	1.000	
Mission	.387	.708	.796	.672	1.000

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.388[a]	.151	.147	1.35
2	.410[b]	.168	.161	1.34

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Company Size

c. Dependent Variable: Market Share

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.067	1	79.067	43.407	.000[a]
	Residual	446.270	245	1.822		
	Total	525.337	246			
2	Regression	88.122	2	44.061	24.589	.000[b]
	Residual	437.215	244	1.792		
	Total	525.337	246			

a. Predictors: (Constant), Mission

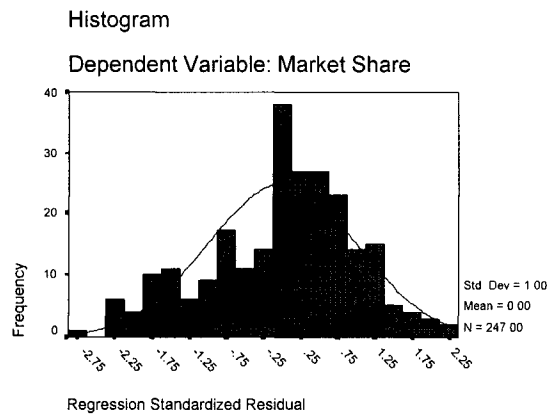
b. Predictors: (Constant), Mission, Company Size

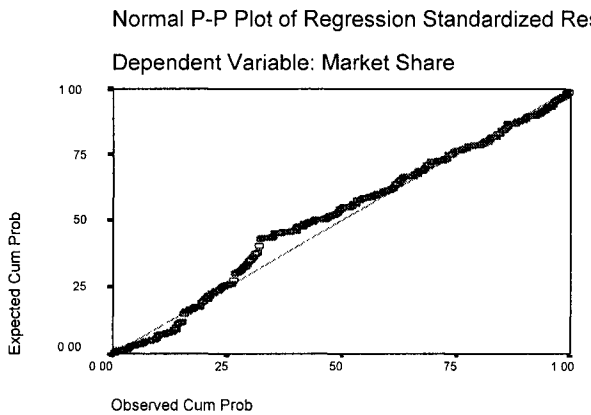
c. Dependent Variable: Market Share

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.351	.405		.867	.387	-.447	1.149		
	Mission	.762	.116	.388	6.588	.000	.534	.990	1.000	1.000
2	(Constant)	4.930E-02	.424		.116	.907	-.785	.884		
	Mission	.715	.117	.364	6.132	.000	.485	.945	.968	1.033
	Company Size	.116	.052	.133	2.248	.025	.014	.217	.968	1.033

a. Dependent Variable: Market Share





Profitability/ROA

Descriptive Statistics

	Mean	Std. Deviation	N
Profitability/ROA	2.80	1.49	245
Company Size	3.99	1.69	245
Involvement	3.5665	.7259	245
Consistency	3.2811	.6068	245
Adaptability	3.3366	.4934	245
Mission	3.4231	.7470	245

Correlations

		Profitability/ ROA	Involvement	Consistency	Adaptability	Mission
Pearson Correlation	Profitability/ ROA	1.000				
	Involvement	.330	1.000			
	Consistency	.398	.690	1.000		
	Adaptability	.298	.564	.618	1.000	
	Mission	.417	.708	.798	.679	1.000

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.417[a]	.174	.170	1.36

a. Predictors: (Constant), Mission

b. Dependent Variable: Profitability/ROA

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	94.428	1	94.428	51.066	.000[a]
	Residual	449.338	243	1.849		
	Total	543.766	244			

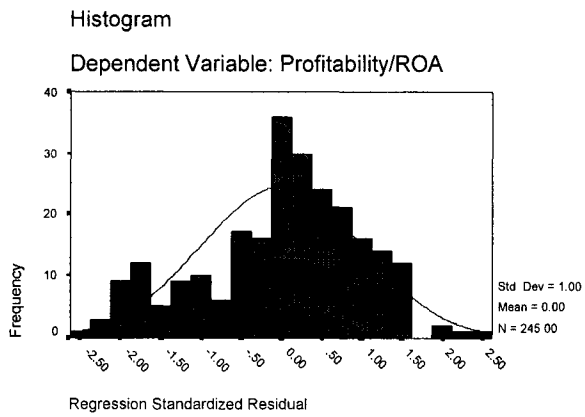
a. Predictors: (Constant), Mission

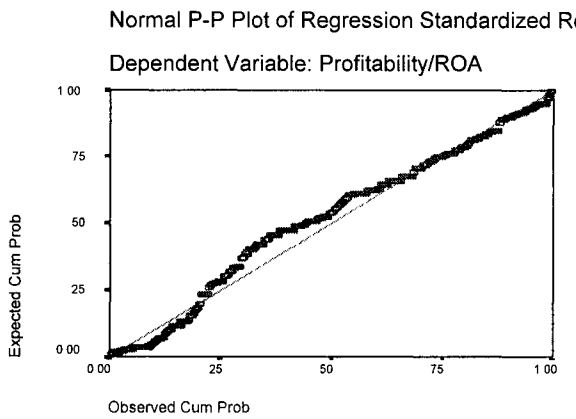
b. Dependent Variable: Profitability/ROA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	-5.39E-02	.408		-.132	.895	-.858	.750		
	Mission	.833	.117	.417	7.146	.000	.603	1.062	1.000	1.000

a. Dependent Variable: Profitability/ROA





Quality of Products and Services

Descriptive Statistics

	Mean	Std. Deviation	N
Quality of Products and Services	3.30	1.26	247
Company Size	4.00	1.68	247
Involvement	3.5683	.7232	247
Consistency	3.2789	.6052	247
Adaptability	3.3312	.4952	247
Mission	3.4240	.7440	247

Correlations (Pearson Correlation)

	Quality of Products and Services	Involvement	Consistency	Adaptability	Mission
Quality of Products and Services	1.000	.307	.454	.353	.434
Involvement	.307	1.000	.688	.556	.708
Consistency	.454	.688	1.000	.617	.796
Adaptability	.353	.556	.617	1.000	.672
Mission	.434	.708	.796	.672	1.000

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.454[a]	.206	.203	1.12
2	.470[b]	.221	.214	1.11

a. Predictors: (Constant), Consistency

b. Predictors: (Constant), Consistency, Mission

c. Dependent Variable: Quality of Products and Services

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.827	1	79.827	63.538	.000[a]
	Residual	307.810	245	1.256		
	Total	387.637	246			
2	Regression	85.578	2	42.789	34.564	.000[b]
	Residual	302.059	244	1.238		
	Total	387.637	246			

a. Predictors: (Constant), Consistency

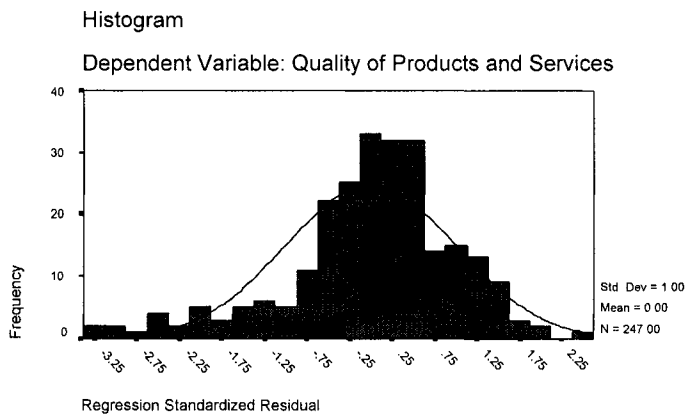
b. Predictors: (Constant), Consistency, Mission

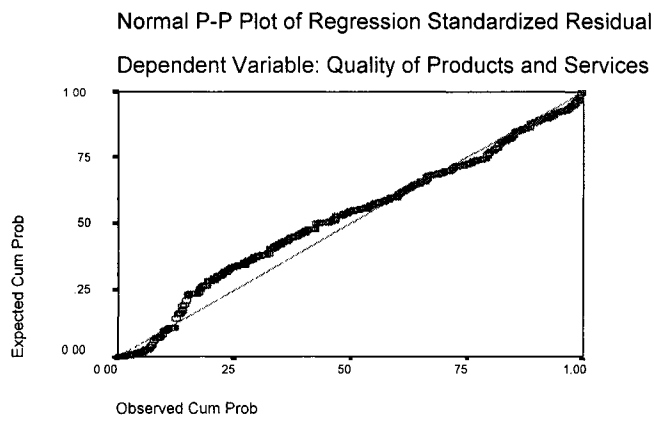
c. Dependent Variable: Quality of Products and Services

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.217	.394		.552	.581	-.558	.993		
	Consistency	.941	.118	.454	7.971	.000	.709	1.174	1.000	1.000
2	(Constant)	.144	.392		.368	.713	-.628	.917		
	Consistency	.609	.194	.294	3.145	.002	.228	.991	.366	2.730
	Mission	.339	.158	.201	2.155	.032	.029	.650	.366	2.730

a. Dependent Variable: Quality of Products and Services





New Product Development

Descriptive Statistics

	Mean	Std. Deviation	N
New Product Development	2.81	1.44	247
Company Size	4.00	1.68	247
Involvement	3.5683	.7232	247
Consistency	3.2789	.6052	247
Adaptability	3.3312	.4952	247
Mission	3.4240	.7440	247

Correlations (Pearson Correlation)

	New Product Development	Involvement	Consistency	Adaptability	Mission
New Product Development	1.000				
Involvement	.297	1.000			
Consistency	.401	.688	1.000		
Adaptability	.346	.556	.617	1.000	
Mission	.403	.708	.796	.672	1.000

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.404[a]	.163	.160	1.32
2	.425[b]	.181	.174	1.31

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Consistency

c. Dependent Variable: New Product Development

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	83.098	1	83.098	47.778	.000[a]
	Residual	426.114	245	1.739		
	Total	509.212	246			
2	Regression	91.979	2	45.989	26.895	.000[b]
	Residual	417.234	244	1.710		
	Total	509.212	246			

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Consistency

c. Dependent Variable: New Product Development

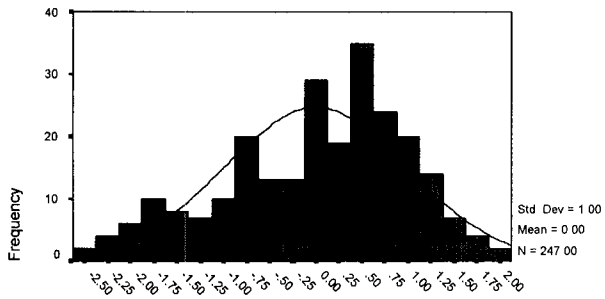
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.138	.396		.348	.728	-.642	.918		
	Mission	.781	.113	.404	6.912	.000	.559	1.004	1.000	1.000
2	(Constant)	-.413	.461		-.896	.371	-1.321	.495		
	Mission	.445	.185	.230	2.405	.017	.081	.810	.366	2.730
	Consistency	.519	.228	.218	2.279	.024	.070	.967	.366	2.730

a. Dependent Variable: New Product Development

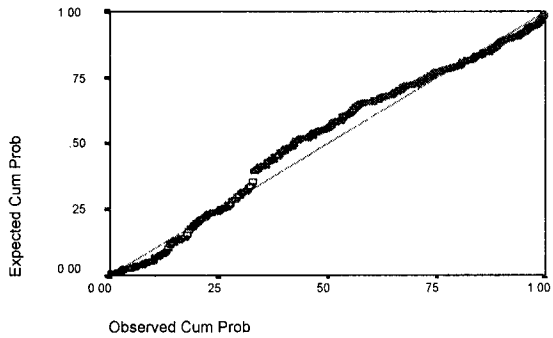
Histogram

Dependent Variable: New Product Development



Normal P-P Plot of Regression Standardized Residual

Dependent Variable: New Product Development



Employee Satisfaction

Descriptive Statistics

	Mean	Std. Deviation	N
Employee Satisfaction	2.90	1.29	247
Company Size	4.00	1.68	247
Involvement	3.5683	.7232	247
Consistency	3.2789	.6052	247
Adaptability	3.3312	.4952	247
Mission	3.4240	.7440	247

Correlations (Pearson Correlation)

	Employee Satisfaction	Involvement	Consistency	Adaptability	Mission
Employee Satisfaction	1.000	.441	.489	.383	.505
Involvement	.441	1.000	.688	.556	.708
Consistency	.489	.688	1.000	.617	.796
Adaptability	.383	.556	.617	1.000	.672
Mission	.505	.708	.796	.672	1.000

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.506[a]	.256	.253	1.12
2	.526[b]	.276	.270	1.10

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Consistency

c. Dependent Variable: Employee Satisfaction

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	105.221	1	105.221	84.386	.000[a]
	Residual	305.491	245	1.247		
	Total	410.712	246			
2	Regression	113.429	2	56.714	46.549	.000[b]
	Residual	297.283	244	1.218		
	Total	410.712	246			

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Consistency

c. Dependent Variable: Employee Satisfaction

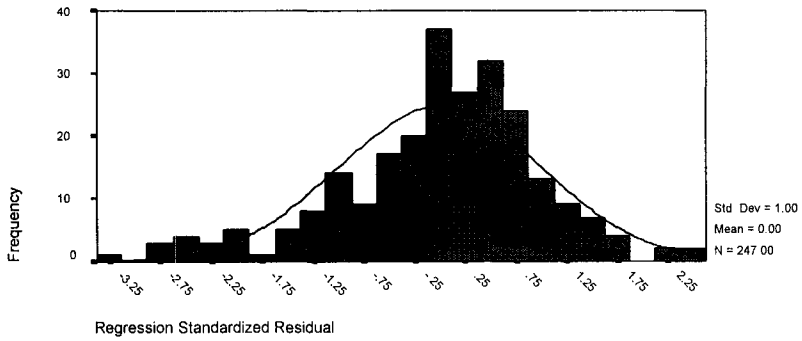
Coefficients[a]

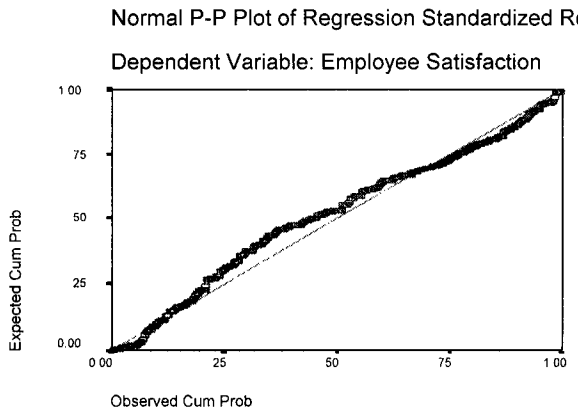
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	-.111	.335		-.332	.740	-.772	.549		
	Mission	.879	.096	.506	9.186	.000	.691	1.067	1.000	1.000
2	(Constant)	-.641	.389		-1.647	.101	-1.408	.126		
	Mission	.556	.156	.320	3.559	.000	.248	.864	.366	2.730
	Consistency	.499	.192	.234	2.595	.010	.120	.877	.366	2.730

a. Dependent Variable: Employee Satisfaction

Histogram

Dependent Variable: Employee Satisfaction





Overall Organization Performance

Descriptive Statistics

	Mean	Std. Deviation	N
Overall Organization Performance	3.31	1.20	247
Company Size	4.00	1.68	247
Involvement	3.5683	.7232	247
Consistency	3.2789	.6052	247
Adaptability	3.3312	.4952	247
Mission	3.4240	.7440	247

Correlations (Pearson Correlation)

	Overall Organization Performance	Involvement	Consistency	Adaptability	Mission
Overall Organization Performance	1.000				
Involvement	.397	1.000			
Consistency	.478	.688	1.000		
Adaptability	.375	.556	.617	1.000	
Mission	.526	.708	.796	.672	1.000

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.526[a]	.276	.273	1.02

a. Predictors: (Constant), Mission

b. Dependent Variable: Overall Organization Performance

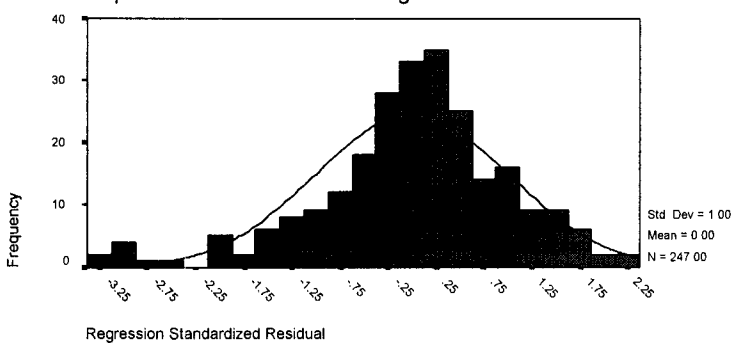
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.402	.307		1.309	.192	-.203	1.008		
	Mission	.848	.088	.526	9.673	.000	.676	1.021	1.000	1.000

a. Dependent Variable: Overall Organization Performance

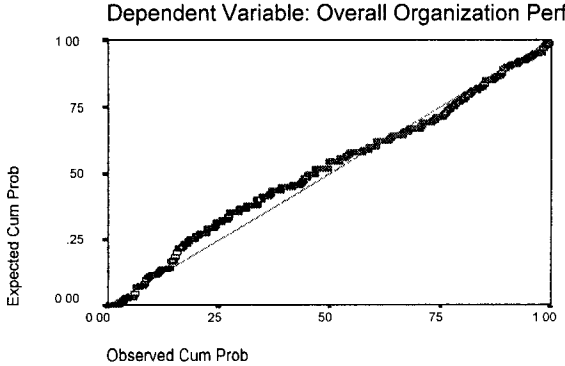
Histogram

Dependent Variable: Overall Organization Performance



Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Overall Organization Performance



Appendix Q

Regression Results of U.S.

Descriptive Statistics

	Mean	Std. Deviation	N
Budget Achievement	3.0413	1.7215	109
Company Size	5.39	1.60	109
Involvement	3.3580	.7900	109
Consistency	3.4171	.7050	109
Adaptability	3.0620	.7091	109
Mission	3.4451	.8444	109
Agreement Scale	3.3181	.7336	109

Correlations (Pearson Correlation)

	Budget Achievement	Company Size	Involvement	Consistency	Adaptability	Mission
Budget Achievement	1.000					
Company Size	.255	1.000				
Involvement	.233	.119	1.000			
Consistency	.393	.080	.752	1.000		
Adaptability	.222	-.068	.607	.672	1.000	
Mission	.450	.022	.698	.707	.646	1.000

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.450[a]	.203	.195	1.5443
2	.513[b]	.263	.249	1.4920

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Company Size

c. Dependent Variable: Budget Achievement

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	64.887	1	64.887	27.208	.000[a]
	Residual	255.178	107	2.385		
	Total	320.064	108			
2	Regression	84.100	2	42.050	18.890	.000[b]
	Residual	235.964	106	2.226		
	Total	320.064	108			

a. Predictors: (Constant), Mission

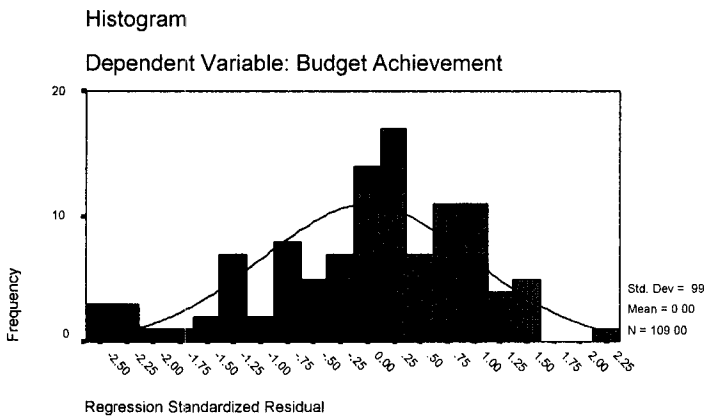
b. Predictors: (Constant), Mission, Company Size

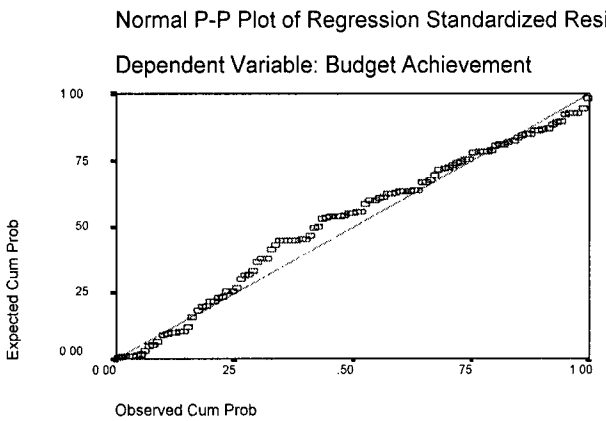
c. Dependent Variable: Budget Achievement

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.121	.624		-.194	.846		
	Mission	.918	.176	.450	5.216	.000	1.000	1.000
2	(Constant)	-1.504	.765		-1.967	.052		
	Mission	.907	.170	.445	5.332	.000	1.000	1.000
	Company Size	.264	.090	.245	2.938	.004	1.000	1.000

a. Dependent Variable: Budget Achievement





Sales/Revenue Growth

Descriptive Statistics

	Mean	Std. Deviation	N
Sales/Revenue Growth	3.14	1.66	109
Company Size	5.39	1.60	109
Involvement	3.3580	.7900	109
Consistency	3.4171	.7050	109
Adaptability	3.0620	.7091	109
Mission	3.4451	.8444	109

Correlations (Pearson Correlation)

	Sales/Revenue Growth	Company Size	Involvement	Consistency	Adaptability	Mission
Sales/Revenue Growth	1.000	.232	.263	.300	.200	.439
Company Size	.232	1.000	.119	.080	-.068	.022
Involvement	.263	.119	1.000	.752	.607	.698
Consistency	.300	.080	.752	1.000	.672	.707
Adaptability	.200	-.068	.607	.672	1.000	.646
Mission	.439	.022	.698	.707	.646	1.000

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.439[a]	.193	.186	1.50
2	.492[b]	.242	.228	1.46

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Company Size

c. Dependent Variable: Sales/Revenue Growth

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.487	1	57.487	25.597	.000[a]
	Residual	240.300	107	2.246		
	Total	297.787	108			
2	Regression	72.168	2	36.084	16.953	.000[b]
	Residual	225.618	106	2.128		
	Total	297.787	108			

a. Predictors: (Constant), Mission

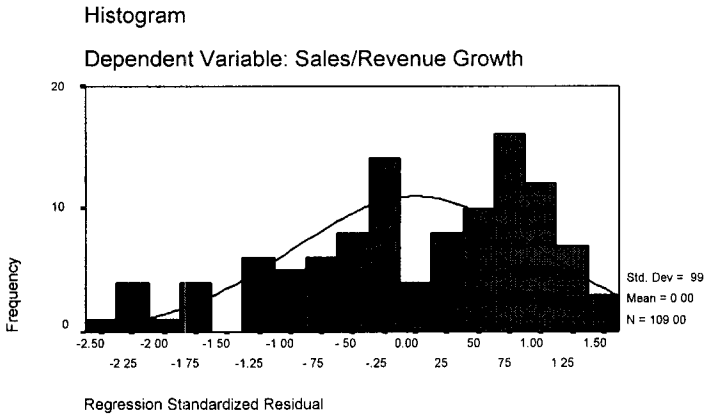
b. Predictors: (Constant), Mission, Company Size

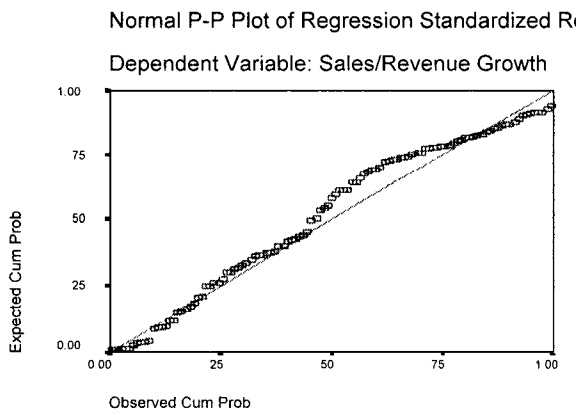
c. Dependent Variable: Sales/Revenue Growth

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.168	.606		.277	.782		
	Mission	.864	.171	.439	5.059	.000	1.000	1.000
2	(Constant)	-1.041	.748		-1.392	.167		
	Mission	.854	.166	.434	5.137	.000	1.000	1.000
	Company Size	.231	.088	.222	2.626	.010	1.000	1.000

a. Dependent Variable: Sales/Revenue Growth





Market Share

Descriptive Statistics

	Mean	Std. Deviation	N
Market Share	3.29	1.58	109
Company Size	5.39	1.60	109
Involvement	3.3580	.7900	109
Consistency	3.4171	.7050	109
Adaptability	3.0620	.7091	109
Mission	3.4451	.8444	109

Correlations (Pearson Correlation)

	Market Share	Company Size	Involvement	Consistency	Adaptability	Mission
Market Share	1.000					
Company Size	.309	1.000				
Involvement	.186	.119	1.000			
Consistency	.226	.080	.752	1.000		
Adaptability	.138	-.068	.607	.672	1.000	
Mission	.300	.022	.698	.707	.646	1.000

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.309[a]	.096	.087	1.51
2	.426[b]	.182	.166	1.45

a. Predictors: (Constant), Company Size

b. Predictors: (Constant), Company Size, Mission

c. Dependent Variable: Market Share

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.886	1	25.886	11.301	.001[a]
	Residual	245.100	107	2.291		
	Total	270.985	108			
2	Regression	49.190	2	24.595	11.754	.000[b]
	Residual	221.795	106	2.092		
	Total	270.985	108			

a. Predictors: (Constant), Company Size

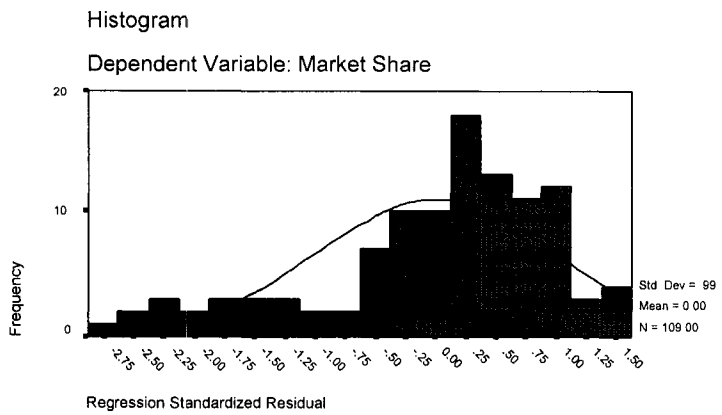
b. Predictors: (Constant), Company Size, Mission

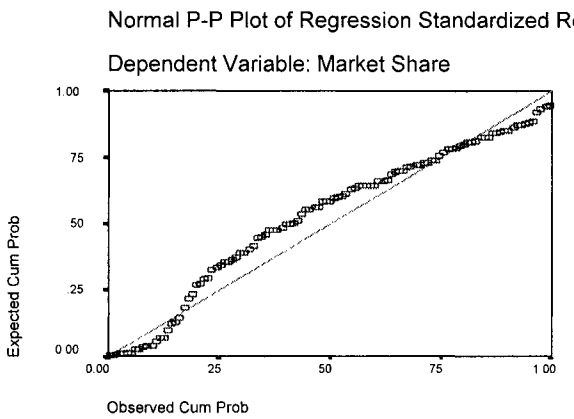
c. Dependent Variable: Market Share

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.645	.512		3.214	.002		
	Company Size	.306	.091	.309	3.362	.001	1.000	1.000
2	(Constant)	-.216	.742		-.291	.772		
	Company Size	.300	.087	.303	3.442	.001	1.000	1.000
	Mission	.550	.165	.293	3.337	.001	1.000	1.000

a. Dependent Variable: Market Share





Profitability/ROA

Descriptive Statistics

	Mean	Std. Deviation	N
Profitability/ROA	2.98	1.69	109
Company Size	5.39	1.60	109
Involvement	3.3580	.7900	109
Consistency	3.4171	.7050	109
Adaptability	3.0620	.7091	109
Mission	3.4451	.8444	109

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.366[a]	.134	.126	1.58
2	.448[b]	.201	.186	1.52

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Company Size

c. Dependent Variable: Profitability/ROA

Correlations (Pearson Correlation)

	Profitability/ ROA	Company Size	Involvement	Consistency	Adaptability	Mission
Profitability/ROA	1.000					
Company Size	.267	1.000				
Involvement	.235	.119	1.000			
Consistency	.274	.080	.752	1.000		
Adaptability	.282	-.068	.607	.672	1.000	
Mission	.366	.022	.698	.707	.646	1.000

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.337	1	41.337	16.588	.000[a]
	Residual	266.637	107	2.492		
	Total	307.974	108			
2	Regression	61.910	2	30.955	13.335	.000[b]
	Residual	246.064	106	2.321		
	Total	307.974	108			

a. Predictors: (Constant), Mission

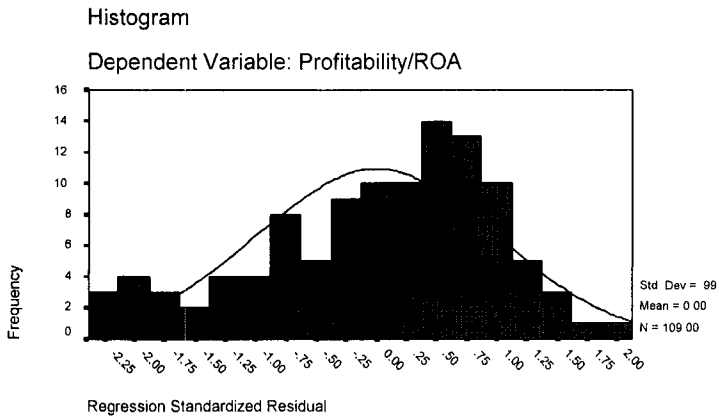
b. Predictors: (Constant), Mission, Company Size

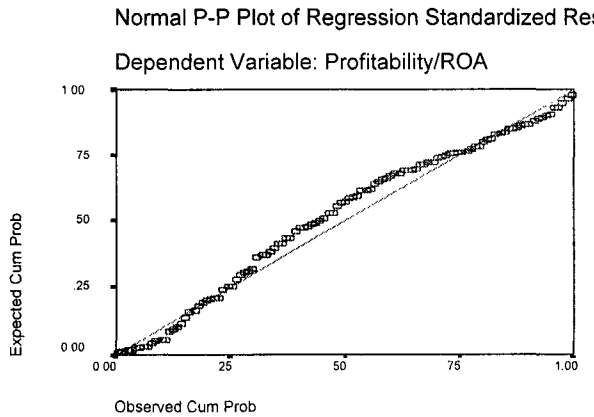
c. Dependent Variable: Profitability/ROA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.456	.638		.715	.476		
	Mission	.733	.180	.366	4.073	.000	1.000	1.000
2	(Constant)	-.975	.781		-1.248	.215		
	Mission	.721	.174	.361	4.152	.000	1.000	1.000
	Company Size	.273	.092	.259	2.977	.004	1.000	1.000

a. Dependent Variable: Profitability/ROA





Quality of Products and Services

Descriptive Statistics

	Mean	Std. Deviation	N
Quality of Products and Services	3.71	1.23	109
Company Size	5.39	1.60	109
Involvement	3.3580	.7900	109
Consistency	3.4171	.7050	109
Adaptability	3.0620	.7091	109
Mission	3.4451	.8444	109

Correlations (Pearson Correlation)

	Quality of Products and Services	Company Size	Involvement	Consistency	Adaptability	Mission
Quality of Products and Services	1.000	.072	.351	.442	.398	.489
Company Size	.072	1.000	.119	.080	-.068	.022
Involvement	.351	.119	1.000	.752	.607	.698
Consistency	.442	.080	.752	1.000	.672	.707
Adaptability	.398	-.068	.607	.672	1.000	.646
Mission	.489	.022	.698	.707	.646	1.000

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.489[a]	.239	.232	1.08

a. Predictors: (Constant), Mission

b. Dependent Variable: Quality of Products and Services

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39.296	1	39.296	33.577	.000[a]
	Residual	125.226	107	1.170		
	Total	164.522	108			

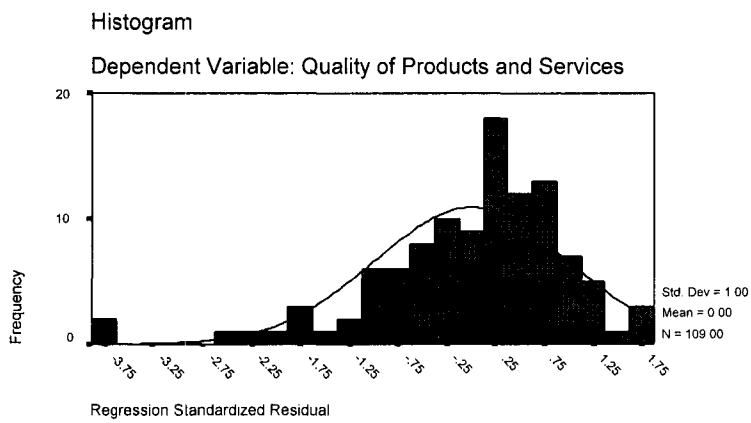
a. Predictors: (Constant), Mission

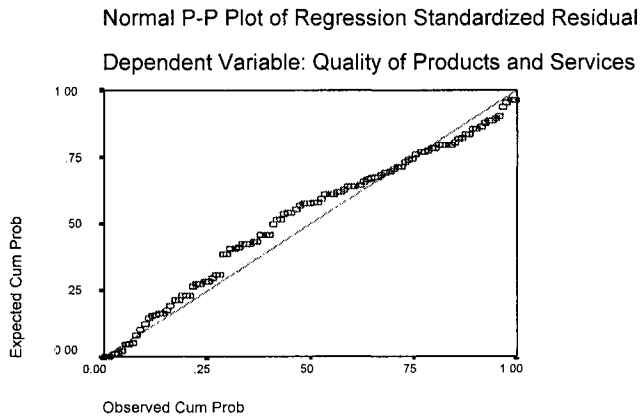
b. Dependent Variable: Quality of Products and Services

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.250	.437		2.859	.005		
	Mission	.714	.123	.489	5.795	.000	1.000	1.000

a. Dependent Variable: Quality of Products and Services





New Product Development

Descriptive Statistics

	Mean	Std. Deviation	N
New Product Development	2.94	1.60	109
Company Size	5.39	1.60	109
Involvement	3.3580	.7900	109
Consistency	3.4171	.7050	109
Adaptability	3.0620	.7091	109
Mission	3.4451	.8444	109

Correlations

	New Product Development	Company Size	Involvement	Consistency	Adaptability	Mission
New Product Development	1.000					
Company Size	.090	1.000				
Involvement	.233	.119	1.000			
Consistency	.349	.080	.752	1.000		
Adaptability	.400	-.068	.607	.672	1.000	
Mission	.408	.022	.698	.707	.646	1.000

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.408[a]	.166	.159	1.47
2	.445[b]	.198	.183	1.45

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Adaptability

c. Dependent Variable: New Product Development

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.302	1	46.302	21.364	.000[a]
	Residual	231.902	107	2.167		
	Total	278.204	108			
2	Regression	55.124	2	27.562	13.096	.000[b]
	Residual	223.081	106	2.105		
	Total	278.204	108			

a. Predictors: (Constant), Mission

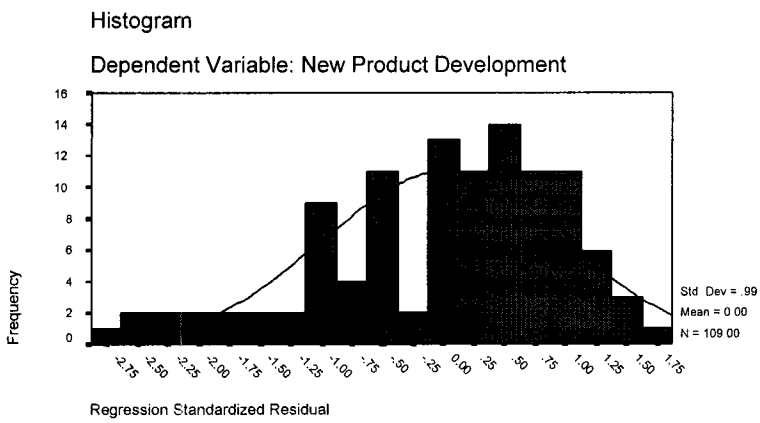
b. Predictors: (Constant), Mission, Adaptability

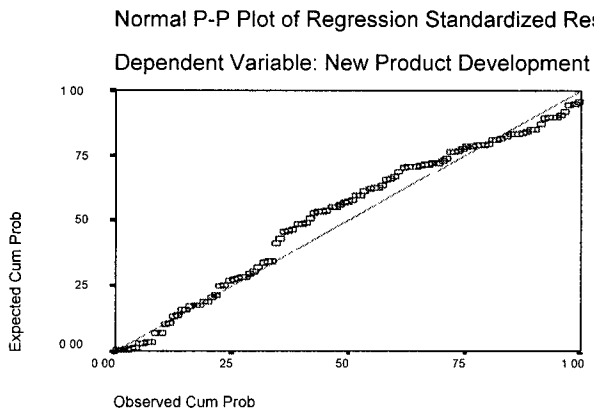
c. Dependent Variable: New Product Development

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.271	.595		.456	.649		
	Mission	.775	.168	.408	4.622	.000	1.000	1.000
2	(Constant)	-.359	.662		-.542	.589		
	Mission	.489	.217	.257	2.257	.026	.582	1.717
	Adaptability	.528	.258	.233	2.047	.043	.582	1.717

a. Dependent Variable: New Product Development





Employee Satisfaction

Descriptive Statistics

	Mean	Std. Deviation	N
Employee Satisfaction	3.06	1.32	109
Company Size	5.39	1.60	109
Involvement	3.3580	.7900	109
Consistency	3.4171	.7050	109
Adaptability	3.0620	.7091	109
Mission	3.4451	.8444	109

Correlations

	Employee Satisfaction	Company Size	Involvement	Consistency	Adaptability	Mission
Employee Satisfaction	1.000					
Company Size	.058	1.000				
Involvement	.619	.119	1.000			
Consistency	.625	.080	.752	1.000		
Adaptability	.582	-.068	.607	.672	1.000	
Mission	.600	.022	.698	.707	.646	1.000

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.625[a]	.391	.385	1.03
2	.665[b]	.442	.431	.99
3	.688[c]	.473	.458	.97

a. Predictors: (Constant), Consistency

b. Predictors: (Constant), Consistency, Involvement

c. Predictors: (Constant), Consistency, Involvement, Adaptability

d. Dependent Variable: Employee Satisfaction

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	73.284	1	73.284	68.718	.000[a]
	Residual	114.110	107	1.066		
	Total	187.394	108			
2	Regression	82.810	2	41.405	41.965	.000[b]
	Residual	104.585	106	.987		
	Total	187.394	108			
3	Regression	88.587	3	29.529	31.379	.000[c]
	Residual	98.808	105	.941		
	Total	187.394	108			

a. Predictors: (Constant), Consistency

b. Predictors: (Constant), Consistency, Involvement

c. Predictors: (Constant), Consistency, Involvement, Adaptability

d. Dependent Variable: Employee Satisfaction

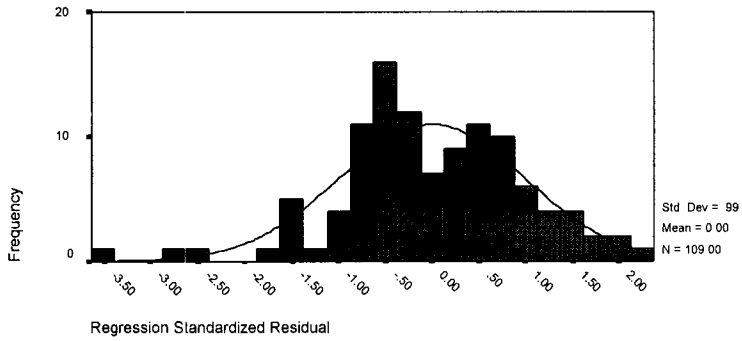
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.931	.492		-1.893	.061		
	Consistency	1.168	.141	.625	8.290	.000	1.000	1.000
2	(Constant)	-1.204	.481		-2.502	.014		
	Consistency	.688	.206	.368	3.345	.001	.435	2.301
	Involvement	.570	.184	.342	3.107	.002	.435	2.301
3	(Constant)	-1.497	.484		-3.090	.003		
	Consistency	.463	.220	.248	2.098	.038	.361	2.773
	Involvement	.476	.183	.286	2.599	.011	.416	2.404
	Adaptability	.450	.182	.242	2.478	.015	.524	1.907

a. Dependent Variable: Employee Satisfaction

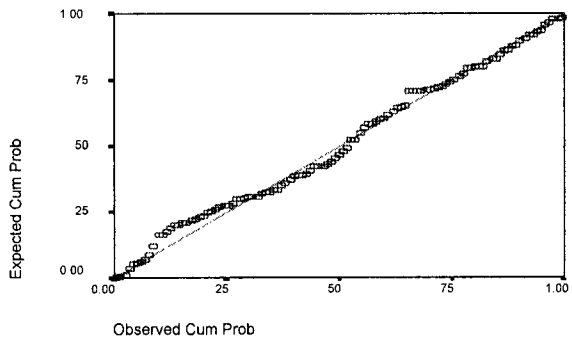
Histogram

Dependent Variable: Employee Satisfaction



Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Employee Satisfaction



Overall Organizational Performance

Descriptive Statistics

	Mean	Std. Deviation	N
Overall Organization Performance	3.49	1.13	109
Company Size	5.39	1.60	109
Involvement	3.3580	.7900	109
Consistency	3.4171	.7050	109
Adaptability	3.0620	.7091	109
Mission	3.4451	.8444	109

Correlations (Pearson Correlation)

	Overall Organization Performance	Company Size	Involvement	Consistency	Adaptability	Mission
Overall Organization Performance	1.000					
Company Size	.113	1.000				
Involvement	.544	.119	1.000			
Consistency	.646	.080	.752	1.000		
Adaptability	.603	-.068	.607	.672	1.000	
Mission	.719	.022	.698	.707	.646	1.000

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.719[a]	.516	.512	.79
2	.745[b]	.554	.546	.76

a. Predictors: (Constant), Mission

b. Predictors: (Constant), Mission, Consistency

c. Dependent Variable: Overall Organization Performance

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	71.084	1	71.084	114.292	.000[a]
	Residual	66.549	107	.622		
	Total	137.634	108			
2	Regression	76.298	2	38.149	65.930	.000[b]
	Residual	61.335	106	.579		
	Total	137.634	108			

a. Predictors: (Constant), Mission

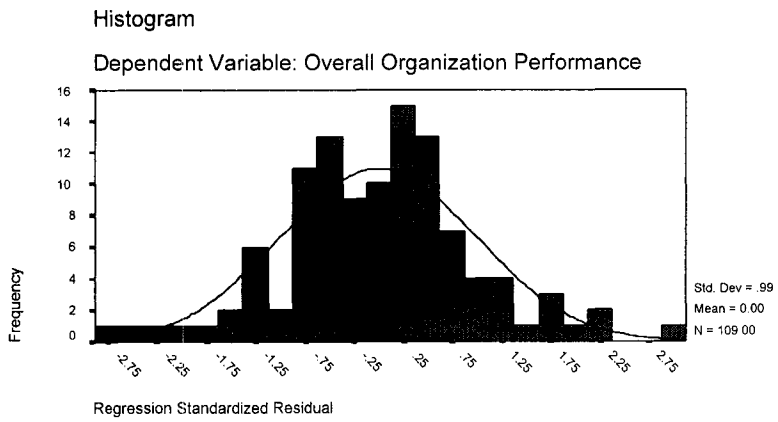
b. Predictors: (Constant), Mission, Consistency

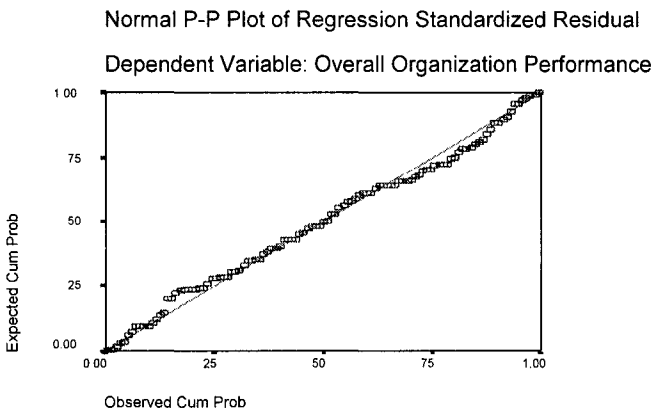
c. Dependent Variable: Overall Organization Performance

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.182	.319		.571	.569		
	Mission	.961	.090	.719	10.691	.000	1.000	1.000
2	(Constant)	-.428	.368		-1.161	.248		
	Mission	.701	.123	.524	5.718	.000	.500	1.999
	Consistency	.441	.147	.275	3.002	.003	.500	1.999

a. Dependent Variable: Overall Organization Performance





Appendix R

Twelve Sub-Scales' Descriptive Statistics Results

Descriptive Statistics- TTL

	N	Minimum	Maximum	Mean	Std. Deviation
Empowerment Scale	356	1.00	5.00	3.4544	.7824
Team Orientation Scale	356	1.00	5.00	3.5841	.9340
Capability Development Scale	356	1.00	5.00	3.4129	.9820
Core Value Scale	356	1.00	5.00	3.4467	.8447
Agreement Scale	356	1.00	5.00	3.3962	.7465
Cooridination and Integration	356	1.00	5.00	3.1208	.7210
Creating Change Scale	355	1.00	5.00	3.0646	.7269
Customer Focus	356	1.00	5.00	3.5000	.7079
Organization Learning	356	1.00	5.00	3.0225	.8464
Strategic Direction and Intent	356	1.00	5.00	3.4691	.8747
Goals and Objects	356	1.00	5.00	3.4337	.7892
Vision	356	1.00	5.00	3.3785	.8520
Valid N (listwise)	355				

Descriptive Statistics-U.S.

	N	Minimum	Maximum	Mean	Std. Deviation
Empowerment Scale	109	1.00	5.00	3.3611	.7952
Team Orientation Scale	109	1.00	5.00	3.3425	1.0559
Capability Development Scale	109	1.00	5.00	3.3945	.9815
Core Value Scale	109	1.33	5.00	3.7005	.8368
Agreement Scale	109	1.33	5.00	3.3181	.7336
Cooridination and Integration	109	1.00	5.00	3.2328	.8886
Creating Change Scale	109	1.00	4.67	2.7582	.7970
Customer Focus	109	1.00	5.00	3.3647	.8570
Organization Learning	109	1.00	5.00	2.9128	.9619
Strategic Direction and Intent	109	1.00	5.00	3.5064	.9686
Goals and Objects	109	1.00	5.00	3.5376	.8610
Vision	109	1.00	5.00	3.2546	.9097
Valid N (listwise)	109				

Descriptive Statistics-Taiwan

	N	Minimum	Maximum	Mean	Std. Deviation
Empowerment Scale	247	1.00	5.00	3.4955	.7748
Team Orientation Scale	247	1.00	5.00	3.6907	.8557
Capability Development Scale	247	1.00	5.00	3.4211	.9840
Core Value Scale	247	1.00	5.00	3.3347	.8252
Agreement Scale	247	1.00	5.00	3.4306	.7510
Cooridination and Integration	247	1.00	5.00	3.0714	.6289
Creating Change Scale	246	1.00	5.00	3.2004	.6505
Customer Focus	247	1.75	5.00	3.5597	.6237
Organization Learning	247	1.00	5.00	3.0709	.7874
Strategic Direction and Intent	247	1.00	5.00	3.4526	.8315
Goals and Objects	247	1.00	5.00	3.3879	.7527
Vision	247	1.00	5.00	3.4332	.8212
Valid N (listwise)	246				

Appendix S

Chi-Square Scores of the Four Culture Traits

Test Statistics

	Involvement	Consistency	Adaptability	Mission
Chi-Square	243.169	250.921	220.831	192.910
df	27	31	27	48
Asymp. Sig.	.000	.000	.000	.000

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.7.

b 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 11.1.

c 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 7.3.

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Appendix T

Survey Tools-Authorization Letter, Invitation Letters, Questionnaires

Denison

Bringing Organizational Culture & Leadership to the Bottom Line

WWW.DENISONCULTURE.COM

Kuo-Kuang Huang
65144 NW 70th Ave.
Tamarac, FL 33321

September 6, 2002

This letter serves as permission for Kuo-Kuang Huang to utilize the 60-item *Denison Organizational Culture Survey* items for his dissertation research as part of his completion of a DBA degree. Permission is granted by Denison Consulting, LLC.

Authorized Signature

Stephanie Haaland

Stephanie Haaland, Ph.D.
Director of Research

Research Invitation Letter

To:
From: Jeremy K. Huang
Subject: Corporate culture and Corporate Performance Research Invitation
Date: April 5 2003

Dear Mr. :

My name is Jeremy K. Huang. I am a Doctorate Candidate of Business Administration at the Nova Southeastern University in Florida.

I would like to invite you and your company to participate in my dissertation study by completing the enclosed "Corporate Culture and Perceived Corporate Effectiveness Questionnaire." I am doing the corporate culture-effectiveness research. The culture-effectiveness research has only been developed 1980s. More research and participants on this research will help the management understanding more aspects on how to improve corporation's effectiveness through corporate culture. My study will compare the linkage relationship among the Fortune 500 companies between two countries, U.S. and Taiwan. For getting stronger verifications on the relationships, your company's participation will be a big plus to the study.

Mr. , I'm really eager to get your participation on my study. I understand that it's very difficult to have the Fortune 500 companies to spend time on the tiny thing. However, my dissertation will be very special and more valuable if I can get your support on this survey; thus, allow me to have this try. If you got no time to fill up the questionnaire, would you please assign one of the management to complete the questionnaire for my study? Or if you can allow me to send more questionnaires, please do not hesitate to inform me at kuohuang@nova.edu. Also, the on-line version of the questionnaire is ready to send to your company if convenient for your company. The on-line format survey can also be found at my personal website: http://www.kuohuang.com.

One stamped envelope is enclosed. That will be a big favor if the questionnaire can be sent by April 30, 2003. The below point will provide more understanding about my study.

Questionnaires & Anonymous Principle: My study will use the Denison's Culture and Effectiveness Questionnaire to diagnose corporate culture. The questionnaire composes 60 items for diagnosing four culture dimensions (Mission, Consistency, Adaptability, and Involvement), 8 items of perceived performance indicators, and company profile. It will take no more than 15 minutes to complete the questionnaire. All the individual information collected through this survey will be kept confidential and only used for this dissertation only. Company name and participants' profiles will not be displayed on the dissertation.

Look forward to hearing you and thanks for your time.

Best regards,

Jeremy K. Huang
040503

To:
From: 黃國光
企管博士候選人 (Nova Southeastern University, FL, USA)
Subject: 畢業論文研究邀請
Date: February 17, 2003

總經理:

您好, 我叫黃國光, 我來自基隆, 現於美國 Nova Southeastern University 攻讀企管博士學位. 現爲博士候選人, 正在寫畢業論文. 個人的論文作有關公司文化及公司營運表現的關聯性研究. 本論文計畫蒐集台灣及美國的企業進行此關聯性的比較. 在此, 透過本函, 邀請貴公司能參與本研究.

美國進行此類研究已有 22 年的歷史, 所得到的結果顯示公司文化對公司的營運表縣成正相關的關係 本論文將此針對美國研究的結果做驗證之外, 並將此根據美國公司所發展出來的 Denison Organizational Culture and Effectiveness Model 應用到台灣實證研究上. 並比較台美之間是否呈現相同的結論.本研究將使用問卷研究的方法. 填寫問卷的人爲設定爲公司的;

1. 總裁,
2. 高階主管, 及
3. 了解公司營運狀況的資深經理人員,

煩請貴部門代爲分送所附的問卷給有可能填寫本問卷的經理人員. 每家公司最少一人, 最多爲 25 人填寫即可. 越多的經理人員參與本研究, 將會使貴公司的文化分析越明確, 煩請貴公司的總裁及其他資深的經理長官們能撥冗對貴公司的文化提供寶貴的評估.

問卷: 本研究所用的問卷爲 Dr. Denison 於 1995 年針對美國中西部的 764 家公司的總裁以問卷調查的方式, 所發展而來的. 自 1995 年以來 此問卷已用於美國(1000 家公司), 日本, 歐洲等多國, 惟仍未用於台灣. 本研究期望能藉由貴公司的參與, 能將此 公司文化及公司營運表現的關聯性研究應用於台灣並提供業界對公司文化的影響有進一步的認識及應用

隱私原則: 所有透過本問卷所蒐集到的資料將僅問於本論文研究之用, 所有參與的公司名稱及參於者的回答將不會個別顯現在論文上, 以確保參與者的隱私權.

本問卷經過測試, 皆可在 15 分鐘之內完成. 填寫本問卷時, 請以整體公司爲考慮對象. 本論文的研究整體結果將願與貴公司分享,以對貴公司在本研究的完成所花費的時間的回饋.

填寫方法: 問卷隨電子郵件附上. 貴公司的參與人員可以將答案以 Microsoft Word 圈選(Highlight). 並以電子郵件的方式寄至 kuohuang@nova.edu. 本研究預計 3 月 15 日起以一個月的時間在美國開始進行資料的分析並進行結論. 屆時, 個人將樂於和貴公司分享本研究的結果.

若有任何進一步的問題或建議 可 Email 至 kuohuang@nova.edu 或電 0021-954-718-1267.

謝謝您的時間並期待貴公司的參與.

黃國光
021703

Pulte

April 21, 2003

Mr. Jeremy K. Huang
6514 NW 70 Ave.
Tamarac, FL 33321

Dear Mr. Huang,

Enclosed is the Denison Culture Survey you requested from our CEO, Mr. Mark O'Brien. Mark asked me to forward it to you along with some information about Pulte's use of the Dennison Culture and Leadership Surveys, in case it may be of help to you in your dissertation.

Pulte Homes has been utilizing the Denison Survey since 2000. As I'm sure you know, studying the culture of an organization requires input from all levels to get a true picture. Over the past 3 years, we have worked with Denison to survey almost all of our 47 divisions, from the President of each division to hourly workers. We have had amazing response rates—averaging 85%. Because each of our divisions operates separately, we have been able to gain a true picture of each culture, compare it to metrics for the division such as customer satisfaction, and help each leadership team develop action plans for improvement. Denison has been especially interested in the correlation we have been able to provide them with customer satisfaction (measured by an outside firm) and culture. We also have conducted Denison's 360 Degree Leadership Survey with most of the top leaders in each market, so we can help the individuals drive the culture we are trying to achieve.

I have attached the composite scores from the 18 divisions we surveyed in 2001, the most recent large-scale survey we completed. As you can imagine, we are very proud of our results, but continue to strive for improvement. If you have any questions, or would like to discuss our use of the survey further, please feel free to call me at (248) 360-1404.

Sincerely,

Elaine Kramer
Vice-President Leadership Development and Training
Pulte Homes

Pulte Homes, Inc.
100 Bloomfield Hills Parkway, Suite 150,

SAFEWAY INC.
5918 STONERIDGE MALL ROAD
PLEASANTON, CA 94588-3229

STEVEN A. BURD
CHAIRMAN, PRESIDENT AND
CHIEF EXECUTIVE OFFICER

April 9, 2003

Mr. Jeremy K. Huang
6514 NW 70th Avenue
Tamarac, FL 33321

Dear Mr. Huang:

Thank you for inviting me to complete an organizational culture survey in conjunction with your doctoral dissertation.

Unfortunately, I am unable to participate in this study. We receive an inordinate number of such requests and could not possibly accommodate each one. To remain consistent and impartial, we feel we must decline all of them.

I'm truly sorry but trust you will understand. Good luck with your dissertation.

Sincerely,

Steven A. Burd

SAB/tc

Denison Organizational Culture Survey

Denison Organizational Cultural Survey

Instructions:

Management practices and organizational strategies are rooted in the underlying beliefs, values, and assumptions held by the members of an organization. The approach that underlies the ***Denison Organizational Culture Survey*** is based on a model of four cultural traits of organizations. These traits have been linked by research to specific aspects of performance and effectiveness such as return on assets, quality, sales growth, and employee satisfaction.

This survey presents a set of 60 statements that describes different aspects of an organization's culture and ways that organizational culture and ways that organizations operate. To complete the survey, just indicate how much you agree or disagree to the statements, think of your organization as a whole and the way that thing are usually done. If the statement is a good description of the way that things indicate that you agree with that statement. If the statement is not a good description of the way things typically work in your organization, then indicate that you disagree.

Using the response categories on the five-point scale below, please fill in the number next to each statement to indicate the extent to which you agree with that statement.

Example:

In my organization.....

44. ①②③●⑤ learning is an important objective in our day to day work.

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

I. Organizational Culture : In this organization

1. ① ② ③ ④ ⑤ Most employees are highly involved in their work

2. ① ② ③ ④ ⑤ decisions are usually made at the level where the best information is available

3. ① ② ③ ④ ⑤ information is widely shared so that everyone can get the information he or she needs when it is needed

4. ① ② ③ ④ ⑤ everyone believes that he or she can have a positive impact.

5. ① ② ③ ④ ⑤ business planning is ongoing and involves everyone in the process to some degree.

6. ① ② ③ ④ ⑤ cooperation across different parts of the organization is actively encouraged.

7. ① ② ③ ④ ⑤ people work like they are part of a team.

8. ① ② ③ ④ ⑤ teamwork is used to get work done, rather than hierarchy.

9. ① ② ③ ④ ⑤ teams are our primary building blocks.

10. ① ② ③ ④ ⑤ work is organized so that each person can see the relationship between his or her job and the goals of the organization.

11. ① ② ③ ④ ⑤ authority is delegated so that people can act on their own.

12. ① ② ③ ④ ⑤ the "bench strength" (capability of people) is constantly improving.

13. ① ② ③ ④ ⑤ there is continuous investment in the skills employees

14. ① ② ③ ④ ⑤ the capabilities of people are viewed as an important source of competitive advantage.

15. ① ② ③ ④ ⑤ problems often arise because we do not have the skills necessary to do the job.

16. ① ② ③ ④ ⑤ the leaders and managers "practice what they preach."

17. ① ② ③ ④ ⑤ there is a characteristic management style and a distinct set of management practices.

18. ① ② ③ ④ ⑤ there is a clear and consistent set of values that governs the way we do business.

19. ① ② ③ ④ ⑤ ignoring core values will get you in trouble.

20. ① ② ③ ④ ⑤ there is an ethical code that guides our behavior and tells us right from wrong.

In this organization.....

21. ① ② ③ ④ ⑤ when disagreement occur, we work hard to achieve "win-win"
22. ① ② ③ ④ ⑤ there is a "strong" culture.
23. ① ② ③ ④ ⑤ it is easy to reach consensus, even on difficult issues.
24. ① ② ③ ④ ⑤ we often have trouble reaching agreement on key issues
25. ① ② ③ ④ ⑤ there is a clear agreement about the right way may and the wrong way to do things.
26. ① ② ③ ④ ⑤ our approach to doing business is very consistent and predictable.
27. ① ② ③ ④ ⑤ people from different parts of the organization share a common perspective.
28. ① ② ③ ④ ⑤ it is easy to coordinate projects across different parts of the organization.
29. ① ② ③ ④ ⑤ working with someone from another part of this organization is like working with someone from a different organization.
30. ① ② ③ ④ ⑤ there is good alignment of goals across levels.
31. ① ② ③ ④ ⑤ the way things are done is very flexible and easy to change.
32. ① ② ③ ④ ⑤ we respond well to competitors and other changes in the business environment.
33. ① ② ③ ④ ⑤ new and improved ways to do work are continually adopted.
34. ① ② ③ ④ ⑤ attempts to create change usually meet with resistence.
35. ① ② ③ ④ ⑤ different parts of the organization often cooperate to create change.
36. ① ② ③ ④ ⑤ customer comments and recommendations often lead to changes.
37. ① ② ③ ④ ⑤ customer input directly influences our decisions.
38. ① ② ③ ④ ⑤ all members have a deep understanding of customer wants and needs.
39. ① ② ③ ④ ⑤ the interests of the customer often get ignored in our decisions.
40. ① ② ③ ④ ⑤ we encourage direct contact with customers by our people.

In this Organization.....

41. ① ② ③ ④ ⑤ we view failure as an opportunity for learning and improvement.
42. ① ② ③ ④ ⑤ innovation and risk taking are encouraged and rewarded.
43. ① ② ③ ④ ⑤ lots of things " fall between the cracks.
44. ① ② ③ ④ ⑤ learning is an important objective in our day-to-day work.
45. ① ② ③ ④ ⑤ we make certain that the " right hand knows what the left hand is doing."
46. ① ② ③ ④ ⑤ there is a long-term purpose and direction.
47. ① ② ③ ④ ⑤ our strategy leads other organizations to change the way they compete in the industry.
48. ① ② ③ ④ ⑤ there is a clear mission that gives meaning and direction to our work.
49. ① ② ③ ④ ⑤ there is a clear strategy for the future.
50. ① ② ③ ④ ⑤ our strategic direction is unclear to me.
51. ① ② ③ ④ ⑤ there is widespread agreement about goals.
52. ① ② ③ ④ ⑤ leaders set goals that are ambitious, but realistic.
53. ① ② ③ ④ ⑤ the leadership has " gone on record" about the objectives we are trying to meet.
54. ① ② ③ ④ ⑤ we continuously track our progress against our stated goals.
55. ① ② ③ ④ ⑤ people understand what needs to be done for us to succeed in the long run.
56. ① ② ③ ④ ⑤ we have a shared vision of what the organization will be like in the future.
57. ① ② ③ ④ ⑤ leaders have a long-term viewpoint.
58. ① ② ③ ④ ⑤ short-term thinking often compromises our long-term vision.
59. ① ② ③ ④ ⑤ our vision creates excitement and motivation for our employees.
60. ① ② ③ ④ ⑤ we are able to meet short-term demands without compromising our long-term vision.

Continue ——————▶

II. Corporate Performance

This final set of questions asks about the performance of your organization. Compared to companies like yours, how would you assess your organization's performance in the following areas? Please mark one response for each item.

	Don't Know	Low Performer		Average		High Performer
Budget Achievement	⓪	①	②	③	④	⑤
Sales/Revenue Growth	⓪	①	②	③	④	⑤
Market Share	⓪	①	②	③	④	⑤
Profit/ROA	⓪	①	②	③	④	⑤
Quality of Products and Services	⓪	①	②	③	④	⑤
New Product Development	⓪	①	②	③	④	⑤
Employee Satisfaction	⓪	①	②	③	④	⑤
Overall Organization Performance	⓪	①	②	③	④	⑤

III. The following items will be3 used to support this research. Your responses will be treated confidentially and will never be used to identify specific individuals.

Age
① Under 20
② 20 to 29
③ 30 to 39
④ 40 to 49
⑤ 50 to 59
⑥ Over 60
⑦ Prefer not to respond

Gender
① Female
② Male
③ Prefer not to respond

Education (Mark the highest Level)
① High School
② Some college
③ Associate's/ Technical degree
④ Bachelor's degree
⑤ Some graduate work
⑥ Master's degree
⑦ Doctoral degree
⑧ Other _____
⑨ Prefer not to respond

Organizational Level
① Line Management
② Middle Management
③ Senior Management
④ Executive/ Senior Vice President
⑤ CEO/President
⑥ Owner
⑦ Prefer not to respond

Function in your organization
① Financial and Accounting
② Engineering
③ Manufacturing and Production
④ Research and Development
⑤ Sales and Marketing
⑥ Purchasing
⑦ Human Resources
⑧ Administration
⑨ Support Staff
⑩. Prefer not to respond

Years with your organization
① Under 6 months
② 6 months to 1 year
③ 1 year to 2 years
④ 2 to 4 years
⑤ 4 to 6 years
⑥ 6 to 10 years
⑦ 10 to 15 years
⑧ Over 15 years
⑨ Prefer not to respond

Company Profile

Company Name: _____

Industry: _____
(please refer the attached industry index)
Size: _____ People

Time to complete: ① 15-20 minutes ② Over 30 minutes

公司文化及公司營運表現相關研究問卷

先謝謝您的參與.本研究使用 **Denison** 組織文化問卷調查公司文化及評估公司營運表現. 本問卷可在 **15** 分鐘內完成. 請參與者回答每一個問題時, 以全公司的情形來看並填完此問卷, 以使您所填寫的問卷能有效的運用在本論文研究中.

所有本問卷中的所有訊息將僅使用於本論文研究. 所有個人的資料將不會被當作辨別使用.

謝謝

黃國光
NSU, Ft. Lauderdale
Florida, USA

以下是有關填表人的公司基本資料, 已做未來進一步的研究時使用

公司基本資料

服務公司名稱_____

職級: _____ 管理人員 _____非管理人員

地點: 台灣 _____ 市/ 縣

產業別: _____

公司規模: _____ 人

年營業額: _____

填表日期: 2003

公司電話/**Email:** _____ @_____. **TEL :** _____

完成本問卷所費時間： __ **15-20** 分鐘 __ **30** 分鐘以上 ____

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