

Employee Perceptions and Financial Performance

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ABSTRACT

A number of studies have found evidence supporting a link between the organizational environment and financial performance. However, several studies have found a mixed support or no support for this link. This study builds on these findings to address the question: Is there a relationship between organizational environment factors and financial performance?

Organizational environment data for this study came from employees of a sales and service division of a global manufacturer located in the Midwest of the U.S. A sample of 1,518 respondents, from a total population of 1,615 employees organized in 100 teams, completed a 68-item survey instrument for a response rate of 94%. An exploratory factor analysis generated a model with 11 subscales using 52 items from the original instrument. The subscales are (1) operational effectiveness, (2) immediate manager/supervisor, (3) senior management, (4) mission, (5) valuing employees, (6) training, (7) involvement, (8) corporate social responsibility, (9) satisfaction, (10) teamwork, and (11) inclusion. Cronbach's alpha coefficients for all subscales on the survey were acceptable, ranging from .85 to .90. Team-level factor scores, the predictor variables, were generated by computing factor scores for individual respondents, followed by computing a mean of each of the factor scores from members of each team. This approach produced 11 factor scores for each team. Contribution margin ratio, a measure of profitability, was the outcome variable. This variable was calculated at the team level and is the quotient created when dividing operating income by revenue. This

study used contribution margin ratios from five financial periods: four consecutive fiscal quarters and the fiscal year overall.

This study found that team-level employee perceptions of organizational environment factors had no to weak relationships between various organizational environment factors and various measures of financial performance. The regression analyses, subsequently, found that organizational environment factors were able to explain only single-digit percentages of variation in financial performance. Implications of these findings with regard to organizational performance are discussed.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	i
ABSTRACT	ii
TABLE OF CONTENTS	iv
LIST OF TABLES	viii
LIST OF FIGURES	x
CHAPTER 1	1
Background	1
Problem Statement	4
Purpose of the Study	5
Significance of the Study	6
Assumptions of the Study	8
Definition of Key Terms	9
Summary	10
CHAPTER 2	12
Enduring Attention on Organizational Culture and Climate	12
Culture and Climate: Comparisons of Concepts	14
Culture versus Climate	14
Definitions of Culture and Climate	17
Organizational Environment Factors and Financial Performance	21
Studies Supporting the Culture-Performance Relationship	23
Studies with Mixed Results on the Culture-Performance Relationship	37

Studies Not Supporting the Culture-Performance Relationship	39
Summary	42
CHAPTER 3	44
Target Population.....	44
Data Collection	45
Instrumentation	46
Bartlett’s Test.....	48
Design of Exploratory Factor Analysis.....	48
Extraction Process.....	50
Interpreting Factors.....	56
Team Level Predictor Variables	58
Outcome Variables.....	61
Methods for Data Analysis	62
Summary	64
CHAPTER 4	66
Correlation Analysis	67
Regression Analysis.....	70
First Quarter Financial Results	70
Second Quarter Financial Results.....	72
Third Quarter Financial Results.....	75
Fourth Quarter Financial Results	75
Fiscal Year Financial Results.....	77

Summary	79
CHAPTER 5	81
Summary	81
Purpose and Research Question.....	82
Results.....	83
Conclusions.....	84
Discussion.....	85
Operational Effectiveness	88
Immediate Manager	89
Senior Management	89
Mission.....	90
Valuing Employees.....	91
Training.....	92
Involvement	92
Corporate Social Responsibility	93
Satisfaction.....	94
Teamwork	95
Inclusion.....	95
Limitations of the Study.....	96
Implications and Recommendations	98
Implications for Human Resource Development Practice.....	98
Implications for Theory	100

Recommendations for Future Research	101
REFERENCES	103
Appendix A: Organizational Culture and Financial Performance Studies	119
Appendix B: IRB Approval Letter.....	140
Appendix C: Survey Questions.....	142
Appendix D: Factor Loadings - First EFA (68 Items).....	147
Appendix E: Factor Loadings - Second EFA (56 Items).....	152
Appendix F: Factor Loadings - Third EFA (54 Items).....	156
Appendix G: Factor Loadings - Fourth (Final) EFA (52 Items).....	160
Appendix H: Comparison of Items and Factor Loadings: Original and Extracted.....	164
Appendix I: Structure Matrix.....	173

LIST OF TABLES

Table 1: Definitions of Organizational Culture	18
Table 2: Definitions of Organizational Climate.....	20
Table 3: Previous Studies of Employee Perceptions and Financial Performance	22
Table 4: Eigenvalues of Extracted Factors with Total Variance Explained	52
Table 5: Correlations Among Extracted Factors (Cronbach Alphas in Parentheses).....	54
Table 6: Communalities of Observed Variables in Extracted Factor Model.....	55
Table 7: Factor Definitions	57
Table 8: Descriptive Statistics of Team Level Organizational Environment	
Factor Scores (n=93).....	61
Table 9: Descriptive Statistics of Team Level Financial Performance.....	62
Table 10: Descriptive Statistics of All Variables of Interest	66
Table 11: Correlations of All Variables of Interest (n=92-93)	68
Table 12: Stepwise Regression of Q1 Financial Results	71
Table 13: Regression Analysis of Q1 Financial Results.....	71
Table 14: Analysis of Variance of Q1 Financial Results.....	72
Table 15: Stepwise Regression of Q2 Financial Results	73
Table 16: Regression Analysis of Q2 Financial Results.....	74
Table 17: Analysis of Variance of Q2 Financial Results.....	74
Table 18: Sequential Sums of Squares of Q2 Financial Results.....	74
Table 19: Stepwise Regression of Q4 Financial Results	76
Table 20: Regression Analysis of Q4 Financial Results.....	77

Table 21: Analysis of Variance of Q4 Financial Results.....	77
Table 22: Sequential Sums of Squares of Q4 Financial Results.....	77
Table 23: Stepwise Regression of Fiscal Year Financial Results.....	78
Table 24: Regression Analysis of Fiscal Year Financial Results	79
Table 25: Analysis of Variance of Fiscal Year Financial Results	79

LIST OF FIGURES

Figure 1: Scree Plot of Eigenvalues.....53

CHAPTER 1

INTRODUCTION

In this chapter, the background for the enduring interest in employee perceptions is discussed, followed by the problem statement and the purpose of the study, the significance of the problem, the assumptions underlying the research, and, finally, definition of key terms of this study.

Background

A belief persists in the literature of both organizational culture and organizational climate, reflected by both researchers and practitioners, that a strong link exists between organizational culture and organizational effectiveness. This assumption has been put forth in both the popular press by practitioners (Deal & Kennedy, 1982; Peters & Waterman, 1982; Rucci, Kirn, & Quinn, 1998; Stringer, 2001) and in the academic press (Denison, 1984, 1990; Gordon, 1985). Two assumptions support the interest and persistence of the link between the climate of the work environment and organizational performance (Ogbonna & Harris, 2002); one is that performance of a company is dependent on the perceptions of employees being aligned with the company strategy, and the other is that organizational culture can be controlled by management to facilitate a realization of the strategy. The first assumption, pertaining to the relationship between employee perceptions of the work environment and performance, is the focus of this study. Specifically, is there a relationship between organizational environment factors and performance? The state of the research focusing on the relationship between culture and performance is inconclusive (Kirby, 2005; Lim, 1995; Siehl & Martin, 1990;

Wilderom, Glunk, & Maslowski, 2000). Wilderom et al. (2000) examined the history and development of the literature focusing on organizational culture and performance, and they suggested that four historical phases of literature can be observed. Phase 1, called *Emergence*, reflected the initial proposition that a link between culture and performance exists, and this initial phase occurred from World War II to the late 1970s. These authors cited two representative authors from this era (Jaques, 1951; Silverzweig & Allen, 1976). *Promulgation*, the second phase of the literature, was relatively brief, occurring from the late 1970s to the early 1980s. This phase was characterized by semi-scientific literature with several representative sources from this stage (Deal & Kennedy, 1982; Ouchi & Jaeger, 1978; Peters & Waterman, 1982). The third phase, *Defiance*, occurred from the early 1980s to 1990. This stage provided criticism of the relatively untested belief in the link between culture and performance. The literature from this period specifically criticized the earlier literature as being too light conceptually or lacking in scientific rigor (Saffold, 1988; Siehl & Martin, 1990). The final stage of literature is the one that continues today, the *Testing* phase. This phase is characterized by empirical testing of the link between organizational culture and performance. Numerous studies from the early 1990s until the present characterize this phase (Booth & Hamer, 2009; Calori & Sarnin, 1991; Davidson, Coetzee, & Visser, 2007; Denison, 1984; Denison & Mishra, 1995; Flamholtz, 2001; Flamholtz & Kannan-Narasimhan, 2005; Flatt & Kowalczyk, 2008; Gordon & DiTomaso, 1992; Hansen & Wernerfelt, 1989; Kotter & Heskett, 1992; Marcoulides & Heck, 1993; Ogbonna & Harris, 2000; Petty, Beadles II, Lowery, Chapman, & Connell, 1995; Rousseau, 1990b; Sorensen, 2003; Thompson, 1996; Van

Der Post, De Coning, & Smit, 1998). Many of these studies provide evidence supporting the notion of a relationship between organizational culture and performance; however, some of these studies found little evidence supporting this relationship. Finally, as studies on the relationship between organizational culture and performance continue to be generated, Wilderom et al. (2000) suggested that a fifth phase could be in the making, *Theory-Testing*, which will help to confirm or reject the work completed to date.

Similarly, the organizational climate literature also reflects a perceived link between climate and performance. Reichers and Schneider (1990) traced the history of the organizational climate concept beginning with the first time the term, climate, was coined, by Lewin, Lippitt, and White (1939), as an approach to studying groups. The early work in climate studies emphasized the global nature of employee perceptions of their organizations, but this work evolved to a focus on specific dimensions of climate and their relationships to various organizational outcomes (Schulte, Shmulyian, Ostroff, & Kinicki, 2009). Numerous studies have focused on the relationship between organizational climate and business performance, and many of these have focused on examining the relationship between organizational climate and financial performance (Borucki & Burke, 1999; Cooil, Aksoy, Keiningham, & Maryott, 2009; Gelade & Young, 2005; Koys, 2001; Leung, 1997; Paradise-Tornow, 1991; Rucci et al., 1998; Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly, 2005; Schulte et al., 2009; Van De Voorde, Van Veldhoven, & Paauwe, 2010). These studies also report a variety of results on whether organizational climate is related to financial performance.

While the topics of organizational culture and organizational climate have different histories and developed in parallel fashion, many have argued for more integration of these two concepts as they share the objective of studying complex organizational phenomena (Ashkanasy, Wilderom, & Peterson, 2000; Denison, 1996; Payne, 2000; Reichers & Schneider, 1990). While different definitions conceptually and operationally have been offered for the terms organizational culture and organizational climate, much common ground between these two concepts can be seen. Regardless of the term used, both climate and culture refer to “fairly enduring multileveled, organized work contexts entailing the following: organizing values, norms, take-for-granted assumptions, behavioral regularities, rituals, practices, procedures, patterns of discourse, use of symbols, ways identity is constructed, and so on” (Ashkanasy, Wilderom, & Peterson, 2011, p. 4). Numerous definitions of both organizational culture and organizational climate can be found in the literature. However, Schein (2011) provided some advice: “My advice to readers is to view both climate and culture as abstractions that lead them to taking a useful perspective toward human behavior in complex systems” (p. xiii). While definitions of organizational culture and organizational climate are provided later in this chapter, culture will be the term used to refer to the organizational phenomenon that is the subject of this research.

Problem Statement

Culture has been used to understand organizations and the experience of people working in them (Alvesson, 2002; Martin, 2002; Reichers & Schneider, 1990; E. H. Schein, 1992) and as a means for explaining their performance (Denison, 1990; Kotter &

Heskett, 1992). Several studies have attempted to measure a link between culture and performance; however, varying results have been reported (Lim, 1995; Siehl & Martin, 1990; Wilderom et al., 2000). Taken together, the existing research on the relationship between employee perceptions of the work environment and performance indicates that some kind of relationship exists, but the evidence is not conclusive. Challenges shared by all of the research in this area involve assessing organizational culture, assessing organizational performance, and demonstrating a convincing link between the two. Furthermore, each study in this area faces challenges in gaining access to organizations and obtaining potentially sensitive data on both cultural measures and financial performance. Wilderom et al. (2000) summarized the need for additional research as follows: “The great intuitive appeal of the C-P [culture-performance] linkage, the preliminary evidence found so far, and the many research challenges involved in obtaining the evidence give some reasons to still believe in this link” (p. 201). This study aimed to provide a meaningful addition to the literature by demonstrating how organizational culture explains the variance in organizational performance.

Purpose of the Study

The purpose of this study was to determine if there is a relationship between organizational culture and financial performance. This study explored the relationships between a measure of financial performance and factors of organizational culture for a sales and service organization of a global manufacturer. The measure of financial performance used for the study was contribution margin ratio (Magoon, 2008). Contribution margin ratio, calculated by dividing operating income by revenue, is a

financial ratio measuring profitability, and it reflects the efficiency with which an organization achieves its financial performance. This research was focused on the explanation of financial performance through the influence of factors of organizational culture. Two decades of research testing the link between organizational culture and financial performance have demonstrated some evidence for its existence; however, additional study is warranted to confirm the initial findings from the literature.

Significance of the Study

The outcomes of this study may provide potential insights for both research and practice. A number of culture and climate studies have demonstrated support for the relationship between employee perceptions of the work environment and financial performance (Borucki & Burke, 1999; Calori & Sarnin, 1991; Denison, 1984, 1996; Flamholtz, 2001; Flamholtz & Kannan-Narasimhan, 2005; Flatt & Kowalczyk, 2008; Gordon & DiTomaso, 1992; Hansen & Wernerfelt, 1989; Harter, Schmidt, & Hayes, 2002; Johnson, Davis, & Albright, 2009; Kotter & Heskett, 1992; Leung, 1997; Marcoulides & Heck, 1993; Petty et al., 1995; Schneider, Hanges, Smith, & Salvaggio, 2003; Schulte et al., 2009; Sorensen, 2003; Thompson, 1996; Van De Voorde et al., 2010; Van Der Post et al., 1998). Additionally, several studies focused in this same area failed to find general support for the link between organizational culture and financial performance (Booth & Hamer, 2009; Cooil et al., 2009; Davidson et al., 2007; Paradise-Tornow, 1991; A. M. Ryan, Schmit, & Johnson, 1996) or found only mixed support for this relationship (Gelade & Young, 2005; Koys, 2001; Ogbonna & Harris, 2000; Rousseau, 1990b). Ashkanasy, Wilderom, and Peterson (2000) suggested that the

question of the link between organizational culture and financial performance remains open because of methodological shortcomings in the current literature and because of the formidable challenges associated with completing studies of this nature.

Because of the inconclusive research results, one may think of the link between perceptions of organizational environment and organizational performance as espoused theory. Based on Lynham's (2002) theory building framework, if a conceptual framework is developed and translated into observable, confirmable components, but it remains unconfirmed through data and research, one could think of that idea as an espoused theory. Such is the case for the notion that organizational culture has a link with financial performance. Some research results have been generated that provide some initial evidence supporting this link, but questions remain about the link between culture and performance, as well as the organizational factors that make up this relationship. Taken together, the results of the previous research in this area suggest the need for further examination of the relationship of organizational culture and performance. This study builds on the findings of the previous studies, and it hopes to confirm or reject previous results in a different population.

This study may also benefit practitioners. Culture is often praised or blamed in the literature as an explanation for high or low performance (Charan, 2001; LaGuardia, 2008; Munck, 2001; O'Toole & Bennis, 2009; Peters & Waterman, 1982). Schein (1999) neatly summarized the impact of culture as a set of forces that determine individual and collective behavior and that influence strategy, goals, and modes of operating. He stated, "If we want to make organizations more efficient and effective, then we must understand

the role that culture plays in organizational life” (p. 14). Practitioners who are interested in having informed practice, where research results help to guide their work, may find benefit in the research.

Assumptions of the Study

The perceptions of factors representing organizational culture and their relationship with performance are the main topic of this research. Some have raised questions about the appropriateness of using self-reported perceptions collected through a survey to measure organizational culture (Lim, 1995; Saffold, 1988; Siehl & Martin, 1990). Earlier definitions of organizational culture suggested that organizational culture was best examined through interpretive epistemologies because they were founded on social construction, but, as the organizational culture research developed from the 1990s onward, the use of quantitative methods, such as survey research, became commonplace and accepted (Van Den Berg & Wilderom, 2004). Studies using surveys to measure organizational culture have been criticized as being organizational climate studies vs. organizational culture studies (Martin, 2002). However, many authors now recognize the value of multiple types of data to inform organizational culture research (Reichers & Schneider, 1990; Rousseau, 1990a; Schneider, 2000). Denison (1996) wrote, “The endless debate over what constitutes the ‘right’ kind of data [for organizational culture research] can be given a decent burial” (p. 645).

Martin (2002) suggested that most literature on organizational culture can be described using one of three paradigms, and these reflect assumptions about the concept of organizational culture. Organizational culture literature that reflects the integrative

paradigm shows a view where cultural manifestations are consistent, and there is agreement about the culture within the organization. The differentiation paradigm is shown when literature reflects organizational culture as something inconsistent and lacking in consensus within an organization; here, the organization can be thought of as a cluster of subcultures without organization-wide consensus. A third perspective, the fragmentation paradigm reflects organizational culture and subcultures as uncertain, fluctuating, blurred, or overlapping. Given the three paradigms provided by Martin (2002), this research takes on assumptions associated with the integration paradigm, including the notion that culture can be understood from the etic point of view, that objectivity is valued, that the generalization of results is both possible and desirable, and that the relationships among variables are valued because of their contribution to theory building based on quantitative data.

Definition of Key Terms

For the purpose of this study, organizational culture was defined as the “shared perceptions of organizational work practices within organizational units that may differ from other organizational units” (Van Den Berg & Wilderom, 2004, p. 571).

Organizational climate was defined as “the shared perception of ‘the way things are around here.’ More precisely, climate is shared perceptions of organizational policies, practices, and procedures, both formal and informal” (Schneider, 1990, p. 22). As demonstrated by the definitions of organizational culture and organizational climate, these two terms refer to the perception of the organizational environment by members of the organization.

Performance has been defined as “the valued productive output of a system in the form of goods or services” (Swanson & Holton III, 2001, p. 89). The measurement of organizational performance, like organizational culture and organizational climate, is a complex issue, and a variety of measures from financial to operational metrics have been used to demonstrate organizational performance (Venkatraman & Ramanujam, 1986). Economic performance of organizations can be reflected in a variety of financial metrics (Venkatraman & Ramanujam, 1987). This study used a financial performance measurement called contribution margin ratio, which is a measure of profitability, as the outcome variable. Contribution margin is a ratio that demonstrates the efficiency with which an organization achieves financial performance through a ratio that combines cost, volume, and profit. Contribution margin ratio was defined as follows: “The difference between sales revenue and the variable costs of a product or service (e.g., labor and materials)” (Magoon, 2008, p. 175). The ratio is calculated by dividing operating income by revenue.

Summary

Organizational culture of a firm is often praised or blamed as a key factor in explaining organizational performance; however, the evidence supporting the link between organizational culture and financial performance requires further investigation. Much of the extant research investigating this relationship has been troubled by methodological challenges of organizational access and sampling. Research methodology has also been challenged by issues associated with operationalizing organizational culture, operationalizing organizational performance, and substantiating the relationship

between culture and performance. Despite these challenges and obstacles, culture remains a lens on which to view organizations, and a clear relationship between organizational culture and financial performance has not yet been demonstrated. Therefore, the research question for this study was: is there a relationship between organizational environment factors and performance?

CHAPTER 2

REVIEW OF LITERATURE

This chapter presents relevant literature investigating the relationship between organizational environment factors and financial performance, and it discusses the continuing interest in organizational culture and organizational climate as subjects of research. Definitions of organizational culture and organizational climate are provided, including how culture is distinguished from climate. Finally, organizational culture and organizational climate research, where financial performance was the outcome variable of interest, is reviewed and summarized.

Enduring Attention on Organizational Culture and Climate

The study of organizational culture and organizational climate is an approach for understanding how organizations perform, ways in which organizations change, and ways in which organizations are experienced by those who are a part of them (Schneider, 2000). In particular, research on both organizational climate and organizational culture and its potential link with organizational performance has been a prominent topic of study within the larger field of organizational culture and organizational climate research (Kirby, 2005; Lee & Yu, 2004; Lim, 1995; Sackmann, 2011; Wilderom et al., 2000). Two assumptions underlie such research: organizational performance is dependent on the alignment of the values and perceptions of employees to the company strategy and organizational culture can be manipulated by management in order to control performance towards predictable outcomes (Ogbonna & Harris, 2002).

Historically, support for these two main assumptions emerged over time. Wilderom et al. (2000) reported that these assumptions were initially suggested by several sources from the 1930s-1950s, namely, the Hawthorne studies (Roethlisberger & Dickson, 1975), a case study of culture change in a factory (Jaques, 1951), and in a popular management text from the early 1960s (Piffner & Sherwood, 1960). Wilderom et al. indicated that the 1960s through the early 1970s was a relatively quiet period for the topic of organizational culture and its links to organizational performance. However, from the late 1970s onward, the topic of organizational culture and its potential link to organizational performance received a great deal more attention with prominent publications in the practitioner press (Collins, 2001; Collins & Porras, 1994; Deal & Kennedy, 1982; Kotter & Heskett, 1992; Peters & Waterman, 1982) as well as in academic circles (Barney, 1986; Chatman & Cha, 2003; Lee & Yu, 2004; Pettigrew, 1979; Siehl & Martin, 1990). In contrast, Reichers and Schneider (1990) noted that in this same time period in the 1960s, researchers focusing on organizational climate generated several studies of collected data and focused on assessing the validity of the climate concept, and they note that these early studies considered climate to be a correlate of work productivity and motivation.

Several reasons support the enduring interest in organizational culture and organizational climate and their potential link to organizational performance. First, the lenses of organizational culture and organizational climate can provide a way to understand how organizations function and change, and how they are experienced by those within them. Second, there has been practitioner and academic interest in the

relationship between employee perceptions of the work environment and performance. This stems not only from understanding how organizations perform, but this is from the interest of organizational stakeholders in controlling and predicting organizational performance. Before reviewing the specific literature that investigated the link between organizational environment factors and financial performance, definitions of organizational culture and organizational climate are provided and discussed.

Culture and Climate: Comparisons of Concepts

No widespread agreement of the definitions of organizational culture or organizational climate has yet emerged from the literature, and many definitions of the terms appear in the literature and often interchangeably (Ashkanasy et al., 2000; Martin, 2002). Because of this the meaning of these concepts has become blurred over time (Payne, 2000; Pettigrew, 1990). A discussion comparing these two concepts follows.

Culture versus Climate

Considerable discussion about the similarities, differences, and conflict between the concepts of organizational culture and organizational climate can be found in the literature, and camps have emerged representing both sides of the debate (Denison, 1996; Martin, 2002; E. H. Schein, 2000). The literature on organizational culture and organizational climate overlap by a great deal as both concepts are linked conceptually and practically to the study of organizational life and how organizational participants experience organizations (Schneider, 2000). However, it is helpful to relate briefly the origins of each concept as a way to understand their distinctions. Reichers and Schneider (1990) and Ashkanasy, Wilderom, and Peterson (2000) provided thorough histories of the

two terms and the development of their respective literature and research. These sources trace both concepts back to their first points of publication as a way to trace the development of each concept.

In the context of organizational behavior studies, culture is a comparatively younger concept than climate. The first time the climate term was used appears to have been in 1939 in a study by Kurt Lewin and his team from the University of Michigan in reference to experimentally created social climates (Lewin et al., 1939). Lewin's area of study emerged from his interest in field theory and social climate. The work in the area of climate continued with Rensis Likert who pioneered the use of surveys as a means for the measurement of employee attitudes (Ashkanasy et al., 2000). In contrast, the first time culture, a concept whose roots are traced to anthropology, was used as an approach for understanding the workings of organizational life appears to have been in 1979 in a study about a private British boarding school (Pettigrew, 1979). Climate studies employing survey techniques that operationalized climate emerged in the 1960s (Reichers & Schneider, 1990). The early culture research emerged out of qualitative approaches to gathering information about the meaning of symbols, language, beliefs, and values that are resident in specific organizations. It was not long before both organizational culture and climate became associated with organizational performance.

Reichers and Schneider (1990) suggested that climate researchers were more concerned about organizational effectiveness than the culture researchers, per se, and that climate researchers viewed climate as a means to understand organizational effectiveness overall. These authors suggested that the early culture researchers were more concerned

with meaning and description of the organizational context. Reichers and Schneider (1990) stated, “The early studies of climate considered climate to be a correlate of work motivation and productivity” (p.14). In contrast, culture was thought to be a sound means to explore an organization and what the experience of it meant to the members. Reichers and Schneider (1990), of the organizational culture paradigm, stated, “effectiveness is not an important concept in anthropology, especially in comparative or cultural anthropology; *description* is the issue” (p. 20, italics in original). However, in the early 1980s, literature emerged that claimed that effective management of organizational culture is associated with improved organizational performance (Deal & Kennedy, 1982; Peters & Waterman, 1982). Following these initial claims, the notion of organizational culture was further developed and refined as a concept, and cultural researchers began to use surveys as a means of studying culture as a means for exploring the link between culture and performance (Denison, 1984). Climate researchers now agree that the use of case study and other qualitative research methods can yield data and richness of understanding that cannot be achieved through survey research alone (Schneider, 2000). And in some parts of the culture camp, the use of survey and quantitative research are valid methods for defining, measuring, and comparing organizational culture (Van Den Berg & Wilderom, 2004). To summarize, organizational studies researchers may or may not specify a distinction between organizational culture and organizational climate, and some cultural researchers would include organizational climate studies, such as those suggested by Martin (2002), to be a subset of the broader study of organizational culture.

Definitions of Culture and Climate

Because of the plethora of definitions of culture, each with its own theoretical implications, defining organizational culture is a dilemma and one that reflects the richness of the organizational culture body of work (Martin, 2002). Schein's (1990) well-known definition of culture has provided a reference point for many organizational culture researchers (Pettigrew, 2000):

Culture can now be defined as (a) a pattern of basic assumptions, (b) invented, discovered, or developed by a given group, (c) as it learns to cope with its problems of external adaptation and internal integration, (d) that has worked well enough to be considered valid and, therefore (e) is to be taught to new members as the (f) correct way to perceive, think, and feel in relation to those problems. (E. H. Schein, 1990, p. 111)

In terms of shared meanings, one point that Schein has made is that culture is both a static state of an organization as well as a constantly emerging process of constructing shared meaning (E. H. Schein, 2000).

In research investigating the link between employee perceptions of the work environment and financial performance, culture has been defined in many ways, but many of these definitions still manage to reflect some of the themes provided by Schein's definition. The definitions in Table 1 reflect several authors' attempts to operationalize culture for research purposes. This table shows some of the various ways organizational culture has been defined, and it demonstrates that there is no broad agreement on the definition of this term.

Table 1

Definitions of Organizational Culture

Reference	Definition of organizational culture
Booth & Hammer (2009)	“Corporate culture can be defined as the expressed values of the organization. These may derive from the values of the founders, transmitted through management rules and practices, and seen in the corporately approved rituals and procedures that all members of the firm take part in” (p. 712).
Calori & Sarnin (1991)	The culture of an organization is a set of values.
Davidson, Coetzee, & Visser (2007)	“It is a collective phenomenon shared by members of a group and is socially constructed. It deals predominantly with intangible and emotional concepts (such as meanings, values, understanding and beliefs) rather than rational concepts. It provides a group with identity, a sense of meaning, purpose, and direction, and involves the establishment of a set of norms that shape the behavior of individuals within that group. Culture has a significant influence on the extent to which there is internal integration (the ways in which people work together in order to adapt to the external environment and remain competitive). Furthermore, it is historically determined and is difficult to change” (p. 46).
Flamholtz & Kannan-Narisimhan (2005)	“Five different areas in which culture is manifest: these include: (1) the way in which people are viewed and treated by the organization, (2) the way customers are viewed and treated by the organization, (3) the standards of performance and accountability, (4) the teamwork among people in an organization, and (5) corporate citizenship or the way in which the organization operates as a member of its communities” (p. 52).
Gordon & DiTomaso (1992)	“The pattern of shared and stable beliefs and values that are developed within a company across time” (p. 784).
Kotter & Heskett (1992)	“We have found it helpful to think of organizational culture as having two levels which differ in terms of their visibility and their resistance to change. At the deeper and

Reference	Definition of organizational culture
Petty et al. (1995)	<p>less visible level, culture refers to values that are shared by the people in a group and that tend to persist over time even when group membership changes. At the more visible level, culture represents the behavior patterns of style of an organization... Each level of culture has a natural tendency to influence the other” (p. 4).</p> <p>One view of culture is “how an organization sets strategy, develops goals, measures progress, and defines products and markets. Culture is considered a mechanism for governing rationale behavior, a system of broad rules for appropriate action under specified contingencies... [A second view of culture] focuses on underlying systems of unconscious assumptions and beliefs which are shared by members of an organization (L. Schein, 1989)... We seek to resolve some of the conflict between the two views [of culture] by proposing that the two views of culture are not in conflict but are rather complementary” (p. 4).</p>
Rousseau (1990)	<p>“Many cognitive and behavioral elements comprise culture from unconscious assumptions, values, and behavioral norms to characteristic patterns of behavior associated with a work group, department, or organization” (p. 449).</p>

Similarly, the concept of organizational climate has been defined in numerous ways by many researchers. Benjamin Schneider has been considered by many to be an acknowledged leader in the study of organizational climate (Ashkanasy, Wilderom, & Peterson, 2011a). Schneider’s definition of climate is as follows: “Climate is widely defined as the shared perception of ‘the way things are around here.’ More precisely, climate is shared perceptions of organizational policies, practices, and procedures, both formal and informal” (Reichers & Schneider, 1990, p. 22).

Many of the climate definitions refer to the role that employee perceptions play in the measurement of a climate. Operationalizing climate in this way has supported the widespread use of survey research in organizational research as a means of measuring the work environment. Table 2 shows various definitions of the term organizational climate.

Table 2

Definitions of Organizational Climate

Reference	Definition of organizational climate
(Cooil et al., 2009)	Perceptions attributed to the work environment [that are used] primarily as a framework to understand how employees experience their work environment.
(Gelade & Young, 2005)	Shared perceptions of policies, practices, and procedures.
(Schulte et al., 2009)	Organizational climate represents shared perceptions among employees within work units regarding what the unit is like in terms of its formal and informal policies, practices, events, and procedures. Organizational researchers view climate as an abstraction of the environment that is based on employees' perceptions and is examined at multiple levels of analysis.
(Lewin et al., 1939)	The attitudes, feelings, and social processes that occur in groups.
(Ashkanasy et al., 2000)	Configurations of attitudes and perceptions by organization members that, in combination, reflect a substantial part of the context in which they are a part and within which they work

For the purpose of this research, the following definition of organizational culture will be used: "Shared perceptions of organizational work practices with organizational units that may differ from other organizational units" (Wilderom et al., 2000, p. 571).

And, organizational climate will be defined as "the shared perception of 'the way things

are around here.’ More precisely, climate is shared perceptions of organizational policies, practices, and procedures, both formal and informal” (Reichers & Schneider, 1990, p. 22). Having established a context for understanding and defining these terms, the results of previous studies are described next.

Organizational Environment Factors and Financial Performance

A variety of research has attempted to identify a relationship between organizational environment factors and organizational performance. Organizational performance has been defined in numerous ways to include variables such as satisfied customers, operational excellence, and financial results, among many variables (Venkatraman & Ramanujam, 1986). Of particular interest here are the studies that focused primarily on the identification and description of organizational culture constructs that might influence financial results. Table 3 summarizes the findings of this literature. Those studies which generally provide evidence for the relationship between employee perceptions and financial performance are listed in the column labeled support. Those studies which identified only mixed support or little evidence supporting the link between employee perceptions and financial performance are shown in these columns respectively.

Table 3

Previous Studies of Employee Perceptions and Financial Performance

Supporting	Mixed Results	Not Supporting
<ul style="list-style-type: none"> • Borucki & Burke (1999) • Calori & Sarnin (1991) • Denison & Mishra (1995) • Denison (1984) • Flamholtz & Kannan-Narasimhan (2005) • Flamholtz (2001) • Flatt & Kowalczyk (2008) • Gordon & DiTomaso (1992) • Hansen & Wernerfelt (1989) • Harter, Schmidt, and Hayes (2002) • Johnson, Davis, & Albright (2009) • Kotter & Heskett (1992) • Leung (1997) • Marcoulides & Heck (1993) • Petty et al. (1995) • Schneider et al. (2003) • Schulte, Shmulyian, Ostroff, & Kinicki (2009) • Sorensen (2003) 	<ul style="list-style-type: none"> • Gelade & Young (2005) • Koys (2001) • Ogbonna & Harris (2000) • Rousseau (1990) 	<ul style="list-style-type: none"> • Booth & Hamer (2009) • Cooil, Aksoy, Keiningham, & Maryott (2009) • Davidson et al. (2007) • Paradise-Tornow (1991) • Ryan, Schmit, & Johnson (1996)

Supporting	Mixed Results	Not Supporting
<ul style="list-style-type: none"> • Thompson (1996) • Van De Voorde, Van Veldhoven, & Paauwe (2010) • Van Der Post et al. (1998) 		

The following three sections provide a summary of these studies: Studies supporting the link between employee perceptions of the work environment and financial performance, studies claiming mixed results on this relationship, and studies with results that do not support this hypothesized relationship.

Studies Supporting the Culture-Performance Relationship

Borucki and Burke (1999) examined the role of organizational climate variables and their influence on sales personnel performance and financial performance in stores in a retail chain located in the U.S. Two samples of survey data were collected from store employees located in 594 stores. Sample one had 34,866 respondents, and the second sample had 34,365 respondents. Individual respondent data was calculated to represent store-level data. Employee perceptions of the work environment included measures of the following variables: (1) Goal emphasis, (2) Means emphasis/general training, (3) Means emphasis/specific training, (4) Management support, (5) Non-monetary reward orientation, (6) Monetary reward orientation, (7) Organizational service orientation, (8) Merchandise-related obstacles, (9) Employee preparation-related obstacles, and (10) Human resource-related obstacles. Path analysis was used to demonstrate linkage

between organizational climate, service performance of employees, and store financial performance. The authors of this study found a relationship between management's support of customer service as an organizational value, a measure of the climate related to customer service, the performance of service related behaviors, and store financial performance. This study found support for the linkage between variables in the organizational climate and financial performance.

Calori and Sarnin (1991) completed a two-part research program using a survey to assess culture, and they administered the survey to identify a link between culture and performance. Numerous co-linear relationships between items/factors were found. In the second phase of the study, the questionnaire was administered to 280 people in five companies in different industries in France. The response rate was not reported. This culture questionnaire has not been used subsequently in other research (Wilderom et al., 2000). Three performance measures were used in this study: return on investment, return on sales, and annual variation in net turnover. In terms of substantiating the link between organizational environment factors and financial performance, culture strength as a concept was used, and it was operationalized as both the homogeneity of responses and the intensity of responses. Many culture values and their corresponding management practices were related to company growth: (1) personal fulfillment, (2) listening to others, (3) team spirit, (4) responsibility, (5) trust, (6) openness to the environment adaptation, (7) anticipation, (8) entrepreneurship, (9) quality, and (10) consistency. The strength of culture was positively related to high growth. However, only a few culture attributes and

management practices were related to profitability, among them were openness to the environment, participation in local activities, societal contribution, and flexibility.

Denison (1984) used 43,747 responses from 34 companies taking the Survey of Organizations questionnaire (Taylor & Bowers, 1972). He created two indices: The Organization of Work index which was made up of 4 survey items and the Decision-Making Practices index which was made up of 2 survey items. For performance, he used two measures: income over investment ratio which measured effective use of resources and income over sales to reflect operating efficiency. Few statistical values of this study were provided in this article; however, graphs were provided to show the difference between the 17 higher performing and 17 lower performing organizations. Thus, some questions remain unanswered by this article summarizing this work. For example, despite the large sample size, the fact that the indexes were each composed of so few items raises doubts about validity and reliability (Lim, 1995). Despite the lack of detail provided in this article about the study, the Denison suggested that the study's data clearly show that those companies having a well organized work environment have a significantly higher return on investment. In addition, a participative culture appeared to provide a small advantage early on and that this advantage steadily increased over a five-year period.

Denison and Mishra (1995) created a questionnaire of items with a focus on four culture traits: (1) adaptability, (2) consistency, (3) involvement, and (4) mission. One survey was sent to each organization with 3,625 total surveys being distributed and 764 surveys being returned for a response rate of 21%. The respondents were top managers such as the CEO, the COO, or the CFO. Objective measures for performance were return

on assets and sales growth. The correlations for the total sample were positive but quite weak. However, when the authors analyzed separately the results from organizations with greater than 100 employees (about 10% of the original sample), the correlations moved from weak relationships to include moderate relationships between employee perceptions of the mission category with return on assets. Relationships between culture and sales growth were all positive, many of which were significant, but with the overall relationship being weak. Various moderate relationships between subscales were shown between the following: input and collaboration, collaboration and agreement, predictability and agreement, and vision and direction. The relationships between subscales call into question whether the subscales are clearly distinguishable. To summarize, the relationships between culture and performance are moderate at best, and they seem to hold for only the larger firms. A criticism of this study was that the subscales only contained two items which is a narrow basis for the study of culture (Wilderom et al., 2000). Denison & Mishra's best evidence for the link between employee perceptions and financial performance is as follows: (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, and (3) All cultural traits were positively related to return on assets, with mission as the strongest predictor (Wilderom et al., 2000).

Flamholtz and Kannan-Narasimhan (2005) conducted additional analysis on the link between culture and performance using data gathered from a previous study (Flamholtz, 2001). 950 people were given a questionnaire from a single organization

developed by Flamholtz, and 702 individuals responded for a response rate of 78%. The factor analysis on indicated that there were six culture variables, and they were named (1) customer focus, (2) corporate citizenship, (3) performance standards, (4) identification with the company, (5) human resource practices, and (6) organizational communication. The dependent variable for this study was earnings before interest and taxes (EBIT). The survey instrument consisted of 29 items which were assessed on a 5-point Likert scale. All of the organizational environment factors have moderate to strong correlations with one another. The authors conclude that the first four culture factors above have moderate to strong relationship with EBIT (however, one of these factors, Corporate Citizenship, does not have a p-value which indicated statistical significance). The last two culture factors above were correlated with several of the first four culture factors, and the authors suggest that they are potentially drivers of the other four.

Flamholtz (2001) created a survey and administered it to 950 individuals in a company with 20 operating divisions that manufactured parts for industrial, truck, and other automotive businesses. The author worked with the organization to articulate a desired corporate culture; statements of values and practices which would reflect this culture were used to construct a survey. The administration of the survey had a response rate of 78%. The culture variables were summarized into one predictor variable called “degree to which each division was perceived by its own personnel to be ‘living’ the desired corporate culture” (Flamholtz, 2001, p. 272). The response variable was earnings before interest and taxes (EBIT). The findings were as follows: 46% of variation in EBIT is explained by corporate culture buy-in.

Flatt and Kowalczyk (2008) reused the data from the Kotter and Heskett study (1992). To the original data, Flatt and Kowalczyk added data about corporate reputation. A single computed variable, culture strength, was used, and it was a calculation of the extent to which managers in competing firms commonly spoke of a (company name) "style" or way of doing things, the extent to which the firm made its values known in a credo, and the extent to which the firm is managed against long-standing policies and procedures and not just the most recent CEO's edicts. Two measures were used for financial performance: market value / total shareholder equity, and return on assets (ROA). Findings related to the culture-performance relationship are as follows: culture was moderately related to book value and ROA, and firm reputation was a mediating variable between culture and financial performance.

Gordon and DiTomaso (1992) used a survey created by Gordon and Cummins (1979) to measure managers' perceptions of how their organizations operate and, by extension, the values that drive the behaviors of individuals in the organization. There were 61 items on the survey, and it used a 7-point Likert scale. Eight factors were identified: (1) clarity of strategy/shared goals, (2) systematic decision making, (3) integration/communication, (4) innovation/risk-taking, (5) accountability, (6) action orientation, (7) fairness of rewards, and (8) development and promotion from within. Eleven companies were in the sample with respondents being in the top four or five levels of management. The response rate was greater than 90%, and it ranged from 34 - 132 respondents per company with a mean of 77 for a total number of responses of 850. The eight factors were combined to construct three predictor variables: (1) culture

strength, which was a composite of all eight above factors; (2) adaptability, which was a combination of factors four and six above; and (3) stability, which was a combination of factors three, seven, and eight above. Measures of financial performance were those that were important to the insurance industry which was the context for the study. These measures were (1) growth in assets and (2) growth in premiums. Results reported were as follows: A strong culture was related positively to firm performance. The adaptability measure was also predictive of short term performance. Stability was not found to be predictive of firm performance.

Hansen and Wernerfelt (1989) attempted to identify the contributions made by economic factors and culture factors on firm performance respectively. Economic factors were (1) size of firm, (2) industry of firm, and (3) relative market share. Culture factors were (1) emphasis on human resources and (2) emphasis on goal accomplishment. Culture and financial data from a total of 60 organizations were used for this study. The culture data, interestingly, came primarily from the same source that was used by Denison (1984) which was the Survey of Organizations (Taylor & Bowers, 1972); however, this study appears to take a different grouping of data from the Survey of Organizations data because of the reported sample size. The response variable was five-year average ROA. Results were as follows: Both organizational factors and economic factors were important in explaining performance. However, the results indicated that organizational factors explained twice as much variance in firm profit rates compared to economic factors.

Harter et al. (2002) studied the relationships between employee perceptions of work characteristics, management practices, and overall employee satisfaction and profitability. Profit was defined as a percentage of revenue, and it was included in other performance variables of productivity for the purpose of the study. This study used a large data base of 198,514 employees in 7,939 business units of 36 unique companies from various industries. Using a meta-analytic approach, this study found that employee attitude measures were related to business-unit outcomes, supporting a link between employee perceptions of the work environment and financial performance. However, correlations between climate and financial performance were positive but of a lower magnitude than were shown for other outcome variables in the study. The outcome of this study suggested that employee perception variables may only indirectly relate to financial and other organizational performance outcomes. The findings of this study suggest that other variables which are not within the scope of this study may influence organizational outcomes.

Johnson, Davies, and Albright (2009) examined the relationship between employee attitudes and a firm's financial performance, testing the hypothesis that firm performance predicts attitudes. Four dimensions of the organizational environment were measured in this study: job satisfaction, pay satisfaction, organizational commitment, and organizational justice. The financial measure for this study was return on assets. The organization involved with this study was a community bank with 45 branches and one headquarters location located in the U.S. Two samples of employee perceptions were gathered as a part of this study: 293 employees in sample 1 and 364 employees in sample

2. The findings of this study suggested that financial performance leads to employee attitudes most specifically when the financial performance improved. Employees working in branches that were performing well financially were found to be more satisfied with their jobs, more committed to the organization, and more satisfied with their pay.

Kotter and Heskett (1992) conducted a set of studies to examine the relationship between culture and performance. They created a survey that was mailed to the top six officers in 207 companies, and 600 responses were collected for a 48% response rate. The culture survey was used to gather data on culture strength using the following approach: A single culture indicator was computed based on responses from leaders of other firms in the same industry to three questions: the extent to which managers in competing firms commonly spoke of a (company name) "style" or way of doing things, the extent to which the firm made its values known in a credo, and the extent to which the firm is managed against long-standing policies and procedures and not just the most recent CEO's edicts. Dependent variables were created using financial performance indices with the following data: (1) average yearly increase in net income, (2) average yearly return on investment, (3) average yearly increase in stock price. A key finding from this study was the modest, positive relationship between the strength of corporate culture and long-term economic performance. However, Kotter and Heskett's study is open to criticism because of issues associated with its operationalization of culture using the "strong culture" thesis as well as having respondents assess organizational cultures of which they are not members. In addition, the Kotter and Heskett data were sourced from a set of respondents who represented only the top-most level of individuals in each of the organizations

participating and not a broader set of responses from the employee base. Nevertheless, the authors found that culture strength described a quarter of the variance in performance.

Leung (1997) also studied employee satisfaction and organizational commitment to identify their relationships with financial performance. This study defined financial performance as total revenue. The sample for this study was 231 sales staff employees from a casual clothing retail chain with 26 locations in Hong Kong. The number of sales staff in the individual retail locations ranged from three to eighteen employees. Both employee perceptions of the work environment and financial performance were reported at the shop level. Job satisfaction showed a moderate relationship with financial performance.

Marcoulides and Heck (1993) used the following five cultural factors to create a structural equation model to explain performance: (1) organizational structure and purpose, (2) organizational values, (3) task organization, (4) organizational climate, and (5) worker attitudes and goals. The predictor variable for the study was a combination of several factors including volume of sales fulfillment, share, profit, and return. Study participants came from 26 organizations in various industries, and 392 respondents participated in the study. The response rate is not reported. The results suggest that variables associated with organizational culture are predictive of organizational performance. The strongest relationships between cultural and financial performance were organizational climate and worker attitudes.

Petty et al. (Petty et al., 1995) examined the culture-performance relationship in a study which used survey data collected from a firm in the utility industry. A 55-item

survey was used to collect data at two points in time from the same organizations within a company. The first sample collected responses from 832 employees, and the second (a year later) from 884 employees. Culture was operationalized to reflect four factors: (1) teamwork, (2) trust and credibility, (3) performance and common goals, and (4) organizational functioning. Performance was measured internally by the company as a composite score of five areas: (1) operations, (2) customer accounting, (3) support services, (4) marketing, and (5) employee safety and health. Results are as follows: The authors found that organizational performance was linked to organizational culture, and in particular, the strongest link of this relationship was shown between teamwork and performance. A moderate positive relationship was also shown between performance and trust and credibility.

Schneider et al. (2003) studied the culture-performance relationship using archival data from a consortium of large, admired (according to Fortune Magazine) companies in the U.S. who agreed to administer a subset of common items from an attitude survey to their employees. The authors shared no information on response rate or how the surveys were administered. In terms of scale development, seven factors were used: (1) satisfaction with empowerment, (2) satisfaction with job fulfillment, (3) satisfaction with pay, (4) satisfaction with work group, (5) satisfaction with security, (6) satisfaction with work fulfillment, and (7) overall job satisfaction. The response variables were (1) return on assets and (2) earnings per share. The results were as follows: Consistent and significant positive relationships over various time lags between attitudes concerning

satisfaction with security, satisfaction with pay, and overall job satisfaction with both return on assets and earnings per share.

Schulte et al. (2009) investigated how different patterns found in climate data, such as elevation, variability, and shape, can be used to explain how climate operates in relation to internal and external indicators of organizational effectiveness. Employee perception variables of the work environment included managerial task support, company vision, employee relationships, intra-organizational relationships, job adequacy, performance management and recognition, and external service. A food distribution company located in the U.S. was the site of this study, and 4,317 employee respondents from 86 stores participated in the study. The financial performance measure for this study was total store sales per square foot. These authors found that the shape of an organization's climate profile is related to customer satisfaction and financial performance, suggesting that organizational climate has a relationship with indicators of financial performance.

Sorensen (2003) reused data from the original Kotter and Heskett culture study (1992) to examine the argument that strong cultures drive firm performance. The predictor variable was summarized as a strong culture per Kotter and Heskett. The response variables were (1) return on invested capital (ROIC) and (2) yearly operating cash flow. Adding to the original data set, the author reviewed information about the market and the environmental volatility. Industry volatility was estimated from a capital asset pricing model. Results of analyses of a sample of firms from a broad variety of industries showed that in relatively stable environments, strong-culture firms have more

consistent performance providing support for the link between work environment perceptions and financial performance. However, in volatile environments, the reliability benefits of strong cultures disappear. The author speculated that those organizations demonstrating a strong culture had difficulty in adapting to changing market conditions.

Thompson (1996) studied 71 districts of a large utility having primary responsibility for customer service and sales. A survey was developed internally at the utility that reflected the company's vision and statements of behaviors and practices that aligned with the vision. The instrument collected employee perceptions of several variables in the work environment: (1) Core values, (2) Customer commitment, (3) Business dimensions, (4) Communication, (5) Safety, (6) Business results, (7) Empowerment, (8) Innovation & risk taking, (9) Rewards & recognition, (10) Community involvement, (11) Environmental responsibility, and (12) Teamwork. A composite score of 60 core items on the survey was computed. The correlation between the composite score and financial performance was significant but moderate. The financial performance variable for this study was contribution margin ratio, a measurement of profitability. When comparing the districts with a high composite score to districts with a low composite score, the differences in profitability were great suggesting that agreement of employees with the vision of the organization was associated with better financial performance. Districts with high rates on the composite index experienced twelve times the profitability than those districts with low employee ratings.

Van de Vorde et al (2010) studied what they called the temporal order in the relationship between organizational climate and performance. Their study was conducted in a financial services organization in the Netherlands with 171 branches. Two samples of employee perceptions were collected: 14,477 respondents and 14,860 employees at time points one and two respectively. Four dimensions of the work environment were gathered in their data from employees: (1) goal and means orientation, (2) reward orientation, (3) socio-emotional support, and (4) task support. The financial performance metric used for this study was branch profit per full-time equivalent employee. These authors found that the organizational climate measures at time point one influenced organizational performance at time point two, providing support for the link between employee perceptions of the work environment and financial performance.

Finally, Van Der Post et al. (1998) examined the culture-performance link in a South African context. These authors created a questionnaire of 97 items, each with a 7-point Likert scale, to collect perceptions of fifteen organizational culture constructs. The fifteen factors are as follows: (1) conflict resolution, (2) culture management, (3) customer orientation, (4) disposition towards change, (5) employee participation, (6) goal clarity, (7) human resource orientation, (8) identification with the organization, (9) locus of authority, (10) management style, (11) organization focus, (12) organization integration, (13) performance orientation, (14) reward orientation, and (15) task structure. This study involved respondents from numerous organizations, and 49% of the initial 128 companies invited to participate in the study did so with 3,617 usable responses for a response rate of 38.2%. Four financial performance variables were used in this study: (1)

return on average equity, (2) return on average assets, (3) total asset growth rate, and (4) share return. Positive, significant relationships were found to exist between financial performance and all culture measures.

Studies with Mixed Results on the Culture-Performance Relationship

Gelade and Young (2005), studying 1,405 branches from four banks in the UK and Ireland, hoped to explain organizational performance as a function of climate factors influencing customer service factors which influence financial performance. Their sample of over 26,000 respondents identified four organizational variables from the work environment: (1) commitment, (2) team climate, (3) job enablers, and (4) support climate. Sales achievement, a financial performance measure of actual bank branch sales as a percentage of planned sales, obtained a correlation of .31 with the employee perception factor called commitment. Sales achievement showed weak correlations only with team climate, job enablers, and support climate. These authors found limited support for the service profit chain theory where customer satisfaction mediates the relationship between climate and financial performance.

Koys (2001) investigated the relationships between unit-level measures of employee satisfaction, organizational citizenship behavior, employee turnover, customer satisfaction, and financial performance. Two variables were used to reflect financial performance: profits after controllable expenses and profits after controllable expenses as a percent of sales. Twenty-eight locations of a restaurant chain participated in the study, and two samples of data were collected. Sample one had 774 hourly employee respondents, and sample two had 693 hourly-employee respondents. While employee

satisfaction and organizational citizenship behaviors predicted unit-level profitability, the relationships between these variables were weak, providing limited support for the link between employee perceptions of the work environment and financial performance.

Ogbonna and Harris (2000) examined the relationship between culture and performance in a study which also examined leadership style. Culture was categorized as one of four types postulated by Deshpande et al. (1993): (1) competitive, (2) innovative, (3) bureaucratic, and (4) community. Performance was measured using an index of five metrics, including (1) customer satisfaction, (2) sales growth, (3) market share, (4) competitive advantage, and (5) sales volume. The sample for the study came from firms in the UK, and a single-respondent approach was adopted for the study where a senior executive was selected as a key respondent from each firm. Responses from 322 organizations were received for a response rate of 34%. Competitive and innovative cultural traits were directly linked with performance as predicted. Contrary to expectations, community and bureaucratic cultural traits were not directly related. This study provided mixed support for the view that organizational culture is directly linked to the performance of an organization. The linkage found between perceptions of the work environment and financial performance in this study is weak.

Rousseau (1990b) examined the link between culture and performance in the context of a fund raising organization. In this study, 32 units of a geographically dispersed non-profit organization participated in the study. The leader of each unit received 10 questionnaires to distribute among each unit's staff. In total, 263 questionnaires were returned for a response rate of 82%. Three organizational culture

variables were used in this study: (1) Team-oriented/satisfaction-oriented, (2) People/security and perceptions, and (3) Task/security. In terms of performance, the amount of incoming funds raised by each unit was used as the response variable. No significant positive correlations were found between the perceptions of the work environment and financial performance. The author speculated whether this finding was a result of the restricted sample size used for this study.

Studies Not Supporting the Culture-Performance Relationship

Booth and Hamer (2009) studied the impact of cultural factors on financial performance. Using annual employee survey data from a major retailer with 500 locations in the UK, this study reviewed the impact of several organizational factors and store characteristic data on sales intensity (revenue per square foot). Results from multiple regression analysis indicated that the best model generated in the analysis explained 32.7% of the variance in sales per square foot with the remainder of the variance in sales intensity remaining unexplained. Store characteristics (such as the region in which the stores were located, the format of the store, and the hours of operation) were the most important variables explaining the variance in sales. While corporate culture played a role in explaining the variation in sales, its significance was less important overall than the variables representing store characteristics. Two culture variables were both positively related to sales: the level of employee morale and the level of employee's perceptions of workload manageability. Curiously, two variables, job satisfaction and the other tools and support infrastructure, had negative relationships with sales. While all four of the culture factors were statistically significant, none played a

major role in predicting sales. The key conclusion is that store format had the greatest impact on predicting sales. Also, the strong culture theory is undermined in that both positive and negative relationships between culture factors and the response variable were shown.

Coil et al. (2009) identified three latent climate variables: self-efficacy vs. leader's efficacy, personal empowerment vs. management facilitation, and a measure of the overall organizational climate. The relationship between these climate variables and financial performance was examined using data from 107 "superstore" locations of a large grocery chain located in Europe. Store-level revenue per employee was the final metric used at the outcome variable in this study. Approximately 360 employees per store completed the survey for an average response rate of 80% per store. While the overall organizational climate variable was found to have a modest relationship to employee retention and customer satisfaction, overall organizational climate, which indicates overall positive employee perceptions, was not significantly linked to revenue per employee. The results of this study do not provide support for the link between employee perceptions of the work environment and financial performance.

Davidson, Coetzee, and Visser (2007) examined the culture-performance link in an investment banking organization in South Africa using the Denison Organizational Culture Survey (Denison, 1990) using a sample of 327 employees (response rate of 66%) from 14 departments of one company. The study reported that this is the first known study documented of this instrument's use in the context of South Africa. Five metrics were used as response variables in this survey: (1) effective tax rate, (2) net interest

income/operating income, (3) non-interest revenue/operating income, (4) operating expenses/operating income, and (5) net income after interest and taxes/operating income. Top level survey results were as follows: High correlations between the four cultural traits were reported which suggests, according to these researchers, that the cultural factors may not be clearly distinguishable; similar results had been obtained in previous studies indicating that the items may be in fact measuring a single trait instead of four clearly distinguishable cultural traits. The authors reported that the culture-performance correlation results were disappointing; very few of the financial ratios used in this study were significantly correlated with the Denison cultural traits or subscales. Two results that stood out were as follows: Team orientation was negatively correlated with profitability. And, higher scores on the consistency trait were related to higher expenses relative to income and thus the lower the profitability of the organization.

Paradise-Tornow (Paradise-Tornow, 1991) examined the role and impact of leadership and management in creating a organizational culture emphasizing quality of service. Twenty-five bank branches of a financial services holding company located in the Midwest of the U.S. participated in this study, and the sample of respondents was 1,415 employees. The bank branches had a size of 20-128 employees. Dimensions of employee perceptions gathered in this study were defined as leadership practices, management culture, and employee connectedness. Various measures of financial performance were used in this study, including contribution margin ratio. A key finding of this study is that management culture factors show strong, but negative, relationships to the financial performance measures. The findings of this study do not support the

expected link between positive employee perceptions of the work environment and financial performance. The authors discuss the implications for these findings, and suggest that financial performance is a multidimensional variable that relates to more than management practices or factors within the organizational environment.

Ryan et al. (1996) examined the relationship between attitudes and effectiveness at group levels, using climate as the shared perceptions of employees. About 5,300 employees from 142 branches of a financial services organization in North America participated in the study with an average of 41 responses per branch. Dimensions of employee perceptions of the work environment included three main factors: job/company satisfaction, supervision, and work group/teamwork. Various response variables were included in this study, including profit and market share. No clear relationship was found between attitude measures and financial performance outcomes.

Summary

Organizational culture and organizational climate have maintained a presence in both the academic and practitioner press because of their perceived ability to explain a link between organizational environment factors and organizational performance. Furthermore, these concepts of culture and climate provide a means for to view and better understand the workings of an organization. Organizational culture and organizational climate are two closely associated terms which have been used in the study of organizations. Despite their differing histories and definitions, the literature now reflects a similarity of the terms despite the lack of agreement on their definitions or the appropriate methods which should be used to investigate each. Numerous quantitative

studies have examined the link between organizational environment factors and financial performance. Many of these studies found support for this relationship, but others found results which question the strength of this relationship or whether the relationship exists between organizational environment factors and financial performance. These studies were reviewed in this chapter, and Appendix A summarizes each of these studies for further reference and comparison.

CHAPTER 3

METHODS

This chapter describes the research methods employed in this study, and it provides information on the target population, the data collection process, instrumentation, descriptions of both predictor and outcome variables, and information about the data analysis process.

Target Population

The population for this study was employees of a U.S. sales and service organization of a large, global manufacturing company. The data were obtained by the host organization using an employee survey that had been completed once every two years for approximately 18 years. At the time of the survey, the population in question was 1,615 employees, and 1,518 employees in the population completed the survey for a response rate of 94.0%. The population was distributed among 100 intact teams located across the U.S., and each team had the same sales and service objectives with the same set of products and customer types. Each organization in the study was composed of individuals performing various roles, including sales, support, training, administration, and team management.

The data were reviewed to determine if an adequate sample size was represented in each of the teams. The full size of each team was not available to me, though the size of each team was estimated to be approximately 16-20 people. Teams with fewer than eight respondents were eliminated. Including teams with eight or more respondents was rationalized because a minimal number of teams would be eliminated from the study and

each team had at least 40% of the team responding in the survey. Based on this requirement, four teams were eliminated from the sample because they had fewer than eight respondents, bringing the total number of respondents to 1,503 over 96 teams.

Data Collection

The survey was paper-based and administered to respondents in employee meetings held in person in the geography of each team by representatives of the human resource function. The completed survey forms were sealed in envelopes in the presence of the employees at the in-person meetings to protect the anonymity of the survey respondents. The sealed envelopes containing the completed employee survey forms were mailed to the third-party research organization for processing. The survey research organization retained by the host organization used scanning technology to transfer individual survey responses into a data base.

Any research project involving participation of human participants requires careful consideration to protect them from possible harm (Gall, Gall, & Borg, 2003). The Institutional Review Board (IRB) process used for this study was exempt from full IRB committee review under the category of pre-existing data bases. Appendix B shows the IRB study approval. Various measures were taken by the host organization to protect participants from harm and ensure candid responses on the instrument. Specific team membership was identified as a part of the survey, but respondents were not asked to identify themselves by name. Demographic information, such as function (i.e., marketing, information technology, finance, etc.), level (i.e., director, exempt professional, technician, etc.), length of service to the organization, gender, race, and age were all

collected on the survey form. However, the survey administrators communicated to respondents that results of demographic information would be reported only for groups with at least ten respondents, and they also reported that individual responses would not be identified. This same promise of anonymity was also printed on the survey forms. The survey was administered by members of the human resources organization in group meetings with employees.

A subset of the collected data was provided for the purpose of the present study directly from the third-party research organization through permission granted by the host organization. None of the demographic information described above was provided. The entire data set continues to be housed by the third party survey organization. The host organization providing permission to use this data for research purposes required that neither the organization nor industry of which it is a part may be identified by name in any published documentation associated with the written results of the research.

Instrumentation

A 68 item questionnaire composed of several parts, as shown in Appendix C, was used to collect perceptions of employees. In approximately 1999, seven years after the survey was first created, the in-house leader responsible for the employee questionnaire's design, implementation, analysis, and feedback significantly redesigned and implemented revisions to the previous survey using items constructed in-house and using the Baldrige Quality Criteria (Baldrige National Quality Award, 2000) as a guide. The questionnaire continued to develop over time, and additional categories of questions were added.

Simultaneously, the organization retained a climate survey administrator to assist with the design, implementation, and analysis of the original instrument.

The items for the survey were grouped into 12 categories: (1) mission and strategic direction, (2) corporate citizenship, (3) senior management, (4) customer focus, (5) measurement, (6) operating effectiveness, (7) immediate manager/supervisor, (8) teamwork, (9) valuing employees, (10) involvement, (11) employee development, and (12) overall satisfaction. Conforming to advisement on questionnaire construction from Dillman et al (2009), this survey clustered and labeled items to create visual groupings of related information to help “respondents to easily process and organize the information on the page” (Dillman et al., 2009, p. 174). However, this approach also creates a potential halo effect, making each item in each category dependent rather than independent, which is a limitation of the survey construction (Scriven, 1991). The survey used five-point Likert-type scales on all items to assess the level of agreement (strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree) with each item.

Data collected from previous administrations of this survey were analyzed to examine the reliability and validity of the questionnaire. Construct validity of the questionnaire was reported to have been determined by the results of confirmatory factor analysis conducted by the third-party survey provider, as well as through a review of the survey with leaders in the organization and subject matter experts from the third-party survey firm retained by the organization. However, upon additional consultation with a subject-matter expert implementing the survey, who was an employee of the host organization, it was revealed that it was a principal components analysis and not a

confirmatory factor analysis that was previously conducted on the instrument. In addition, it was unclear how the study designers came up with the structure of the instrument after the principal component analysis documentation was reviewed. Consequently, it was determined that the best approach would be to proceed with an exploratory factor analysis using the sample provided by the host organization for this study.

Bartlett's Test

Bartlett's test of sphericity was completed to determine if the correlation matrix of items was an identity matrix (one where none of the variables correlate with one another). Without correlations among the items, it would not be possible to obtain a factor model, and there could be as many factors as there are items (Pett, Lackey, & Sullivan, 2003). A significant result suggests that the sample correlation matrix does not come from a population in which the correlation matrix is an identity matrix, and the exploratory factor analysis (EFA) can proceed (Yang, 2005). The p value for this data set was .000, suggesting that the null hypothesis (that the correlation matrix is an identity matrix) can be rejected, and the EFA for this study could proceed.

Design of Exploratory Factor Analysis

Several decisions regarding the exploratory factor analysis (EFA) needed to be made next. The first question was whether to use common factor analysis or principal component analysis. Yang (2005) recommended common factor analysis over principal component analysis because organizational studies can be assumed to have some degree of measurement error, and common factor analysis allows the researcher to interpret the

meaning of the results better than is the case with principal component analysis. Taking Yang's recommendation, common factor analysis was used for this study. Following the advisement of Tinsley and Tinsley (1987) and Conway and Huffcutt (2003), principal axis factoring was selected as the extraction method. Regarding the criterion used to decide on the number of extracted factors, the Kaiser-Guttman rule of selecting factors, which suggests retaining factors with eigenvalues greater than 1.00, was used (Pett et al., 2003). The promax rotation method with kappa set to 4 was used for this research. Promax is generally thought to produce satisfactory solutions (Fabrigar, Wegener, MacCallum, & Strahan, 1999). Using an oblique (vs. orthogonal) rotation, such as promax, was recommended by Yang (2005) who suggested that factors having a degree of correlation tend to be more realistic for studies in organizational research. The loadings of measured variables on factors were set at .40 as is common in exploratory factor analysis (Pett et al., 2003; Yang, 2005). Items were dropped from the final factor solution if they loaded at less than .40 on all factors or if they loaded greater than .40 on two or more factors (Hinkin, 2005). Factors were removed from the factor solution if they were composed of fewer than three items. Finally, coefficient alphas were generated for the set of items in each factor in the final factor model. A coefficient alpha of .70 provides evidence of strong internal consistency, and it suggests that the sampling domain has been adequately represented (Hinkin, 2005).

Extraction Process

Following these design parameters for the EFA, four iterations of the EFA were required to obtain a factor model. As noted previously, the instrument had 68 items. After the first EFA was run, a 12-factor model was produced with 12 items dropped from the instrument based on the criteria outlined above (see new factor loadings in Appendix D). The omitted items were removed from subsequent rounds of analysis.

A second EFA was run (see new factor loadings in Appendix E), and an 11-factor solution was generated. Two additional items were removed because their factor loadings were less than .40. These two additional items were also excluded from subsequent rounds of analysis.

A third EFA was run (see new factor loadings in Appendix F), and two additional items were dropped. Like the second EFA, the third EFA also generated a model with 11 factors. After three rounds of analysis, a total of 16 items were removed from the instrument.

A fourth and final round of EFA was completed (see new factor loadings in Appendix G), and all items loaded at .40 or greater on only one factor, and all factors in the final model had at least three items. The results of the EFA provided a model with 11 factors using 52 items from the instrument.

An examination of the items that were removed during the EFA revealed that many of the items were vague or open to multiple interpretations by respondents (i.e., these individual items in the instrument frequently used the word “and” to join two or more constructs). See Appendix H for a listing of all items on the original instrument,

their original subscale assignments, and the disposition of each item on the final factor solution. Also, as the extraction process proceeded, list-wise exclusion was used in the analysis; if a respondent was missing one or more responses to an item, that individual was removed from the analysis. During this portion of the analysis, 193 respondents had missing data, and these individuals were dropped from the analysis, leaving a sample of 1,310 in the EFA.

Table 4, Eigenvalues of Extracted Factors with Total Variance Explained, and Figure 1, Scree Plot of Eigenvalues, show the eigenvalues generated by the extracted factors. As shown, the eleven extracted factors explained 71% of the total variance. This level of explained variance meets the rule of thumb explained by Yang (2005) an adequate EFA should retain factors that explain at least 60-70% of total variance.

Table 4

Eigenvalues of Extracted Factors with Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	20.27	38.98	38.98	19.91	38.30	38.30	14.60
2	2.93	5.64	44.62	2.61	5.03	43.32	13.17
3	2.39	4.60	49.22	2.00	3.86	47.18	13.76
4	2.13	4.10	53.31	1.77	3.41	50.59	6.53
5	1.73	3.32	56.64	1.42	2.73	53.32	12.11
6	1.59	3.07	59.70	1.25	2.40	55.71	8.95
7	1.44	2.76	62.46	1.10	2.12	57.84	15.31
8	1.29	2.48	64.94	0.95	1.82	59.66	8.01
9	1.16	2.23	67.18	0.83	1.59	61.25	11.00
10	1.07	2.05	69.23	0.71	1.37	62.62	10.94
11	1.01	1.94	71.17	0.66	1.26	63.88	11.89

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

A scree test is another approach to determining the number of extracted factors (Pett et al., 2003; Yang, 2005). The scree plot depicts the eigenvalues in descending order of magnitude. Although difficult to see unless the plot is magnified considerably, the distinct break in the slope lines between values identifies the number of factors (Pett et al., 2003).

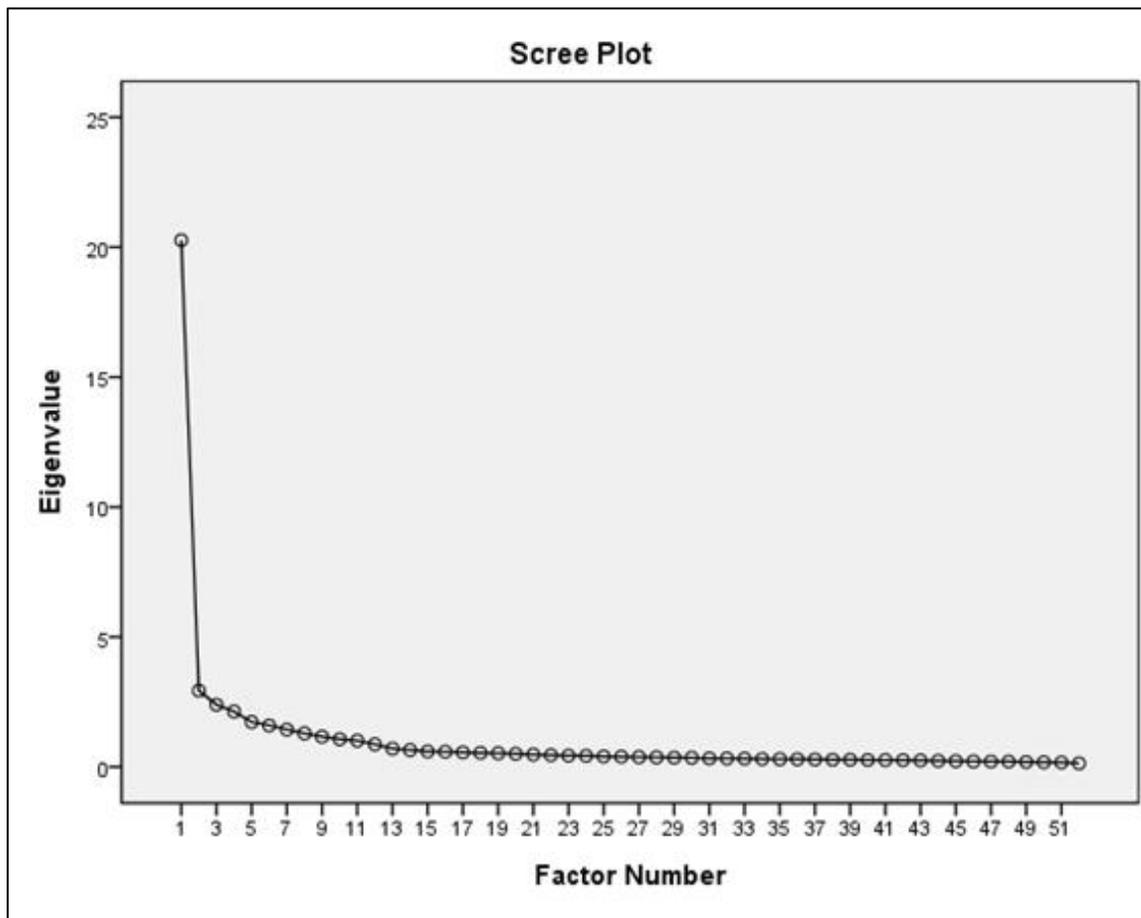


Figure 1. Scree plot of eigenvalues

Cronbach's alpha coefficients for all measurements on the items on this instrument were previously calculated by the host organization and the third party survey provider to examine the reliability of the questionnaire. Cronbach's alpha coefficients for all subscales on the survey were reported to be acceptable, ranging from .85 to .90. Table 5 shows the correlations among extracted factors and Cronbach's alphas for each factor based on an analysis of the data used in this study. In addition, Yang (2005) advised that, when an oblique solution is used, the structure matrix should also be reported (see Appendix I). The structure matrix is used for generating factor scores, a procedure described later in this chapter.

Table 5

Correlations Among Extracted Factors (Cronbach's Alphas in Parentheses)

Factor	1	2	3	4	5	6	7	8	9	10	11
1	(.90)										
2	.56	(.94)									
3	.63	.51	(.91)								
4	.38	.32	.44	(.82)							
5	.51	.57	.58	.28	(.87)						
6	.51	.46	.44	.29	.48	(.88)					
7	.72	.62	.68	.35	.69	.55	(.88)				
8	.46	.41	.49	.38	.40	.39	.51	(.81)			
9	.52	.44	.61	.42	.62	.44	.59	.38	(.85)		
10	.64	.57	.49	.29	.51	.40	.57	.36	.47	(.87)	
11	.56	.59	.56	.36	.61	.45	.63	.44	.54	.58	(.83)

Finally, Yang (2005) suggested that communalities should be reported in exploratory factor analyses. Communality estimates explain variance in each item that is explained by the extracted factors. Communalities are reported in Table 6.

Table 6

Communalities of Observed Variables in Extracted Factor Model

Item	Initial	Extraction	Item	Initial	Extraction	Item	Initial	Extraction
q01	0.58	0.70	q22	0.59	0.60	q47	0.65	0.64
q02	0.56	0.64	q23	0.59	0.58	q48	0.62	0.73
q03	0.52	0.58	q24	0.56	0.55	q49	0.59	0.60
q04	0.49	0.48	q25	0.64	0.65	q50	0.75	0.77
q06	0.49	0.54	q26	0.64	0.64	q51	0.55	0.56
q07	0.59	0.81	q28	0.65	0.65	q52	0.64	0.67
q08	0.44	0.48	q29	0.75	0.71	q53	0.66	0.69
q09	0.65	0.66	q30	0.80	0.80	q54	0.58	0.55
q10	0.65	0.66	q31	0.72	0.72	q55	0.70	0.71
q11	0.56	0.55	q32	0.64	0.65	q59	0.63	0.71
q12	0.67	0.69	q33	0.77	0.77	q60	0.68	0.78
q13	0.71	0.73	q34	0.66	0.63	q61	0.60	0.65
q14	0.69	0.70	q35	0.66	0.73	q63	0.65	0.66
q15	0.52	0.49	q36	0.61	0.72	q64	0.58	0.61
q16	0.53	0.49	q38	0.60	0.64	q65	0.55	0.60
q17	0.55	0.52	q43	0.55	0.63	q66	0.67	0.74
q18	0.47	0.42	q44	0.60	0.74			
q19	0.42	0.40	q45	0.57	0.59			

Interpreting Factors

Pett et al. (2003) provided some guidance on interpreting factors. Pedhazur and Schmelkin (1991) suggested that items that were selected as representing similar aspects of a phenomenon should share high loadings on the same factors, and the observed variables should lead to a factor useful for defining a construct. Comrey and Lee (1992) suggested that loadings of .45 (indicating 20% shared variance) should be considered “fair,” loadings of .55 (indicating 30% shared variance) should be considered “good,” loadings of .63 (indicating 40% shared variance) should be considered “very good,” and loadings of .71 (indicating 50% shared variance) should be considered excellent. Comrey and Lee (1992) provided some conditions to facilitate the process of interpreting factors. The higher the factor loading, the more the factor is like the item. Also, the greater the number of items with high loadings on a factor, the easier it is to isolate what the factor represents. In terms of naming factors, Pett et al. (2003) suggested that if the items for an EFA were derived from a conceptualization, then the researcher should return to the original conceptualization to name the factors.

As noted previously, the instrument was constructed to reflect a 12 factor model. The results of the obtained EFA indicated that four of the original factors were unchanged, and these were previously named “Corporate Citizenship,” “Senior Management,” “Immediate Manager/Supervisor,” and “Involvement.” These remain appropriate labels. In addition, four of the original factors had one or more items that were removed from the original factor design because one or more of the individual items failed to load at .40 or higher. These factors were named “Mission and Strategic

Direction,” “Teamwork,” “Employee Development,” and “Overall Satisfaction.”, These labels still are appropriate. Three of the previous factors, “Customer Focus,” “Measurement,” and “Operating Effectiveness” were extracted as one factor, but three of the items in this grouping were dropped in the extracted factor solution. The label for this factor in the final solution is Operational Effectiveness. Finally, the factor previously called “Valuing Employees” produced two factors in the extracted solution, and some of the items previously loading into this factor were also eliminated in the final solution. The two factors from the previous category called “Valuing Employees” were renamed “Inclusion” and “Pay and Rewards.” Definitions of each of the factors are found in Table 7.

Table 7

Factor Definitions

Factor	High ratings indicate that respondents have a favorable impression of...
Factor 1 - Operational Effectiveness	“any number of practices that allow a company to better utilize its inputs by, for example, reducing defects in products or developing better products faster” (Porter, 1996, p. 62).
Factor 2 - Immediate Managers/Supervisor	the individuals directing the work of survey respondents and responsible for the system of action for coping with complexity by planning, budgeting, organizing, staffing, problem solving, and controlling for results (Kotter, 1990).
Factor 3 - Senior Management	the individuals in senior corporate roles who are responsible for the system of action for coping with organizational change by setting direction, aligning people, and motivating and inspiring people (Kotter, 1990).

Factor	High ratings indicate that respondents have a favorable impression of...
Factor 4 - Mission	the organization's reason for its existence combined with an explanation of its strategic framework describing the desired future state, key values, and major goals (Hill & Jones, 2009).
Factor 5 - Valuing Employees	the human resources practices of an organization involving the treatment of people and including the promotion of safe working conditions, employee welfare, and employee recognition (Flamholtz & Kannan-Narasimhan, 2005).
Factor 6 - Training	the process of developing knowledge and expertise in people (Swanson & Holton III, 2001).
Factor 7 – Involvement	the process of gaining organization members' input into decisions that affect organization performance and employee well-being (Cummings & Worley, 1997).
Factor 8 - Corporate Social Responsibility	the economic, legal, discretionary, and philanthropic expectations that society has of the organization at a given point in time (Carroll, 1991).
Factor 9 – Satisfaction	“positive emotional reactions to a particular job. It is an affective reaction to a job that results from the person's comparison of actual outcomes with those that are desired, anticipated or deserved” (Oshagbemi, 1999, p. 338)
Factor 10 - Teamwork	group(s) of interdependent individuals who have a common purpose, have common work methods, and hold each other accountable (Katzenbach & Smith, 1993).
Factor 11 - Inclusion	a climate for truly valuing, not just accepting, differences in people in order to maximize its performance benefits (McLean, 2005).

Team Level Predictor Variables

To compare the employee perceptions of the organizational environment factors with financial performance, both individual factor scores and team factor scores of the

organizational environment needed to be estimated to enable a regression analysis of a possible relationship. Factor scores are composite variables that provide information about an individual's placement on a set of factors (DiStefano, Zhu, & Mindrila, 2009), and they are generated using a linear combination of the observed variables loading onto each factor (Pett et al., 2003). The generation of factor scores can be used after an EFA when the objective is to identify a set of variables for inclusion in a subsequent statistical analysis (Hair, Anderson, Tatham, & Black, 1995). While there are several approaches to generating factor scores, the factor scores in this study were estimated for each respondent using a regression approach (DiStefano et al., 2009; Pett et al., 2003). The regression approach for generating factor scores was selected for this study because this procedure is thought to maximize the validity of estimates because each respondent's location on each factor is predicted by the factor score (DiStefano et al., 2009), and it reflects a possible correlation among scores reflecting the oblique rotation used in the study's EFA (Pett et al., 2003). Factor scores generated by regression are standard scores having a mean equal to 0 and a variance equal to the squared multiple correlation between the estimated factor scores and the true factor values (Pett et al., 2003).

Factor scores for this study were generated using SPSS. All of a respondents' scores on the observed variables on the instrument were standardized, weighted by a generated factor structure coefficient (see Appendix I) for the factor under consideration, and then summed across all items (Pett et al., 2003). This portion of the analysis yielded a factor score per individual. Restated differently, each recipient's actual response on each of the 52 final items in the instrument was standardized. The standardized scores of the

respondents were multiplied by the factor structure coefficient for each item on a given factor. These products were then summed to produce a factor score. Loadings for each of the 52 items were different for each of the 11 factors. This linear combination of individual responses on the instrument multiplied by the factor structure coefficient for an individual factor was repeated for each of the eleven factors. Using the regression approach, eleven factor scores were generated for each respondent.

In order to compare organizational environment factors at the team level with financial performance variables at the team level, team organizational environment factor scores needed to be generated. Team factor scores were created by generating a mean of each respondent's factor score within a team. The result was eleven average factor scores per team. Table 8 shows descriptive statistics (means and standard deviations) for the team factor scores that are the predictor variables of this study.

Table 8

*Descriptive Statistics of Team Level Organizational
Environment Factor Scores (n=93)*

Factor	Factor Name	Mean	SD
Factor 1	Operational Effectiveness	-.01	.38
Factor 2	Immediate Manager/Supervisor	.00	.41
Factor 3	Senior Management	-.01	.34
Factor 4	Mission	.01	.27
Factor 5	Valuing Employees	.00	.32
Factor 6	Training	.00	.38
Factor 7	Involvement	.00	.35
Factor 8	Corporate Social Responsibility	.01	.32
Factor 9	Satisfaction	-.01	.31
Factor 10	Teamwork	.00	.37
Factor 11	Inclusion	-.01	.30

Outcome Variables

The outcome variables for this study are measures of financial performance called contribution margin ratio; the contribution margin ratio is calculated by dividing operating income by revenue (Magoon, 2008). At approximately the start of the first quarter of this study, the management of the sales and service organization was changing its focus from top line revenue to contribution margin ratio. The organization provided financial performance data for each of the teams in the target population of the study.

Contribution margin ratio for each team was measured at the end of four consecutive quarters. In addition, the entire period, a fiscal year made up of the same four quarters, was provided to the researcher. The climate survey was administered to the entire population in the three week period immediately following the close of the second quarter. In summary, this study had five outcome variables, shown in Table 9: the contribution margin ratios calculated after quarters one, two, three, and four, and the contribution margin ratio for the entire fiscal year.

Table 9

Descriptive Statistics of Team Level Financial Performance

Variable	Mean	SD	Valid n
Financial Performance Q1	.69	.05	93
Financial Performance Q2	.69	.03	93
Financial Performance Q3	.67	.05	92
Financial Performance Q4	.67	.04	92
Financial Performance FY	.68	.03	93

Methods for Data Analysis

With factor scores for each subscale per team for the work environment and outcome variables for each team for financial performance, correlation and regression analyses were used to answer the research questions. Correlation analysis was used to determine the relationship between individual variables. Regression analysis was used to seek the best combination of predictor variables to explain the variance in a single

outcome variable. In particular, stepwise regression analysis was used to identify a regression model that contained those predictors that maximize R^2 and minimize the sum of squares error (Bates, 2005). Stepwise regression employs forward selection and backward elimination simultaneously, and it is effective when there is little theoretical basis for choosing one variable over another (Wand, 2003).

According to the Minitab Handbook (B. F. Ryan, Joiner, & Cryer, 2005), the software used for the regression analysis, Minitab combines both forward selection and backwards elimination, testing at each stage for variables that should be included or excluded. Minitab first fit all regression models with one predictor, the variable with the lowest p-value. This variable was added to the equation if the p-value was less than the Alpha to Enter. For this study, the Alpha to Enter and the Alpha to Remove were both set at .15, the Minitab default for stepwise regression. These alpha values are somewhat liberal, and they increase the potential for Type 1 errors. However, this study had a large number of predictor variables, and there was an interest in using all of the predictor variables in the analysis. I reasoned that using a more liberal approach may help to narrow the list of predictor variables. If a variable entered the model, Minitab then attempted to add an additional variable to the first, again by entering the remaining variables one at a time using the smallest p-values as criteria. Next, Ryan et al. (2005) reported:

At this point in the procedure, Stepwise looks to see if any other variables in the equation (other than the one that was just entered) can be removed. At this stage, there is just one possible variable to remove... Later, when the equation contains

more variables, there will be many more candidates [for removal]. The variable with the largest p-value is removed, provided its p-value is larger than the value specified than the Alpha to Remove...If no variable has a p-value larger than the Alpha to Remove, Stepwise goes on to the next step, where it attempts to enter another predictor. (p. 420)

The ability to eliminate variables already in the model is a distinguishing feature of stepwise regression from simple forward regression models (Hair et al., 1995). The stepwise procedure continues in this fashion until the variables making up the model were identified and reported in the output. After the variables were identified by the stepwise regression, a regression analysis containing the regression equation was generated along with the adjusted R^2 and other information.

Summary

This chapter described the methods of the study. The target population for this study was the employees of a U.S.-based sales and service division of a large, global manufacturer. A paper-based survey instrument with 68 items was administered to the entire population within a three-week period. Of the 1,615 employees in the host organization, 1,518 responses were collected for a response rate of 94%. An exploratory factor analysis was conducted, and a factor model with 11 subscales was generated from 52 items after four iterations of the factor analysis. Individual-level factor scores on each subscale were generated using the regression method in SPSS, and team-level scores were created by generating a mean of each respondent's factor score within a team. This procedure generated one factor score for each of the 11 factors per team, and these scores

were the predictor variables for this study. The outcome variable for this study was contribution margin ratio at the team level. This financial performance variable was gathered for the two quarters prior to the administration of the survey and the two quarters following the administration of the survey, as well as the entire fiscal year overall. Correlation analysis and step-wise regression analysis were used to determine whether there was a relationship between any of the team-level organizational environmental factor scores and the team-level financial performance results.

CHAPTER 4

RESULTS

This chapter reports the results of this study: correlation analysis and regression analysis. Table 10 reports descriptive statistics for all variables of interest.

Table 10

Descriptive Statistics of All Variables of Interest

Variable	Variable Description	n	M	SD
Factor 1	Operational Effectiveness	93	-.01	.38
Factor 2	Immediate Manager/Supervisor	93	.00	.41
Factor 3	Senior Management	93	-.01	.34
Factor 4	Mission	93	.01	.27
Factor 5	Valuing Employees	93	.00	.32
Factor 6	Training	93	.00	.38
Factor 7	Involvement	93	.00	.35
Factor 8	Corporate Social Responsibility	93	.01	.32
Factor 9	Satisfaction	93	-.01	.31
Factor 10	Teamwork	93	.00	.37
Factor 11	Inclusion	93	-.01	.30
Financial Performance Q1	Contribution Margin Ratio – Q1	93	.69	.05
Financial Performance Q2	Contribution Margin Ratio – Q2	93	.69	.03
Financial Performance Q3	Contribution Margin Ratio – Q3	92	.67	.05
Financial Performance Q4	Contribution Margin Ratio – Q4	92	.67	.04
Financial Performance FY	Contribution Margin Ratio – Fiscal Year	93	.68	.03

Correlation Analysis

Table 11 shows the correlations of all variables. Cohen (1988) suggested that interpreting the size of a correlation is somewhat arbitrary and should not be observed too strictly. For educational research, McMillan (2008), suggested that a correlation between .10 and .30 is a small or weak relationship, a correlation between .40 and .60 is a moderate relationship, and a correlation of .70 and above shows a high relationship. Based on these guidelines, correlations between these categories, such as those between .31 and .39 can be considered weak to moderate. Similarly, correlations between .61 and .69 can be considered moderate to strong.

Table 11

Correlations of All Variables of Interest (n=92-93)

	1	2	3	4	5	6	7	8	9	10	11	Q1	Q2	Q3	Q4	FY
1	—															
2	.66**	—														
3	.78**	.54**	—													
4	.58**	.33**	.54**	—												
5	.59**	.57**	.64**	.40**	—											
6	.66**	.56**	.57**	.49**	.56**	—										
7	.84**	.69**	.79**	.50**	.76**	.65**	—									
8	.57**	.45**	.53**	.53**	.53**	.45**	.59**	—								
9	.70**	.41**	.74**	.61**	.67**	.53**	.68**	.54**	—							
10	.73**	.60**	.54**	.40**	.57**	.44**	.66**	.52**	.55**	—						
11	.71**	.71**	.68**	.49**	.74**	.58**	.76**	.58**	.63**	.66**	—					
Q1	.13	.23*	.16	.11	.16	.21*	.18	.21*	.11	.18	.28**	—				
Q2	.13	.12	.23*	.00	.09	-.03	.11	.11	.09	.10	.09	.19	—			
Q3	.06	.02	.09	.05	.01	-.03	.04	.01	.08	.03	.01	.48**	.40**	—		
Q4	.08	-.04	.19	-.06	.02	.00	.04	-.04	.07	.01	-.01	.42**	.69**	.58**	—	
FY	.15	.17	.22*	.06	.13	.07	.13	.16	.11	.13	.16	.67**	.76**	.74**	.86**	—

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

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

Twenty-three of the relationships between culture variables were considered high or strong, and 32 of the relationships between culture variables were considered moderate. The strongest correlation, with a value of .84, was between Environment Factor 1 (Operational Effectiveness) and Environment Factor 7 (Involvement). The two environment factors with high correlations with the most other factors were Factor 1 (Operational Effectiveness) and Factor 11 (Inclusion), each having strong correlations with seven other environment factors. As a reference point for understanding these results, the instrument was administered immediately following the completion of second quarter. Financial results from the first quarter demonstrated a weak relationship with four of the eleven environment factors: Factor 2 (Immediate Manager/Supervisor), Factor 6 (Training), Factor 8 (Corporate Social Responsibility), and Factor 11 (Inclusion). Financial results from the second quarter demonstrated a weak relationship with only one of the eleven environment factors, Factor 3 (Senior Management). Financial results from the third quarter showed no relationship with any of the organizational environment factors. Financial results from fourth quarter demonstrated a weak relationship with only one of the environment factors, Factor 3 (Senior Management). Finally, the financial performance for the fiscal year overall showed only one significant, but weak, relationship to an environment factor, and this was to Factor 3 (Senior Management).

Based on correlation analysis, alone, there is no to weak relationship between the environment factors and financial performance.

Regression Analysis

Regression analysis for each of the five outcome variables are addressed in this section.

First Quarter Financial Results

The stepwise regression procedure for the financial results from first quarter showed that only Factor 11, Inclusion, could be used to explain financial performance for the first quarter given the regression parameters. The results of this regression analysis are shown in Tables 12, 13, and 14. The environment factor called Inclusion explained 6.7% of the variation in first quarter financial results. The regression equation is $Q1 = 0.688 + 0.0458 F11$ (Inclusion).

Table 12

*Stepwise Regression of Q1**Financial Results*

Step	1
Constant	0.69
Factor 11 (Inclusion)	0.05
t-Value	2.75
p-Value	0.01
SD	0.05
R-Sq	7.67
R-Sq(adj)	6.65
Mallows CP	-3.5

Alpha-to-Enter: 0.15 Alpha-to-Remove: 0.15
 Response is Q1 on 11 predictors, with n = 93

Table 13

Regression Analysis of Q1 Financial Results

Predictor	Coef	SE Coef	t	p
Constant	0.69	0.00	140.14	0.00
Factor 11 (Inclusion)	0.05	0.02	2.75	0.01

SD = 0.0473376 R-Sq = 7.7% R-Sq(adj) = 6.7%

Table 14

Analysis of Variance of Q1 Financial Results

Source	DF	SS	MS	F	P
Regression	1	0.02	0.02	7.56	0.01
Residual Error	91	0.20	0.00		
Total	92	0.22			

Second Quarter Financial Results

The stepwise regression procedure for the financial results from second quarter showed that Factors 3 and 6, Senior Management and Training, respectively, can be used to explain financial performance for second quarter. The results of this regression analysis are shown in Tables 15, 16, 17, and 18. Taken together, the two factors, Senior Management and Training, explain 7.2% of the variance in the financial performance for second quarter. The regression equation is $Q2 = 0.691 + 0.0363 F3$ (Senior Management) - $0.0208 F6$ (Training).

Table 15

Stepwise Regression of Q2 Financial Results

Step	1	2
Constant	0.69	0.69
Factor 3 (Senior Management)	0.02	0.04
t-Value	2.26	3.00
p-Value	0.03	0.00
Factor 6 (Training)		-0.02
t-Value		-1.96
p-Value		0.05
SD	0.03	0.03
R-Sq	5.29	9.18
R-Sq(adj)	4.25	7.17
Mallows CP	-1.5	-3.1

Alpha-to-Enter: 0.15 Alpha-to-Remove: 0.15
 Response is Q1 on 11 predictors, with n = 93

Table 16

Regression Analysis of Q2 Financial Results

Predictor	Coef	SE Coef	T	P
Constant	0.69	0.00	208.75	0.00
Factor 3 (Senior Management)	0.04	0.01	3.00	0.00
Factor 6 (Training)	-0.02	0.01	-1.96	0.05

SD = 0.0319056 R-Sq = 9.2% R-Sq(adj) = 7.2%

Table 17

Analysis of Variance of Q2 Financial Results

Source	DF	SS	MS	F	P
Regression	2	0.01	0.00	4.55	0.01
Residual Error	90	0.09	0.00		
Total	92	0.10			

Table 18

*Sequential Sums of Squares of Q2 Financial**Results*

Source	DF	Seq SS
Factor 3 (Senior Management)	1	0.01
Factor 6 (Training)	1	0.00

Third Quarter Financial Results

With regard to the financial results from third quarter, none of the environment factors entered the regression model using an alpha of .15. No regression equation was generated for this response variable. None of the employee perception variables are better able to predict response of financial performance better than the mean value of Quarter 3 financial results.

Fourth Quarter Financial Results

The stepwise regression procedure for the financial results from fourth quarter showed that Factors 3 and 4, Senior Management and Mission, respectively, can be used to explain financial performance for second quarter. The results of this regression analysis are shown in Tables 19, 20, 21, and 22. Taken together, the two factors, Senior Management and Mission, explain 5.3% of the variance in the financial performance for fourth quarter. The regression equation is $Q4 = 0.669 + 0.0362 F3 \text{ (Senior Management)} - 0.0318 F4 \text{ (Mission)}$.

Table 19

Stepwise Regression of Q4 Financial Results

Step	1	2
Constant	0.67	0.67
Factor 3 (Senior Management)	0.022	0.036
t-Value	1.84	2.61
p-Value	0.07	0.01
Factor 4 (Mission)		-0.03
t-Value		-1.91
p-Value		0.06
SD	0.04	0.04
R-Sq	3.61	7.42
R-Sq(adj)	2.54	5.34
Mallows CP	-1.0	-2.5

Alpha-to-Enter: 0.15 Alpha-to-Remove: 0.15

Response is Q1 on 11 predictors, with n = 92

n (cases with missing observations) = 1, n (all cases) = 93

Table 20

Regression Analysis of Q4 Financial Results

Predictor	Coef	SE Coef	T	P
Constant	0.67	0.00	175.99	0.00
Factor 3 (Senior Management)	0.04	0.01	2.61	0.01
Factor 4 (Mission)	-0.03	0.02	-1.91	0.06

SD = 0.0364197 R-Sq = 7.4% R-Sq(adj) = 5.3%

Table 21

Analysis of Variance of Q4 Financial Results

Source	DF	SS	MS	F	P
Regression	2	0.01	0.00	3.57	0.03
Residual Error	89	0.12	0.00		
Total	91	0.13			

Table 22

Sequential Sums of Squares of Q4 Financial Results

Source	DF	Seq SS
Factor 3 (Senior Management)	1	0.00
Factor 4 (Mission)	1	0.00

Fiscal Year Financial Results

The stepwise regression procedure for the financial results from the fiscal year showed that only Factor 3, Senior Management, can be used to explain financial performance

for the fiscal year given the regression parameters. The results of this regression analysis are shown in Tables 23, 24, and 25. The factor called Senior Management explains 3.6% of the variation in the financial results of the fiscal year. The regression equation is $FY = 0.683 + 0.0187 F3$ (Senior Management).

Table 23

*Stepwise Regression of Fiscal Year**Financial Results*

Step	1
Constant	0.68
Factor 3 (Senior Management)	0.02
t-Value	2.11
p-Value	0.04
SD	0.03
R-Sq	4.68
R-Sq(adj)	3.64
Mallows CP	-5.0

Alpha-to-Enter: 0.15 Alpha-to-Remove: 0.15
Response is Q1 on 11 predictors, with n = 93

Table 24

Regression Analysis of Fiscal Year Financial Results

Predictor	Coef	SE Coef	T	P
Constant	0.68	0.00	231.69	0.00
Factor 3 (Senior Management)	0.02	0.01	2.11	0.04

SD = 0.0283965 R-Sq = 4.7% R-Sq(adj) = 3.6%

Table 25

*Analysis of Variance of Fiscal Year Financial**Results*

Source	DF	SS	MS	F	P
Regression	1	0.00	0.00	4.47	0.04
Residual Error	91	0.07	0.00		
Total	92	0.08			

Summary

This chapter showed the Pearson correlations between each of the variables and the regression analyses for each of the outcome variables for this study. Results suggest that there is at best a weak relationship between employee perceptions of the work environment and financial performance. This study found that five organizational environment factors had a weak relationship to at least one financial performance variable. These organizational environment factors were Factor 2 (Immediate Manager/Supervisor), Factor 3 (Senior Management), Factor 6 (Training), Factor 8 (Corporate Social Responsibility), and Factor 11 (Inclusion). This study also found that six organizational environment factors had no

relationship to financial performance, and these factors were Factor 1 (Operational Effectiveness), Factor 4 (Mission), Factor 5 (Valuing Employees), Factor 7 (Involvement), Factor 9 (Satisfaction), and Factor 10 (Teamwork).

The results of the regression analysis revealed that organizational environment factors can explain only a single-digit percentage of the variation in financial performance some of the time, reinforcing the key finding of this study. The four environmental factors most able to explain the variation in financial performance were Senior Management, Training, Mission, and Inclusion. However, these four factors can explain only single-digit percentages of the variance in financial performance.

CHAPTER 5

SUMMARY, DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this chapter is to summarize the purpose and methods of the study, present conclusions based on the findings of the study, provide discussion of the research findings, review the limitations of this study, discuss implications for human resource development practice, and offer recommendations for human resource development research and theory.

Summary

Interest in organizational environments continue to be a source of interest for both practitioners and researchers (Ashkanasy et al., 2011b), and part of this interest is due to an apparent assumption of linkage between employee perceptions of the work environment and organizational performance. While organizational performance can be described using many measures (Venkatraman & Ramanujam, 1986), both practitioners and researchers have maintained an interest in the financial performance of organizations and its potential relationship with organizational environment factors (Lim, 1995; Sackmann, 2011; Siehl & Martin, 1990; Wilderom et al., 2000). While many previously published studies have examined the relationship between employee perceptions of the work environment and financial performance of an organization (see Appendix A for summaries of these studies from the organizational culture/climate literature), the results of this question can so far be considered inconclusive. Many studies have found support for this linkage (Borucki & Burke, 1999; Calori & Sarnin, 1991; Denison, 1984; Denison & Mishra, 1995; Flamholtz, 2001; Flamholtz & Kannan-Narasimhan, 2005; Flatt & Kowalczyk, 2008; Gordon &

DiTomaso, 1992; Hansen & Wernerfelt, 1989; Harter et al., 2002; Johnson et al., 2009; Kotter & Heskett, 1992; Leung, 1997; Marcoulides & Heck, 1993; Petty et al., 1995; Schneider et al., 2003; Schulte et al., 2009; Sorensen, 2003; Thompson, 1996; Van De Voorde et al., 2010; Van Der Post et al., 1998), while several others have found mixed results (Gelade & Young, 2005; Koys, 2001; Ogbonna & Harris, 2000; Rousseau, 1990b) or little to no support (Booth & Hamer, 2009; Cooil et al., 2009; Davidson et al., 2007; Paradise-Tornow, 1991; A. M. Ryan et al., 1996) for this relationship. This study was conducted to shed further light into this topic using 1,296 respondents in 93 teams from a sales and service organization of a large, global manufacturer located in the Midwest of the U.S.

Purpose and Research Question

The purpose of this study was to determine if there is a relationship between organizational environment factors and financial performance. Several challenges are present in a study such as this, including assessing organizational environment factors, assessing organizational performance, and demonstrating a convincing link between the two. To assess the organizational environment, employee perceptions of the work environment were used from a previously collected data base based on an instrument containing 68 items. An exploratory factor analysis was conducted. The EFA yielded a factor model with 11 factors from 52 of the items in the instrument, compared with the original instrument that contained 12 factors from the 68 items. Factor scores were generated at the individual level for each respondent using a multiple regression procedure. Team-level factor scores were generated by computing a mean of each factor score from individual factor scores from members of each team (Pett et al., 2003). Each of the 93 teams in the correlation and regression analysis,

then, had one factor score for each of the eleven factors. To assess financial performance, five response variables at the team level were examined as a part of this study. These five response variables were the contribution margin ratio (a measure of profitability) for the two financial quarters before the survey was administered, the two financial quarters after the survey was administered, and the entire four-quarter period overall. As noted, correlation and regression analyses were conducted to determine if a link exists between employee perceptions of the organizational environment and financial performance.

Results

The results of the correlation and regression analyses revealed that, at best, there is a weak relationship between employee perceptions of the work environment and financial performance.

First Quarter Financial Results. The correlation analysis for the financial results from the first quarter demonstrated that only 4 of the 11 organizational environment factors demonstrated a significant, but weak, relationship to financial performance in the first quarter, the highest correlation at .28. These four factors were Factor 2 (Immediate Manager/Supervisor), Factor 6 (Training), Factor 8 (Corporate Social Responsibility), and Factor 11 (Inclusion). The regression analysis for first quarter financial results found that only Factor 11 (Inclusion) could be used to explain financial performance for the first quarter, explaining 6.7% of the variation in first quarter financial results.

Second Quarter Financial Results. The correlation analysis for the financial results from the second quarter found only one organizational environment factor, Factor 3 (Senior Management), with a significant, weak relationship with second quarter financial results.

However, the regression analysis showed that two factors, Factor 3 (Senior Management) and Factor 6 (Training), explained 7.2% of the variance in second quarter financial performance.

Third Quarter Financial Results. No correlations were found to be significant between any of the 11 organizational environment factors and third quarter financial performance. Similarly, none of the organizational environment variables could be used in the regression analysis to explain the variation in third quarter financial results.

Fourth Quarter Financial Results. Financial results from the fourth quarter demonstrated a weak significant relationship with only one of the organizational environment factors, Factor 3 (Senior Management). The regression analysis showed that two organizational environment factors, Factor 3 (Senior Management) and Factor 4 (Mission), explained 5.3% of the variance in fourth quarter financial performance.

Fiscal Year Financial Results. Finally, the financial performance for the fiscal year overall showed only one significant, but weak, relationship to an organizational environment factor, Factor 3 (Senior Management). The regression analysis, likewise, found that only Factor 3 (Senior Management) explained the variance in fiscal year financial performance for the fiscal year, and that explanation was only 3.6% of variation.

Conclusions

The literature has not shown a clear connection between employee perceptions of the work environment and financial performance outcomes. The goal of the present study was to explore the relationship between employee perceptions and financial performance. The large, existing data base of employee perceptions along with the actual financial performance of each of the teams in the host organization provided a unique opportunity study this question.

This study concludes that employee perceptions of organizational environment factors have, at best, a weak relationship to financial performance.

Discussion

The results of this study illuminate limitations on the claims of a link between organizational environment factors and financial performance. This study found, at best, weak support for the relationship between employee perceptions of organizational environment factors and financial performance. These results stand in counterpoint to the propositions and beliefs that a strong link exists between organizational environment factors and financial performance coming from both the practitioner press (Collins & Porras, 1994; Katzenbach, 2000; Kotter & Heskett, 1992; Peters & Waterman, 1982) and the academic press (Borucki & Burke, 1999; Calori & Sarnin, 1991; Denison, 1984; Denison & Mishra, 1995; Flamholtz, 2001; Flamholtz & Kannan-Narasimhan, 2005; Flatt & Kowalczyk, 2008; Gordon & DiTomaso, 1992; Hansen & Wernerfelt, 1989; Harter et al., 2002; Johnson et al., 2009; Leung, 1997; Marcoulides & Heck, 1993; Petty et al., 1995; Schneider et al., 2003; Schulte et al., 2009; Sorensen, 2003; Thompson, 1996; Van De Voorde et al., 2010; Van Der Post et al., 1998). However, not all of the previous literature in this area has provided evidence supporting this relationship. The findings from the present research join a group of studies whose findings also fail to demonstrate linkage between employee perceptions of organizational environment factors and financial performance (Booth & Hamer, 2009; Cooil et al., 2009; Davidson et al., 2007; Paradise-Tornow, 1991; A. M. Ryan et al., 1996).

Wilderom et al. (2000) recapped the phases of organizational literature focused on the potential linkage between organizational environment factors and organizational

performance: Emergence, Promulgation, Defiance, and Testing. This study, using quantitative data analysis techniques on a relatively large data base from a large organization, fits well into the phase they call Testing. Wilderom et al. (2000) suggested that the Testing phase is appropriate at this time in the development of the organizational environment literature to confirm or disconfirm the earlier studies and the hypothesized link. Thus, this study is in harmony with the generation of new studies having a shared purpose of identifying the potential linkage between the organizational environment and performance (Sackmann, 2011).

Why are these findings different from the majority of findings from the literature? These studies reflect a diversity of approaches on numerous levels. Few studies had agreement on how to define and measure the organizational environment. Few studies had agreement on the sub-scales that were used. Few of the studies used the same instrument to collect data. The previous studies each used sampling techniques that yielded sample sizes that varied widely. For example, the range of survey respondents by study was extremely wide, from 231 individuals (Leung, 1997) to 198,514 individuals (Harter, Schmidt, & Hayes, 2002). Similarly, the range of organizational groupings by study also had a wide range from 5 groups (Calori & Sarnin, 1991) to 7,939 groups (Harter, Schmidt, & Hayes, 2002).

What key insights were generated by this study? Employee perceptions of organizational environment factors on a broad range of topics explain a minimal amount of the variation in financial performance. I speculate that other variables may explain this variation more effectively. These variables may include Years of experience of the team members performing sales and service roles, length of the relationship between sales and

service team members and customer decision makers and buyers, customer service capabilities and performance, monetary commissions and incentives to team members, quantity of training and education of team members, team member attendance, hours spent at work, market size, geographic size of the sales territories and districts, population size of the sales territories and districts, product quality and features compared with competitors', marketplace fluctuations, industry regulations, and competitor activity. These are potential covariates that could be used in future research.

This study dispels a popular notion occasionally discussed in the practitioner press: "Culture eats strategy for lunch" (Ford, 2007, p. 16). This phrase has been used by practitioners to describe how the informal controls within an organization, while often invisible, can have more power than those controls that are formal and more easily seen (McLaughlin, 2006). Instead, this study suggests that variables other than those associated with the organizational environment can better explain a greater percentage of the variation in financial performance.

A number of observations can be made about the organizational environment subscales that were a part of this study. Of the 11 subscales in this study, 6 were found to have no relationship with financial performance. The remaining subscales were found to have significant but weak relationships to at least one measure of financial performance. Of these, only 4 subscales (Senior Management, Mission, Training, and Inclusion) explained the variation in at least one measure of financial performance. All subscales are now discussed in the context of findings from previous studies.

Operational Effectiveness

Employee perceptions of Operational Effectiveness, defined as “any number of practices that allow a company to better utilize its inputs by, for example, reducing defects in products or developing better products faster” (Porter, 1996, p. 62), were found to have no relationship with any of the financial performance variables used in this study. This result stands in contrast to other studies that found various notions of operational effectiveness and customer focus to be important in explaining financial performance. Flamholtz and Kannan-Narasimhan (2005) found performance standards to be a significant predictor of financial performance with a moderate to strong correlation between performance and behavior standards and earnings before interest and taxes. Hanson and Wernerfelt (1989) found a moderate relationship between employees’ perceptions of the importance of achieving organizational goals and financial performance. Marcoulides and Heck (1993) found a moderate to high relationship between organizational structure and the operational processes and organizational performance. Gordon and DiTomaso (1992) found that their scale, called Adaptability, which is composed of risk taking and innovation, was predictive of short term profitability. Van Der Post et al. (1998) found a moderate relationship between actively responding to customer feedback and financial performance. However, similar to the results of this study, Gibson et al. (2007), examining relationships between high-performance work practices and organizational outcomes, found only weak relationships between organizational environment factors and firm performance. While many of these studies contradict my findings, I speculate that operational effectiveness may relate more closely to non-financial performance measures that were not a part of this study, such as customer satisfaction,

reductions in cycle time and lead time measures, and measurements of quality. Gibson et al. (2007) supported this line of thinking. They examined the relationship between high performing work practices and various organizational performance measures, and they found a weak relationship between information-sharing practices and financial performance. Two other variables, boundary-setting practices and team-enabling practices, were weakly related to firm-level customer service outcomes and firm-level quality outcomes, respectively.

Immediate Manager

This study found a significant, weak relationship between employee perceptions of their immediate managers and one of the financial performance variables of this study. This subscale was defined as the individuals directing the work of survey respondents and responsible for the system of action for coping with complexity by planning, budgeting, organizing, staffing, problem solving, and controlling for results (Kotter, 1990). Other studies have found that management effects differ. Booth and Hamer (2009) found that management support was not a significant predictor of financial performance. However, Borucki and Burke (1999) found that the role and support of management played a moderating role in influencing financial results, as did Van Der Post et al. (1998) and Calori and Sarnin (1991). Harter et al. (2002) found employee perceptions of management practices to be positive but having a lower impact on financial performance than other climate variables in their study.

Senior Management

Senior management was defined as the individuals in senior corporate roles who are responsible for the system of action for coping with organizational change by setting direction, aligning people, and motivating and inspiring people (Kotter, 1990). This study

found weak but significant correlations between employee perceptions on this subscale and two of the five financial performance variables. In addition, senior management was useful in explaining a small portion of the variance in financial performance. Similarly, two studies found a relationship between senior leadership and financial performance. Asree et al. (2010), in their study on hotel operations and performance, found moderate relationships between leadership competency, a variable called organizational responsiveness, and revenue. Koene et al. (2002), in their study of leadership and financial performance in grocery stores, found a moderate relationship between leadership style, organizational climate, and profit. In contrast, Ogbonna and Harris (2000) found that leadership style of senior management was not directly linked to performance.

Mission

The mission subscale, defined as the organization's reason for its existence combined with an explanation of its strategic framework describing the desired future state, key values, and major goals (Hill & Jones, 2009), was found to have no relationship to any of the financial performance variables based on correlation analysis; however, it was useful in explaining a small portion of the variation in financial performance. This result stands in contrast to other findings from the literature. Davidson et al. (2007) claimed that their mission subscale to be weakly correlated with financial measures; however, these results were statistically insignificant. Denison and Mishra (1995) also found the mission subscale to be moderately associated with financial performance. When examining a subset of their sample (larger firms with more than 100 employees and with a top executive reporting), they found a moderate relationship between mission and return on assets. Flatt and Kowalczyk

(2008), used a construct called credo as part of their definition of strong culture, and they found that a strong culture was moderately related to financial performance. Finally, Marcoulides and Heck (1993) used numerous notions of organizational purpose to support definitions of organizational structure, organizational values, and organizational climate, all of which were found to have strong relationships to financial performance.

Valuing Employees

This subscale, defined as the human resources practices of an organization involving the treatment of people and including the promotion of safe working conditions, employee welfare, and employee recognition (Flamholtz & Kannan-Narasimhan, 2005), showed no significant relationship with any of the financial performance variables. These results also stand in contrast to previous findings from other studies. Calori and Sarnin (1991) found that trust, listening to others, and team spirit were all moderately correlated to participatory management practices that were found to be moderately associated with the annual variation of the net turnover (an indicator of the growth performance of the firm). Hansen and Wernerfelt (1989) studied employee perceptions of how concerned the organization was with employee welfare and work conditions, and they found this variable to be significant in its relationship with financial performance, showing a moderate to high relationship. Schneider et al. (2003) examined employee perceptions of satisfaction with pay and security, and they found that both variables demonstrated a moderate relationship with financial performance. Finally, Marcoulides and Heck (1993) found that a number of variables showed a moderate to high relationship with financial performance, and these included employee perceptions of

employee selection, compensation, and the extent to which the organization is concerned about the welfare and protection of employees.

Training

In this study training, defined as the process of developing knowledge and expertise in people (Swanson & Holton III, 2001), had a weak but significant relationship with one of five financial performance variables. In addition, this subscale was useful in explaining a small percentage of variation in financial performance. Other studies also found that training had a relationship with financial performance. Borucki and Burke (1999) had training as a part of their organizational climate variable, and they found a relationship between training and financial performance. However, the specific relationship or influence of training on performance was not clearly specified. Gordon and DiTomaso (1992) identified development and promotion from within as a component of their strong culture variable, and they found that strong culture was found to be positively related to firm performance. Booth and Hamer (2009) included employee perceptions of a related topic, career development, as a component of culture; however, they found that organizational culture was a weak predictor of firm performance.

Involvement

The process of gaining organization members' input into decisions that affect organizational performance and employee well-being (Cummings & Worley, 1997) was found to have no relationship with any of the financial performance variables in this study. These results are inconsistent with other findings associated with this factor. Denison (1984, 1990) suggested that involvement has a positive impact on short-term and long-term

organizational effectiveness. He found correlations of .15 to .54 between his human resources index and financial performance. He stated, "Using measures of both informal involvement in decision making and more formal participation through organizational design and governance, these results present convincing evidence that there are positive short- and long-term impacts of high involvement systems" (pp. 177-8). Denison and Mishra (1995) also found involvement to be a strong predictor of growth in financial performance.

Corporate Social Responsibility

Corporate social responsibility, defined as the economic, legal, discretionary, and philanthropic expectations that society has of the organization at a given point in time (Carroll, 1991), was found to have a weak but significant correlation with one of the five financial performance variables for this study. These results are not altogether surprising as researchers have found positive, neutral, and negative relationships between corporate social responsibility and financial performance (Foote, Gaffney, & Evans, 2010). Foote et al. reported that issues with the research between Corporate social responsibility and financial performance may relate to difficulties associated with defining and measuring corporate social responsibility, as well as the impact of differing social contexts associated with this concept. Despite the inconclusive results in the literature, as well as published criticisms and limitations, Carroll and Shabana (2010) stated that there is growing support for the acceptance of arguments for the business case of corporate social responsibility. However, recent studies focused on a quantifiable link between have shown no to weak results. Surroca, Tribo, and Waddock (2010) found no direct relationship between corporate social responsibility and firm performance. Pelozo (2009), in his meta-analysis of literature,

concluded that there is a positive, but weak, relationship between corporate social responsibility and financial performance. The results of the current study do not support a link between employee perceptions of corporate social responsibility and financial performance.

Satisfaction

The satisfaction subscale, defined as “positive emotional reactions to a particular job” (Oshagbemi, 1999, p. 338), showed no relationship with financial performance. This finding is different from many other studies that had a similar subscale. Booth and Hamer (2009) found a weak, negative relationship between job satisfaction and sales intensity, a measure of retail store performance. Calori and Sarnin (1991) found that personal fulfillment was a factor moderately associated with participative management practices which were found to have a moderate relationship with growth in financial performance. Gelade and Young (2005) found that a factor they called commitment, which has a component of job satisfaction included with it, had a moderate relationship with achievement. Koys (2001) found a moderate relationship between employee satisfaction and commitment and short-term profitability in a restaurant chain. Leung (1997) also found that job satisfaction had a moderate relationship with financial performance. Ryan et al. (1996) demonstrated that average levels of job/company satisfaction, positive perceptions of teamwork, and (lack of) stress in the branches of a finance company, are weakly associated with superior market share, reduced debt delinquency, and fewer credit losses. Finally, Schneider (2003) found a moderate relationship between return on assets and employee satisfaction.

Teamwork

Teamwork, defined as group(s) of interdependent individuals who have a common purpose, have common work methods, and hold each other accountable (Katzenbach & Smith, 1993), was found to have no relationship with any of the financial metrics used in this study. This finding stands generally in contrast to previous findings. Calori and Sarnin (1991), as mentioned earlier, found that trust and team spirit were moderately correlated to participatory management practices that were found to be moderately associated with financial performance. Petty et al. (1995) found both moderate and strong relationships between teamwork and financial performance. Delarue et al. (2008), in their survey of previous literature that focused on the relationship between teamwork and organizational performance, found that teamwork had a positive impact on various dimensions of organizational performance, including financial performance; however, the strength of this relationship is not reported. Similarly, Proctor and Burrige (2008) found that teamwork was moderately related to both productivity and financial performance. However, in contrast to these many findings, one study (Gonzalez-Roma, Fortes-Ferreira, & Peiro, 2009) found that team support was found to have only a weak, but statistically significant, relationship with financial performance.

Inclusion

Finally, inclusion, which was defined as a climate for truly valuing, not just accepting, differences in people in order to maximize its performance benefits (McLean, 2005), was found to have a significant but weak relationship with one of five financial performance metrics used in this study. Previous studies examining the relationship between

concepts of inclusion and financial performance are scarce. However, one source that appears to be focused on promoting notions similar to inclusion is the Great Place to Work Institute (Our Model, 2011). On its website, the Great Place to Work organization describes a great place to work as “one in which you trust the people you work for, have pride in what you do, and enjoy the people you work with,” and its model describes trust as an interaction of credibility, respect, fairness, pride, and camaraderie (Our Model, 2011). They also provided listings of “best companies,” and they link to *Fortune Magazine*’s list of 100 best places to work (Best Companies, 2011). Fulmer, Gerhart, and Scott (2003) examined the relationship between being a best place to work and financial performance. These authors found that companies on the best place to work list also demonstrated financial performance advantages over the broader market and, in some cases, over a matched group of similar companies. Fawcett, Rhodes, and Burnah (2004) completed interviews and content analyses of employee responses from great places to work to determine the shared characteristics of these organizations from the perspectives of employees. One of the key traits was a facilitative company culture that was built on a foundation of affirmation, belonging, and competence. The results of the current study suggest that inclusion has a small, at best, relationship with an organization’s financial performance.

Limitations of the Study

A number of areas may be a source of limitations for the findings of this study. First, the instrument used to collect employee perceptions of organizational environment factors may be limited in its design. While an attempt was made by the survey designers to collect comprehensive data on numerous subscales, it is possible that some important factors may

have been missed, including employee perceptions of organizational, process, and product innovation; and employee perceptions of the organization's approach and capabilities to planning and managing change. Second, this study focused only on financial performance at the team level; it did not include individual performance nor did it include non-financial variables, such as customer service, productivity, or other non-financial performance measures. Non-financial performance measures reflecting process or organizational indicators or outputs may well serve as mediating variables between employee perceptions of the organizational environment and financial performance. Third, the financial performance measures used for this study covered a period of one fiscal year. The one-year timeframe could be considered as too short and could be considered a limitation. In addition, an expanding or contracting business cycle may well span more than one year. The financial performance during a period of contraction or expansion could affect the results of this study. Fourth, the environment within which the organization operates was outside the scope of this study, but it may be a source of limitation of this survey. The environment, to the extent it is open, regulated, or politicized, may exert some influence on financial performance. Fifth, all of the organizational and financial data were collected from within the same organization. This approach may constrain the amount of variation that might have been observed if I had collected data from more than one organization. As such, the homogeneity of the data may reduce the size of the relationships that were observed.

Another potential limitation of this study is factor score indeterminacy. This study used common factor analysis with principal axis factoring as the method of extraction, and it used a multiple regression approach to generating factor scores. Because factors are not exact

linear combinations of shared variance using this extraction method, an infinite number of factor score coefficient matrices could be used to create factor scores (Pett et al., 2003). This situation, one where there is no unique solution to generating factor scores, is called factor score indeterminacy (Pett et al., 2003). Different approaches to generating factor scores have been proposed in the factor analysis literature. Each approach has different properties and the resulting scores are different. Because there is no single, correct approach for generating factor score estimates, there are no clear guidelines. Thus, a potential limitation of this study is that different factor score estimates will be generated based on approach used.

The outcome variable, contribution margin ratio, is another potential limitation of this study. Because this is a ratio, its range is from zero to one. In addition, this variable is composed of total revenue and various types of costs (costs of sales, product costs, commissions, and other expenses) that may not be related directly to the organizational environment measures.

Implications and Recommendations

This study found that financial performance is not easily explained using employee perceptions of organizational environment factors. Implications and recommendations for human resource development may be suggested based on this finding, and they are outlined in the following sections on human resource development practice, research, and theory.

Implications for Human Resource Development Practice

The findings of this study suggest that practitioners focused on human resource development may need to look to other mediating variables between employee perceptions of organizational environment factors and financial performance. These factors may include

measures of productivity, customer satisfaction, or other non-financial performance measures. The findings of this study may also suggest that employee perceptions are not a key variable overall in explaining the variation in financial performance of organizations. This does not suggest that employee perceptions are not useful as a means for measuring aspects of the organizational environment or for providing feedback to management on the quality of the experience of employees of the organization. However, the results of this study suggest that organizational performance is complex. Practitioners would be advised against providing overly simplistic explanations for organizational performance to client partners or accepting overly simplistic explanations of performance from the press. Conventional wisdom from both the practitioner and scholarly communities have suggested a moderate relationship between employee perceptions of the organizational environment and financial performance; however, the results of this study do not support this assumption. The findings of this study suggest that this assumption should be questioned, and more practitioners should continue to seek better explanations of the financial performance of organizations.

In addition, results such as those found here may suggest that values statements about a participatory work environment may need to be refined or refocused. If practitioners have a personal bias that a participatory work environment is valued, this findings may change how that argument should be delivered to the client organization's leadership. Results of this study suggest that it may not be accurate to suggest that participatory work environments yield better financial performance. If arguments for participatory work environments are put forth from practitioners to client partners, practitioners are advised to consider the rationale for this approach and adopt a rationale that is consistent with research results.

Implications for Theory

The results of this study suggest that financial performance is based on numerous variables, and employee perceptions of the organizational environment provide only a minimal, at best, explanation for the variation in financial performance. This suggests that explanations about organizational performance may currently be too simplistic and have a limited ability to explain organizational performance. The current literature requires improvement so that the process of theory building related to financial performance of organizations can continue based on research results. The results of this study suggest that phenomena found in the organizational environment and our explanations for organizational performance need further development, refinement, and confirmation. Simple explanations about the impact of employee perceptions of the work environment on financial performance do not provide adequate explanations of how organizational performance works.

Organizational environment theories would benefit from the application of research results from this and other similar studies. Drawing on Dubin's eight step model of theory building (Dubin, 1978), a few potential, notable next steps could be taken. The units of the relationship of variables explaining organizational phenomena and financial performance should be revisited. As noted previously, varying results on the relationship between organizational environment factors and financial performance provide inconclusive results. Consequently, the units and concepts of theories of the organizational environment and their relationships to financial performance should be reviewed and revised. Furthermore, the interaction between the units or concepts should be articulated in new ways that better

explain the relationships between the variables. Finally, testing of the reconceptualized variables is needed to continue the process of theory building and validation.

Recommendations for Future Research

Organizational performance needs better explanations, both practically and theoretically (Kirby, 2005), and several areas of future research on topics related to this study would be useful for both the academic and practitioner communities. To answer the question of how financial performance can be explained, additional research could focus on the interaction between organizational environment factors and other variables such as measures of customer satisfaction, process performance, quality, and productivity. Mediating factors might include years of experience of the team members performing sales and service roles, length of relationship between sales and service team members and customer decision makers and buyers, customer service capabilities, monetary commissions and incentives, quantity of training and education of team members, team member attendance, hours spent at work, market place size, geographic size of sales territories and districts, population size of the sales territories and districts, product quality and features compared to competitor products, marketplace fluctuations, industry regulations, and competitor behavior. Theories of organizational performance have not conclusively explained financial results (Kirby, 2005). Additional research on organizational performance could be useful for developing and confirming additional explanations and theory, and these would have both their heuristic and practical value.

Future studies could also examine the relationships between employee perceptions of the work environment and non-financial performance variables. While this study found that

employee perceptions of organizational environment factors provided only a single-digit percentage explanation of the variation in financial performance, perhaps these perceptions can better explain non-financial performance measures, such as those related to quality, productivity, and customer satisfaction. Future research in this area would be useful as organizational performance is multi-faceted and consists of both financial and non-financial variables (Venkatraman & Ramanujam, 1986). In addition, future studies could examine the economic environment in which the organizations operate. Because the economic environment impacts the amount of sales, the environment itself is a variable worthy of further investigation because of its impact on financial performance.

Finally, as shown in both this study and other studies of a similar nature, the sub-scales may be a useful area of future research. First, meta-analytic studies comparing and examining the contributions of these sub-scales to our understanding of different types of organizational performance would be useful. I have reported these results piecemeal throughout this study and compared the sub-scale results of this study to these findings; however, a more systematic review of previous research results could be helpful. Second, this study, like many others, reported moderate to strong correlations among organizational environment factors. These relationships are interesting, but it would be helpful to have greater insight as to why these relationships exist and how they function. The instruments used in the current study include subscales. Including the information from these subscales could be helpful in deepening our understanding of how organizations function as a system.

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Appendix A: Organizational Culture and Financial Performance Studies

Appendix A

Organizational Culture and Financial Performance Studies

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Booth & Hamer (2009)	To determine if culture is a significant factor in determining financial performance	Employee responses were categorized under 5 themes: (1) Degree of commitment, (2) Job satisfaction, trust, and respect; (3) Management support; (4) Career development and fairness; and (5) Work conditions and improvements	Sales Intensity reflecting corporate financial performance at the retail store level	500 stores of a major retailing organization based in the UK	Approximately 100,000 respondents	Culture was not found to be a strong predictor of performance overall. Morale and satisfaction were found to have a modest influence financial performance

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Borucki & Burke (1999)	To examine the role of organizational climate variables and their influence on sales personnel performance and financial performance	(1) Goal emphasis, (2) Means emphasis/general training, (3) Means emphasis/specific training, (4) Management support, (5) Non-monetary reward orientation, (6) Monetary reward orientation, (7) Organizational service orientation, (8) Merchandise-related obstacles, (9) Employee preparation-related obstacles, and (10) Human resource-related obstacles	Return on Sales, defined as operating profit/loss as a percentage of total sales	594 stores of a large retail chain located in the U.S.	34,866 employees for sample 1 and 34,365 employees for sample 2	Results support hypothesized linkage between organizational climate, service performance, and financial performance

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Calori & Sarnin (1991)	(1) To build and test a tool for assessing corporate culture and (2) To test some hypotheses about the relationship between culture and financial performance.	Numerous employee perception variables were a part of this study including 88 management practices corresponding to 17 culture dimensions	(1) Return on investment, (2) Return on sales, and (3) Annual variation of net turnover (a measure of sales growth)	5 organizations from various industries	260 individuals	The following variables were found to relate to financial performance: (1) Personal fulfillment, (2) Listening to others, (3) Team spirit, (4) Responsibility, (5) Trust, (6) Openness to the environment, (7) Adaptation, (8) Anticipation, (9) Entrepreneurship, (10) Quality and consistency, (11) Participation in local activities, (12) Societal contribution, and (13) Flexibility

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Cooil, Aksoy, Keiningham, & Maryott (2009)	To use multivariable partial least squares technique to identify latent climate variables which were used to explore the relationship between climate and performance	(1) Overall organizational climate, (2) Self-efficacy versus leader's efficacy, (3) Personal empowerment versus management facilitation	Store-level revenue per employee	107 "superstore" locations from a large, multinational retail grocery chain based in continental Western Europe	About 38,000 employees with an average of 360 employees per store	Overall organizational climate was not found to be significantly linked to revenue per employee

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Davidson et al. (2007)	To determine if a relationship exists between organizational culture profile and financial performance of a bank in South Africa.	(1) Involvement, (2) Consistency, (3) Adaptability, and (4) Mission	(1) Net interest income / operating income; (2) Non-interest revenue / operating income; (3) Operating expenses / operating income, and (4) Net income after interest and taxes / operating income	14 departments of an investment bank in South Africa	327 employees	Few financial measures were found to correlate with components of culture specified in the study

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Denison & Mishra (1995)	To determine what characteristics of organizational culture relate to effectiveness?	(1) Involvement, (2) Consistency, (3) Adaptability, and (4) Mission	(1) Return on assets and (2) Sales growth	Organizations from numerous industries	764 senior executives from various organizations	Culture measures were found to be weak predictors of sales growth and profits but instead were stronger predictors of quality, employee satisfaction, and overall performance
Denison (1984)	To determine the relationship between organizational culture and with effectiveness	(1) Organization of work, (2) Emphasis on human resources, (3) Job design, (4) Involvement, (5) Adaptability, and (6) Mission	(1) Return on sales and (2) Return on investment	6,671 work groups from 34 firms in 25 different industries	43,747 respondents	Organization of work and decision-making practices were found to have the closest relationships with financial performance

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Flamholtz & Kannan-Narasimhan (2005)	(1) To identify the elements of an organization's culture and (2) To determine which elements are important in influencing the financial performance	(1) Customer focus, (2) Corporate citizenship, (3) Performance standards, (4) Identification with the company, (5) Human resource practices, (6) Organizational communication	Earnings before interest and taxes	An industrial manufacturer located in the U.S. with 18 divisions	702 employees	The following variables were found to relate to financial performance: (1) Customer focus, (2) Corporate citizenship, (3) Performance standards, and (4) Identification with the company
Flamholtz (2001)	To determine if there is a relationship between corporate culture and financial performance	The degree to which the people in the division were "living the desired corporate culture" as perceived by employees	Earnings before interest and taxes	20 divisions of an industrial manufacturer located in the U.S.	741 employees	A moderately strong relationship was found between financial performance and corporate culture buy-in

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Flatt & Kowalczyk (2008)	To examine the relationship of reputation as a mediating variable between culture and firm performance	(1) Strength of corporate culture and (2) Reputation	(1) Market to book value and (2) Return on assets	Numerous companies in various industries; only the top executives in each company were invited to participate	600 top executives	Culture was found to have a moderate relationship with financial performance, and reputation was found to be a mediating variable between culture and financial performance
Gelade & Young (2005)	To explain bank performance as a function of climate factors influencing customer service factors which influence financial performance	(1) Commitment, (2) Team climate, (3) Job enablers, and (4) Support climate	Sales achievement, defined as actual branch sales as a percentage of target	1,407 branches of 4 banks operating in the United Kingdom and Ireland	26,109 employees	Results provided only limited support for the service profit chain theory where customer satisfaction mediates the relationship between climate and financial performance

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Gordon & DiTomaso (1992)	To investigate the relationship between culture and performance by looking at culture strength.	(1) Clarity of strategy/shared goals, (2) Systematic decision making, (3) Integration / communication, (4) Innovation / Risk-taking, (5) Accountability, (6) Action orientation, (7) Fairness of rewards, (8) Development and promotion from within	(1) Assets and (2) Total premiums	11 insurance companies	850 respondents	Culture strength, a composite of all factors, was found to relate positively to firm performance
Hansen & Wernerfelt (1989)	To create a model of performance that integrates economic and organizational factors	(1) Emphasis on human resources and (2) Emphasis on goal attainment	Average return on assets	60 firms, representing 300 lines of business from the Fortune 1000	Over 50,000 respondents	Organizational factors emphasizing human resources and goal attainment were found to relate moderately to financial performance

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Harter, Schmidt, and Hayes (2002)	To examine employee perceptions of the work environment and their relationships to business outcomes	(1) Employee perceptions of work characteristics and management practices and (2) Overall employee satisfaction	Profitability, defined as profit as a percentage of revenue as well as other productivity measures	7,939 business units of 36 unique companies from various industries	198,514 employees	Correlations between climate and financial performance were positive but of a lower magnitude than were shown for other outcome variables in the study
Johnson, Davis, & Albright (2009)	To investigate the hypothesis that firm performance predicts attitudes	(1) Job satisfaction, (2) Pay satisfaction, (3) Organizational commitment, and (4) Organizational justice	Return On Assets (ROA)	45 branches and one headquarters location of a community bank operating within one state in the U.S.	293 employees in sample 1 and 364 employees in sample 2	Findings suggest financial performance leads to employee attitudes most specifically when the financial performance improved

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Kotter & Heskett (1992)	To test whether culture relates to firm financial performance under different conditions	Strength of culture	(1) Average yearly increase in net income, (2) Average yearly return on investment, and (3) Average yearly increase in stock price	Numerous companies in various industries; only the top executives in each company were invited to participate	600 top executives	A modest, positive relationship between culture and financial performance was found

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Koys (2001)	To investigate the relationship between unit-level measures employee satisfaction, organizational citizenship behavior, employee turnover, customer satisfaction, and financial performance	(1) Employee satisfaction and (2) Organizational citizenship	(1) Profits after controllable expenses and (2) Profits after controllable expenses as a percent of sales	28 locations of a restaurant chain	774 hourly employees in sample 1 and 693 employees in sample 2	Employee satisfaction and organizational citizenship behavior predicted unit-level profitability but the relationships are weak
Leung (1997)	To examine the link between attitudes and performance using a group-level analysis of individual responses	(1) General satisfaction and (2) Organizational commitment	Total revenue	26 locations of a retail chain specializing in casual apparel in Hong Kong	231 sales staff employees	Job satisfaction showed a moderate relationship with financial performance

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Marcoulides & Heck (1993)	To create and test a model of organizational culture and performance	(1) Organizational structure and purpose, (2) Organizational values, (3) Task organization, (4) Organizational climate, (5) Work attitudes and goals	A composite variable composed of (1) Volume, (2) Share, (3) Profit, and (4) Return	26 organizations in various industries	392 respondents	The organizational variables together were found to predict financial performance
Ogbonna & Harris (2000)	To demonstrate links between three variables: (1) leadership, (2) organizational culture, and (3) organizational performance	Four culture profiles: (1) Community, (2) Competitive, (3) Bureaucratic, and (4) Innovative; Three styles of leadership: (1) Participative, (2) Supportive, and (3) Instrumental	Organizational Performance (derived from customer satisfaction, sales growth, market share, competitive advantage, and volume)	322 organization in multiple industries with one senior executive response per organization	322 respondents	Claims that strong culture and performance are linked were not supported; however, competitive and innovative culture was moderately linked to performance

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Paradise-Tornow (1991)	To examine the role and impact of leadership and management in creating a service-quality organizational culture	(1) Leadership practices, (2) Management culture, and (3) Employee connectedness	Various, including a measure of contribution margin	25 bank branches of a financial services holding company located in the Midwest of the U.S.	1,415 employees from branches with sizes of 20-128 employees	Management culture factors showed strong, but negative, relationships to the financial performance measures
Petty et al. (1995)	To identify a relationship between culture and performance	(1) Teamwork, (2) Trust and credibility, (3) Organizational functioning, and (4) Performance and common goals	Organizational Performance (derived from Operations, Customer Accounting, Support Services, Marketing, and Employee Safety and Health)	12 service organizations within the utility industry in the U.S. with 11,000 employees total	832 employees in sample 1 and 884 employees in sample 2	Measures of culture were significantly related to performance; the strongest link was between teamwork and performance

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Rousseau (1990)	The purpose of this research is to investigate differences in normative beliefs between high and low fund raising units.	Employee perceptions in three categories: (1) Team-oriented/satisfaction-oriented, (2) People/security, and perceptions, and (3) Task/security	Funds raised annually	32 units of a geographically dispersed non-profit. Each leader got 10 questionnaires to distribute	263 respondents	A statistically significant relationship between culture and performance was not found; however, the study found a link between beliefs and performance
Ryan, Schmit, & Johnson (1996)	To examine the relationship between attitudes and effectiveness at group levels	(1) Job/company satisfaction, (2) Supervision, and (3) Work group/teamwork	Various, including (1) profit, (2) market share	142 branches of a financial services organization in North America.	About 5,300 employees with an average of 41 responses per branch	No clear relationship was found between attitude measures and financial performance outcomes

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Schneider et al. (2003)	To study the relationship between employee attitudes and performance with both variables indexed at the organizational level of analysis	Employee satisfaction with (1) Empowerment, (2) Job fulfillment, (3) Pay, (4) Work group, (5) Security, (6) Work fulfillment, and (7) Overall job satisfaction	(1) Return on assets and (2) Earnings per share	35 companies with an average sample size per company of 450 individuals	Over 7,700 respondents	This study found that organizational performance can be a driver of employee perceptions and attitudes

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Schulte, Shmulyian, Ostroff, & Kinicki (2009)	To investigate how different characteristics of climate (elevation, variability, and shape) can be used to explain how climate operates in relation to internal and external indicators of organizational effectiveness	(1) Managerial task support, (2) Company vision, (3) Employee relationships, (4) Intra-organizational relationships, (5) Job adequacy, (6) Performance management and recognition, and (7) External service	Total store sales per square foot	86 stores of a national food distribution company	4,317 employees	Shape of a climate profile, but not elevation, was important for understanding the external effectiveness outcomes of customer satisfaction and financial performance

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Sorensen (2002)	To examine the implications of the strong culture and performance claim by analyzing the effect of strong cultures on the variability of firm performance	Strength of culture	(1) Return on invested capital and (2) Yearly operating cash flow	Numerous companies in various industries; only the top executives in each company were invited to participate	600 top executives	In stable environments, firms with strong culture were found to have less variability and more reliable performance; when the environment was more volatile, the reliability benefits of strong cultures diminished
Thompson (1996)	To determine the nature and strength of the relationships between various measures of employee perceptions and performance.	(1) Core values, (2) Customer commitment, (3) Business dimensions, (4) Communication, (5) Safety, (6) Business results, (7) Empowerment, (8) Innovation & risk taking, (9) Rewards & recognition, (10) Community	Contribution margin (profitability)	71 districts of a large utility with approximately 30,000 employees	Over 24,000 surveys	Overall climate index was found to positively related to financial performance

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
		involvement, (11) Environmental responsibility, and (12) Teamwork				
Van De Voorde, Van Veldhoven, & Paauwe (2010)	To explore the temporal order in the relationship between organizational climate and performance	(1) Goal and means orientation, (2) Reward orientation, (3) Socio-emotional support, (4) Task support	Branch profit per FTE index	171 branches of a financial services organization in the Netherlands	14,477 employees at time point 1 and 14,860 employees at time point 2	Organizational climate at time point one was found to influence organizational performance at time point two

Reference	Purpose(s) of the Study	Dimensions of Employee Perceptions	Financial Measure	Organizations Involved	Respondents Involved	Results
Van Der Post et al. (1998)	To establish a statistical relationship between organizational culture and financial performance	(1) Conflict resolution, (2) Culture management, (3) Customer orientation, (4) Disposition towards change, (5) Employee participation, (6) Goal clarity, (7), Human resource orientation, (8) Identification with the organization, (7) Locus of authority, (8) Management style, (9) Organization focus, (10) Organization integration, (11) Performance orientation, (12) Reward orientation, and (13) Task structure	(1) Return on average equity, (2) Return on average assets, (3) Total asset growth rate, and (4) Share return	49 organizations from various industries in South Africa	3,676 respondents	This study showed significant but moderate correlations only between numerous culture variables and performance

Appendix B: IRB Approval Letter

The IRB: Human Subjects Committee determined that the referenced study is exempt from review under federal guidelines 45 CFR Part 46.101(b) category #4 EXISTING DATA; RECORDS REVIEW; PATHOLOGICAL SPECIMENS.

Study Number: 1101E94572

Principal Investigator: Michael De Georgeo

Title(s):
Employee Perceptions and Financial Performance

This e-mail confirmation is your official University of Minnesota RSPP notification of exemption from full committee review. You will not receive a hard copy or letter. This secure electronic notification between password protected authentications has been deemed by the University of Minnesota to constitute a legal signature.

The study number above is assigned to your research. That number and the title of your study must be used in all communication with the IRB office.

If you requested a waiver of HIPAA Authorization and received this e-mail, the waiver was granted. Please note that under a waiver of the HIPAA Authorization, the HIPAA regulation [164.528] states that the subject has the right to request and receive an accounting of Disclosures of PHI made by the covered entity in the six years prior to the date on which the accounting is requested.

If you are accessing a limited Data Set and received this email, receipt of the Data Use Agreement is acknowledged.

This exemption is valid for five years from the date of this correspondence and will be filed inactive at that time. You will receive a notification prior to inactivation. If this research will extend beyond five years, you must submit a new application to the IRB before the study's expiration date.

Upon receipt of this email, you may begin your research. If you have questions, please call the IRB office at (612) 626-5654.

You may go to the View Completed section of eResearch Central at <http://eresearch.umn.edu/> to view further details on your study.

The IRB wishes you success with this research.

Appendix C: Survey Questions

Survey

Definitions

MY ORGANIZATION – The business unit, geographic location, or facility that you primarily identify as “where I work.”

SENIOR MANAGEMENT - The “people at the top” of the organization where you work. Vice Presidents, business unit heads, site managers, general managers, country managers, organization heads in your specific organization or at corporate headquarters.

Directions

Please read each question carefully and respond by filling in the response square that most closely represents your opinion.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

Use only black or blue pen (preferred) or pencil.

Make an “X” mark that fills the square completely

IF YOU CANNOT ANSWER A QUESTION BECAUSE IT DOES NOT APPLY TO YOU, PLEASE LEAVE IT BLANK.

Mission and Strategic Direction

1. I have a clear understanding of the organization’s mission.
2. The organization’s mission is consistent with my personal values.
3. The work I do supports the organization’s mission.
4. I have a clear understanding of my organization’s goals and priorities.
5. Decisions, actions, and plans in my organization support the organization’s mission.

Corporate Citizenship

6. The organization does a good job of maintaining good citizenship in the community where I work (for example, employee involvement, help for those in need, financial contributions, disaster relief).

7. My organization encourages employees to be involved in making a positive impact in their community (for example, volunteering time for community projects).
8. My organization demonstrates concern for the environment (for example, recycling, waste reduction, air and water).

Senior Management

9. Senior management at my organization has the ability to deal with the challenges we face.
10. Senior management gives employees a clear picture of the direction in which my organization is headed.
11. Senior management supports and practices high standards of ethical conduct.
12. When senior management at my organization says something, you can believe it's true.
13. In what they say and do, senior management demonstrates its commitment to the organization's mission.
14. Senior management demonstrates that employees are important to the success of my organization.

Customer Focus

15. Customer/client problems get corrected quickly.
16. Where I work, we set clear performance standards for product/service quality.
17. My organization places a higher priority on customer/client satisfaction than on achieving short-term business goals.
18. Overall, customers/clients are very satisfied with the products and services they receive from my organization.

Measurement

19. We regularly use customer/client feedback to improve our work processes.
20. I get enough information about how well my work group is meeting its goals.
21. I have measures of quality for my work (for example, scorecards, customer/client satisfaction, cycle time, re-work, financial).

Operating Effectiveness

22. In my work group, we adapt and respond quickly to changing business needs.
23. In my work group, we are effective at increasing the speed of delivery of our products/services.
24. In my work group, we are effective at eliminating unnecessary tasks and steps.
25. When there are problems in my work group, they get corrected quickly.

26. Where I work, day-to-day decisions demonstrate that quality and improvement are top priorities.
27. Where I work, managers effectively drive continuous improvement efforts.

Immediate Manager/Supervisor

28. My immediate manager/supervisor makes it clear what I am expected to do.
29. My immediate manager/supervisor actively works with me to develop my job skills and abilities.
30. My immediate manager/supervisor gives me feedback that helps me improve my performance.
31. My immediate manager/supervisor treats employees fairly.
32. My performance on the job is evaluated fairly.
33. My immediate manager/supervisor creates an environment of trust, respect, and appreciation for individual differences.
34. My immediate manager/supervisor supports and practices high standards of ethical conduct.

Teamwork

35. In my organization, we are all in this together.
36. The people I work with cooperate to get the job done.
37. Other work groups give us the support we need to serve our customers/clients.
38. In my organization, teams are used effectively to get the job done.
39. Where I work, we exchange ideas and best practices with other groups across the organization.

Valuing Employees

40. I have the tools, technology, and equipment I need to do my job.
41. I am satisfied with the safety and health conditions in my work area.
42. Employees are encouraged to balance their work life and personal life.
43. My organization makes it easy for people from diverse backgrounds to fit in and be accepted.
44. My organization supports the development and advancement of employees without regard to individual differences (for example, disability, race, gender).
45. I can be myself around here.
46. Where I work, employees are recognized for delivering outstanding customer service.
47. I am satisfied with the recognition I receive for doing a good job.
48. I am paid fairly for the work I do.
49. I am satisfied with my total benefits program.
50. I feel valued as an employee.

Involvement

51. I have the authority to do what is necessary to serve my customers/clients.
52. Employees in my organization are encouraged to be innovative, that is, to develop new and better ways of doing things.
53. When employees have good ideas, management makes use of them.
54. Where I work, we are told about upcoming changes in time to prepare for them.
55. I am satisfied with my involvement in decisions that affect me.

Employee Development

56. I have a real opportunity to improve my skills in the organization.
57. I am satisfied with the career development opportunities in the organization.
58. I am currently implementing a documented Individual Development Plan (IDP) agreed upon by my immediate manager/supervisor and me.
59. New employees receive the training necessary to perform their jobs effectively.
60. Where I work, employees are getting the training and development needed to keep up with customer/client demands.
61. Overall, I am satisfied with the on-the-job training I have received.

Overall Satisfaction

62. My job makes good use of my skills and abilities.
63. Considering everything, I am satisfied with my job.
64. I have confidence in the future of the organization.
65. I am proud to tell people I work for the organization.
66. Considering everything, I am satisfied with the organization as a place to work.
67. I am seriously considering leaving the organization in the next 12 months. (If you are retiring within the next 12 months or you are going on leave, please do not answer this question.)
68. I believe action will be taken based on the results of this survey.

Note: Permission to reprint the survey instrument was provided to the researcher by the host organization

Appendix D: Factor Loadings - First EFA (68 Items)

Pattern Matrix ^a												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
q40												
q41												
q42												
q43											.87	
q44											.89	
q45											.49	
q46												
q47						.63						
q48						1.06						
q49						.87						
q50						.63						
q51										.79		
q52										.89		
q53										.83		
q54										.50		
q55										.56		
q56												.86
q57												.90
q58												.41
q59							.87					

Pattern Matrix ^a												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
q60							.90					
q61							.72					
q62												.46
q63				.44								
q64				.50								
q65				.50								
q66				.54								
q67												
q68												

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 12 iterations.

Appendix E: Factor Loadings - Second EFA (56 Items)

Pattern Matrix ^a												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	
q23	.76											
q24	.67											
q25	.70											
q26	.65											
q28		.82										
q29		.85										
q30		.95										
q31		.88										
q32		.75										
q33		.90										
q34		.83										
q35										.78		
q36										.89		
q38										.67		
q43												.87
q44												.97
q45												.49
q47								.46				
q48								.93				
q49								.74				

Pattern Matrix ^a											
	Factor										
	1	2	3	4	5	6	7	8	9	10	11
q50							.49				
q51								.68			
q52								.85			
q53								.85			
q54								.67			
q55								.69			
q56											
q57				.42							
q58											
q59						.88					
q60						.88					
q61						.74					
q62				.44							
q63				.64							
q64				.71							
q65				.77							
q66				.80							

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Appendix F: Factor Loadings - Third EFA (54 Items)

Pattern Matrix ^a											
	Factor										
	1	2	3	4	5	6	7	8	9	10	11
q50				.55							
q51								.74			
q52								.91			
q53								.88			
q54								.59			
q55								.63			
q57											
q59						.88					
q60						.88					
q61						.76					
q62											
q63							.54				
q64							.67				
q65							.78				
q66							.78				

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Appendix G: Factor Loadings - Fourth (Final) EFA (52 Items)

Pattern Matrix ^a												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	
q23	.81											
q24	.75											
q25	.78											
q26	.69											
q28		.81										
q29		.84										
q30		.95										
q31		.87										
q32		.74										
q33		.89										
q34		.83										
q35										.79		
q36										.91		
q38										.67		
q43												.86
q44												.92
q45												.51
q47					.49							
q48					1.02							
q49					.81							

Pattern Matrix ^a											
	Factor										
	1	2	3	4	5	6	7	8	9	10	11
q50					.54						
q51							.74				
q52							.89				
q53							.86				
q54							.56				
q55							.61				
q59						.86					
q60						.87					
q61						.72					
q63									.45		
q64									.64		
q65									.76		
q66									.73		

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Appendix H: Comparison of Items and Factor Loadings: Original and Extracted

Comparison of Items and Factor Loadings: Original and Extracted

Item	Original Factor Assignment	Revised Factor Assignment
1. I have a clear understanding of the organization's mission.	Mission and Strategic Direction	Factor 4 (Mission)
2. The organization's mission is consistent with my personal values.	Mission and Strategic Direction	Factor 4 (Mission)
3. The work I do supports the organization's mission.	Mission and Strategic Direction	Factor 4 (Mission)
4. I have a clear understanding of my organization's goals and priorities.	Mission and Strategic Direction	Factor 4 (Mission)
5. Decisions, actions, and plans in my organization support the organization's mission.	Mission and Strategic Direction	Excluded – Items dropped after EFA Round #1
6. The organization does a good job of maintaining good citizenship in the community where I work (for example, employee involvement, help for those in need, financial contributions, disaster relief).	Corporate Citizenship	Factor 8 (Corporate Social Responsibility)
7. My organization encourages employees to be involved in making a positive impact in their community (for example, volunteering time for community projects).	Corporate Citizenship	Factor 8 (Corporate Social Responsibility)

Item	Original Factor Assignment	Revised Factor Assignment
8. My organization demonstrates concern for the environment (for example, recycling, waste reduction, air and water).	Corporate Citizenship	Factor 8 (Corporate Social Responsibility)
9. Senior management at my organization has the ability to deal with the challenges we face.	Senior Management	Factor 8 (Corporate Social Responsibility)
10. Senior management gives employees a clear picture of the direction in which my organization is headed.	Senior Management	Factor 3 (Senior Management)
11. Senior management supports and practices high standards of ethical conduct.	Senior Management	Factor 3 (Senior Management)
12. When senior management at my organization says something, you can believe it's true.	Senior Management	Factor 3 (Senior Management)
13. In what they say and do, senior management demonstrates its commitment to the organization's mission.	Senior Management	Factor 3 (Senior Management)
14. Senior management demonstrates that employees are important to the success of my organization.	Senior Management	Factor 3 (Senior Management)
15. Customer/client problems get corrected quickly.	Customer Focus	Factor 1 (Operational Effectiveness)
16. Where I work, we set clear performance standards for	Customer Focus	Factor 1 (Operational

Item	Original Factor Assignment	Revised Factor Assignment
product/service quality.		Effectiveness)
17. My organization places a higher priority on customer/client satisfaction than on achieving short-term business goals.	Customer Focus	Factor 1 (Operational Effectiveness)
18. Overall, customers/clients are very satisfied with the products and services they receive from my organization.	Customer Focus	Factor 1 (Operational Effectiveness)
19. We regularly use customer/client feedback to improve our work processes.	Measurement	Factor 1 (Operational Effectiveness)
20. I get enough information about how well my work group is meeting its goals.	Measurement	Excluded – Items dropped after EFA Round #1
21. I have measures of quality for my work (for example, scorecards, customer/client satisfaction, cycle time, re-work, financial).	Measurement	Excluded – Items dropped after EFA Round #1
22. In my work group, we adapt and respond quickly to changing business needs.	Operating Effectiveness	Factor 1 (Operational Effectiveness)
23. In my work group, we are effective at increasing the speed of delivery of our products/services.	Operating Effectiveness	Factor 1 (Operational Effectiveness)
24. In my work group, we are effective at eliminating unnecessary tasks and steps.	Operating Effectiveness	Factor 1 (Operational Effectiveness)

Item	Original Factor Assignment	Revised Factor Assignment
25. When there are problems in my work group, they get corrected quickly.	Operating Effectiveness	Factor 1 (Operational Effectiveness)
26. Where I work, day-to-day decisions demonstrate that quality and improvement are top priorities.	Operating Effectiveness	Factor 1 (Operational Effectiveness)
27. Where I work, managers effectively drive continuous improvement efforts.	Operating Effectiveness	Excluded – Items dropped after EFA Round #1
28. My immediate manager/supervisor makes it clear what I am expected to do.	Immediate Manager/Supervisor	Factor 2 (Immediate Manager/Supervisor)
29. My immediate manager/supervisor actively works with me to develop my job skills and abilities.	Immediate Manager/Supervisor	Factor 2 (Immediate Manager/Supervisor)
30. My immediate manager/supervisor gives me feedback that helps me improve my performance.	Immediate Manager/Supervisor	Factor 2 (Immediate Manager/Supervisor)
31. My immediate manager/supervisor treats employees fairly.	Immediate Manager/Supervisor	Factor 2 (Immediate Manager/Supervisor)
32. My performance on the job is evaluated fairly.	Immediate Manager/Supervisor	Factor 2 (Immediate Manager/Supervisor)
33. My immediate manager/supervisor creates an environment of trust, respect, and appreciation for individual differences.	Immediate Manager/Supervisor	Factor 2 (Immediate Manager/Supervisor)

Item	Original Factor Assignment	Revised Factor Assignment
34. My immediate manager/supervisor supports and practices high standards of ethical conduct.	Immediate Manager/Supervisor	Factor 2 (Immediate Manager/Supervisor)
35. In my organization, we are all in this together.	Teamwork	Factor 10 (Teamwork)
36. The people I work with cooperate to get the job done.	Teamwork	Factor 10 (Teamwork)
37. Other work groups give us the support we need to serve our customers/clients.	Teamwork	Excluded – Items dropped after EFA Round #1
38. In my organization, teams are used effectively to get the job done.	Teamwork	Factor 10 (Teamwork)
39. Where I work, we exchange ideas and best practices with other groups across the organization.	Teamwork	Excluded – Items dropped after EFA Round #1
40. I have the tools, technology, and equipment I need to do my job.	Valuing Employees	Excluded – Items dropped after EFA Round #1
41. I am satisfied with the safety and health conditions in my work area.	Valuing Employees	Excluded – Items dropped after EFA Round #1
42. Employees are encouraged to balance their work life and personal life.	Valuing Employees	Excluded – Items dropped after EFA Round #1
43. My organization makes it easy for people from diverse backgrounds to fit in and be accepted.	Valuing Employees	Factor 11 (Inclusion)

Item	Original Factor Assignment	Revised Factor Assignment
44. My organization supports the development and advancement of employees without regard to individual differences (for example, disability, race, gender).	Valuing Employees	Factor 11 (Inclusion)
45. I can be myself around here.	Valuing Employees	Factor 11 (Inclusion)
46. Where I work, employees are recognized for delivering outstanding customer service.	Valuing Employees	Excluded – Items dropped after EFA Round #1
47. I am satisfied with the recognition I receive for doing a good job.	Valuing Employees	Factor 5 (Valuing Employees)
48. I am paid fairly for the work I do.	Valuing Employees	Factor 5 (Valuing Employees)
49. I am satisfied with my total benefits program.	Valuing Employees	Factor 5 (Valuing Employees)
50. I feel valued as an employee.	Valuing Employees	Factor 5 (Valuing Employees)
51. I have the authority to do what is necessary to serve my customers/clients.	Involvement	Factor 7 (Involvement)
52. Employees in my organization are encouraged to be innovative, that is, to develop new and better ways of doing things.	Involvement	Factor 7 (Involvement)
53. When employees have good ideas, management makes use of them.	Involvement	Factor 7 (Involvement)

Item	Original Factor Assignment	Revised Factor Assignment
54. Where I work, we are told about upcoming changes in time to prepare for them.	Involvement	Factor 7 (Involvement)
55. I am satisfied with my involvement in decisions that affect me.	Involvement	Factor 7 (Involvement)
56. I have a real opportunity to improve my skills in the organization.	Employee Development	Excluded – Items dropped after EFA Round #2
57. I am satisfied with the career development opportunities in the organization.	Employee Development	Excluded – Items dropped after EFA Round #3
58. I am currently implementing a documented Individual Development Plan (IDP) agreed upon by my immediate manager/supervisor and me.	Employee Development	Excluded – Items dropped after EFA Round #2
59. New employees receive the training necessary to perform their jobs effectively.	Employee Development	Factor 6 (Training)
60. Where I work, employees are getting the training and development needed to keep up with customer/client demands.	Employee Development	Factor 6 (Training)
61. Overall, I am satisfied with the on-the-job training I have received.	Employee Development	Factor 6 (Training)
62. My job makes good use of my skills and abilities.	Overall Satisfaction	Excluded – Items dropped after EFA

Item	Original Factor Assignment	Revised Factor Assignment
Round #3		
63. Considering everything, I am satisfied with my job.	Overall Satisfaction	Factor 9 (Satisfaction)
64. I have confidence in the future of the organization.	Overall Satisfaction	Factor 9 (Satisfaction)
65. I am proud to tell people I work for the organization.	Overall Satisfaction	Factor 9 (Satisfaction)
66. Considering everything, I am satisfied with the organization as a place to work.	Overall Satisfaction	Factor 9 (Satisfaction)
67. I am seriously considering leaving the organization in the next 12 months. (If you are retiring within the next 12 months or you are going on leave, please do not answer this question.)	Overall Satisfaction	Excluded – Items dropped after EFA Round #1
68. I believe action will be taken based on the results of this survey.	Overall Satisfaction	Excluded – Items dropped after EFA Round #1

Appendix I: Structure Matrix

EFA Structure Matrix

Structure Matrix											
	Factor										
	1	2	3	4	5	6	7	8	9	10	11
q01	.28	.22	.34	.83	.22	.21	.27	.27	.31	.20	.27
q02	.28	.25	.33	.80	.21	.21	.25	.29	.34	.20	.29
q03	.33	.25	.35	.76	.26	.26	.31	.33	.39	.26	.28
q04	.42	.35	.50	.64	.35	.30	.40	.38	.38	.30	.35
q06	.35	.31	.39	.29	.30	.28	.38	.73	.32	.26	.31
q07	.38	.35	.42	.33	.35	.33	.43	.90	.34	.33	.38
q08	.36	.32	.39	.30	.30	.29	.39	.69	.27	.29	.39
q09	.54	.39	.80	.30	.48	.36	.58	.43	.51	.38	.44
q10	.51	.44	.81	.35	.49	.36	.58	.42	.46	.39	.42
q11	.45	.43	.71	.39	.38	.33	.45	.37	.50	.41	.48
q12	.51	.42	.83	.35	.51	.36	.56	.39	.50	.41	.48
q13	.53	.43	.85	.44	.48	.40	.57	.43	.54	.42	.50
q14	.55	.47	.82	.32	.58	.39	.61	.40	.57	.47	.49
q15	.63	.31	.52	.20	.39	.35	.58	.31	.41	.30	.34
q16	.67	.45	.47	.37	.30	.41	.50	.33	.36	.46	.40
q17	.69	.42	.55	.28	.39	.36	.60	.37	.42	.40	.45
q18	.62	.35	.46	.31	.32	.35	.50	.30	.44	.40	.40
q19	.61	.40	.47	.25	.35	.35	.52	.34	.30	.41	.38
q22	.77	.40	.44	.28	.37	.37	.52	.33	.42	.46	.41

Structure Matrix											
	Factor										
	1	2	3	4	5	6	7	8	9	10	11
q23	.76	.38	.45	.28	.36	.36	.51	.31	.41	.47	.42
q24	.73	.43	.42	.26	.41	.37	.49	.37	.34	.51	.43
q25	.78	.49	.44	.27	.44	.39	.52	.34	.35	.60	.46
q26	.79	.53	.49	.36	.43	.43	.57	.38	.42	.58	.49
q28	.46	.79	.38	.28	.42	.42	.50	.36	.33	.42	.42
q29	.47	.82	.39	.22	.44	.45	.52	.39	.32	.42	.44
q30	.47	.88	.40	.27	.44	.45	.53	.39	.34	.42	.44
q31	.45	.84	.42	.24	.46	.30	.47	.27	.37	.50	.51
q32	.46	.79	.42	.23	.55	.36	.51	.35	.40	.45	.52
q33	.48	.87	.45	.26	.48	.34	.52	.32	.38	.53	.52
q34	.40	.77	.44	.29	.39	.28	.42	.26	.37	.42	.47
q35	.59	.52	.47	.27	.46	.35	.54	.33	.43	.85	.50
q36	.53	.40	.39	.23	.37	.32	.44	.27	.39	.84	.44
q38	.60	.49	.45	.24	.44	.37	.56	.37	.42	.78	.50
q43	.44	.42	.41	.28	.41	.40	.47	.34	.38	.40	.78
q44	.46	.49	.47	.28	.47	.35	.50	.38	.41	.47	.86
q45	.53	.52	.49	.33	.56	.42	.62	.40	.53	.52	.73
q47	.48	.62	.49	.28	.74	.42	.64	.39	.47	.50	.63
q48	.35	.39	.44	.21	.84	.35	.50	.27	.46	.34	.41
q49	.35	.36	.45	.24	.76	.40	.47	.31	.52	.32	.41

Structure Matrix

Factor

	1	2	3	4	5	6	7	8	9	10	11
q50	.53	.62	.60	.33	.84	.48	.72	.42	.63	.55	.65
q51	.56	.39	.49	.24	.51	.38	.74	.38	.48	.39	.46
q52	.58	.49	.50	.31	.51	.42	.81	.40	.49	.49	.49
q53	.59	.53	.59	.32	.52	.44	.83	.43	.48	.49	.52
q54	.58	.50	.56	.28	.51	.47	.72	.38	.38	.47	.47
q55	.63	.59	.60	.28	.67	.47	.82	.41	.48	.54	.58
q59	.41	.35	.36	.25	.41	.84	.43	.30	.36	.31	.39
q60	.49	.40	.40	.24	.43	.88	.50	.34	.39	.38	.40
q61	.43	.46	.41	.26	.46	.79	.51	.34	.45	.38	.45
q63	.54	.54	.55	.33	.70	.45	.62	.38	.74	.52	.57
q64	.45	.32	.58	.31	.53	.34	.51	.33	.76	.38	.44
q65	.41	.38	.48	.40	.44	.37	.45	.34	.77	.38	.42
q66	.53	.47	.57	.36	.61	.44	.59	.34	.84	.47	.49

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.