

THE IMPACT OF CULTURE ON EMPLOYEE TRUST IN TECHNOLOGY-BASED ORGANIZATIONS

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Abstract

Many theorists and practitioners have recognized the important roles trust and culture play in the corporate environment. Some believe that the amount of trust employees have in management is influenced by the organization's culture. This paper proposes a methodology for investigating the relationship between mechanistic and organic cultures and the level of organizational trust in technology-based organizations. An initial pilot study found that, among five organizations sampled, the more organic an organization's culture, the more trust employees had in management.

Introduction

A literature review was conducted to identify existing theoretical and empirical knowledge in the areas of organizational culture and organizational trust. Results show that culture and trust both have distinctive roles in an organization. If one were to imagine the world without trust, its importance becomes clearer. In a world without trust, leaders would be viewed as self-serving and few people would be willing to follow them (Shaw, 1997). Cultural values directly influence the development of trust: therefore the culture of an organization can affect people's willingness to trust. Developing a culture that fosters trust is crucial to the success of leaders. A culture that encompasses an atmosphere of trust allows leaders to empower their followers (Fairholm, 1994). Culture can serve as a tool to unite or divide people. It also affects people's perceptions of unity and diversity in the decision-making process because values can unite or divide (Pheysey, 1993).

To date there has been no study identified that determines the impact or role of culture on employee trust in management. This research investigates the potential correlation between culture and trust. There is a need to understand how trust develops and the ways culture impacts the trust-building process.

Literature Review

Culture and trust are defined differently by various authors, theorists, and practitioners. Many theorists agree that culture plays an important role in an organization's success. The reviewed literature contains a plethora of information on the culture of organizations. However, the trust literature suggests

that the area involving employee trust in management has not been as yet thoroughly explored.

Organizational Culture. The Hawthorne studies conducted at the Western Electric Company in the 1930s are recognized as the first attempt to define work organizations in terms of culture. These studies proved to be useful to the understanding of human behaviors in organizations (Harrison and Beyer, 1993). Culture is viewed as the informal set of values and norms that controls human interaction within an organization (George and Jones, 1996). Substantial influence can be placed on an organization by its culture, because shared values and beliefs represent important variables that guide behaviors (Sathe, 1983).

An employee's attitude toward change is affected by his/her trust in management. The more an employee trusts management, the less that employee will resist change (Schoderbek, Cosier, and Aplin, 1991). Culture emerges from people's struggle to manage uncertainties while creating order in their lives. People in organizations are faced with many uncertainties. Cultures can help them to cope with uncertainties by providing accepted ways of expressing and affirming their beliefs, values and, norms. Trust can remove the curtain of uncertainty. It allows people to feel free to communicate timely, relevant information, while contributing creative alternatives to problem solving (Zand, 1997).

Burns and Stalker (1961) describe two types of organizational cultures. These two cultures are known as organic and mechanistic. The structures of the two cultures are aligned differently, with different management control systems. According to Schoderbek, Cosier, and Aplin (1991), organic organizational structures are flexible and adaptive, meaning the organization tends to be low in complexity, centralization, and formalization. Typically, companies that have organic cultures exhibit the following traits:

- Tolerance for diversity
- Trust
- Minimal defensiveness in interpersonal relationships
- Open confrontation of issues
- Respect for individuality

- Flexibility and change

Mechanistic organizational structures are complex, formal and centralized. This culture type typically displays the following characteristics:

- Little tolerance for members with different values/beliefs
- Decisions made from fear about what happens if we don't do it
- Conformity
- Rules, regulations, and procedures
- Loyalty to the system
- Lack of risk taking

In today's environment it may not be feasible for organizations to maintain cultures that are either completely organic or completely mechanistic. Reigle (2001) identified 4 classifications of culture (Exhibit 1) during her development of the Organizational Culture Assessment survey instrument (OCA). The OCA instrument was developed to enable managers to determine if their organizations have mechanistic or organic cultures. After tabulation of scores, organizations receive an overall culture score that corresponds to a culture type. The culture types along with corresponding OCA range of scores are listed in Exhibit 1.

Exhibit 1. Culture Type Model (Reigel 2001)

Culture Type	OCA Score
Mechanistic	≤ 4.74
Mechanistic-organic	$4.75 > M-O \geq 5.25$
Organic-mechanistic	$5.25 < O-M \leq 5.75$
Organic	$O > 5.75$

A clear understanding of the type of culture operating within an organization is necessary, since culture is viewed as being important to the performance. The knowledge of the type of culture that produces high employee trust in management can be important in constructing the appropriate culture for building high-performing organizations.

Organizational Trust. The definition of trust varies from author to author. Trust requires being concerned for the well being of others. This does not mean that the interest of others always comes before the needs of the organization as a whole. However, it does require an understanding of the impact of one's actions on others. Additionally, concern reflects a sincere desire to promote the well-being and success of people at all levels of the organization (Shaw, 1997).

The key elements of building high trust organizations and teams must be demonstrated in the actions of the leaders, if the desire is to build and sustain trust (Shaw, 1997). Leaders must act with integrity in order to be trusted, which involves complete honesty in relationships with others in the organization. Integrity involves complete openness and honesty, while fulfilling commitments to others. An employee must believe in management's ability to lead the organization in meeting a common goal in order for trust to develop (Garrity, 1991). Trust can be generated by removing barriers that demoralize employees and is enhanced by supervisors who effectively plan for and manage the work load (Daley and Vasu, 1998). Trust is easier to achieve when an organization's aim, vision, mission, values, objectives, and goals are understood and shared (Whitney, 1993).

Shockley-Zalabak et. al. (1999) define organizational trust as "the organization's willingness, based upon its culture and communication behaviors in relationships and transactions, to be appropriately vulnerable based on the belief that another individual, group, or organization is competent, open and honest, concerned, reliable, and identified with common goals, norms, and values."

Trust must be treated as a cultural and structural characteristic of the organization in order to significantly influence business outcomes (Shaw, 1997). Zand (1997) emphasizes that trust can add enrichment to relationships and force cooperation, creativity, and commitment. Trust and trustworthiness determine the level of cooperation a leader receives. He advocates three elements of trust. They are:

- Information – the flow of accurate, timely information, considered crucial to a productive relationship
- Influence – refers to the source of information and how that information alters behaviors
- Control – the regulation and limitation of behaviors

When building trust, it is necessary to pay attention to every aspect of an organization's structure, management policies and practices, technological systems, culture, values, and expectations of its members, as well as the behavior of its leaders (Shaw, 1997).

When an individual trusts another person, he/she tends to accept that person's influence. Managers must build trust with employees day by day. Trustworthiness is the foundation of any credible organization. An organization must develop credibility through trust with its employees in order to grow and survive in our fast-paced world. Reliance creates a

solid foundation that endures through time. Once trust is broken, it is difficult or nearly impossible to reestablish. People trust others whom they believe understand them. Creating trust within an organization requires daily commitment (Brownell, 2000).

Trust and Culture Elements. There are five elements that are important in evaluating culture. Each element is important to the management system and should be embedded within an organization. These elements determine the functionality and effectiveness of an organization. Reigel (2003) lists the elements of culture that have been identified by most researchers and authors. They are language, artifacts and symbols, patterns of behavior, espoused values, and basic underlying assumptions. Each of these elements is shown below in Exhibit 2.

Exhibit 2. Culture Elements

Element	Definition/examples
Language	Ceremonies, heroes, slogans
Espoused values	Important principles
Basic underlying assumptions	Beliefs
Patterns of behavior	Rites, behavioral norms
Artifacts and symbols	Depicts what a company stands for, tangible evidence

According to Shockley-Zalabak et. al., (1999) there are five dimensions that are important in order to build high trust organizations. The determinants of trust that are present in our daily relationships are competence, openness and honesty, reliability, concern for employees, and identification. The determinants of trust are found in Exhibit 3.

Exhibit 3. Trust Dimensions

Dimensions	Definition/examples
Openness & honesty	Amount, accuracy and, sincerity of information
Concern for employees	Feelings of caring, empathy, tolerance and safety
Reliability	Consistent and dependable actions
Identification	Common goals, values and beliefs
Competence	Effective leaders and co-workers

Building Trust Through Culture. A very important aspect of culture is the connection that exists between

leadership and culture. Leaders are instrumental in shaping the culture of an organization. Culture determines behaviors that bond and motivate, while providing clarity where ambiguity exists (Hampden-Turner, 1992).

Trust determines whether a leader is able to gain access to the knowledge and creative thinking required to solve problems. It is important for leaders to understand the effects of trust, if they wish to improve their decision-making mechanism as well as the quality of their decisions. Poor leaders will acknowledge that people are valuable resources, but their *actions* demonstrate that the primary resources are funds, equipment, products, and inventory. A leader can open the path to knowledge and abilities by gaining and maintaining credence. Trust leads to increased production, creativity, adaptability, and commitment (Zand, 1997). Many believe that the most difficult aspect of building a competitive organization and team is managing the culture. It is understood that values, principles, and norms are not easy to manage, yet must not be ignored.

Management effectiveness depends on the ability to gain the trust of subordinates. When trust is relatively high, employees are more committed to authority. People who are committed to organizational authority are more likely to be: (a) satisfied with their relationship with the people in authority, (b) more committed to the organization, and (c) willing to behave in ways that will help the organization achieve its goals (Brockner, Siegel, Daily, Martin, and Tyler, 1997). Some actions that can be used in developing and sustaining a culture of trust are listed below in Exhibit 4.

Exhibit 4. Trust Culture actions (Shaw, 1977)

Actions	Outcome/Results
Develop a common vision and shared view of competitive realities	Help create a sense of shared fate
Live by genuinely felt values and principles	Clarify expectations and promote trust
Build familiarity across groups and levels	Promote understanding and concern
Encourage a culture of risk-taking and experimentation	Risk-taking and taking new approaches are necessary to remain competitive
Make visible a few powerful symbols of trust and collaboration	Reinforce the organization's commitment to the trust imperative/elements

Working with people and solving problems continues to be an important role for leaders. Good leaders realize the importance of a reward system and that this factor may encourage trust or create mistrust. People's belief about their leader's intention has an important impact on trust (Zand, 1997). Trust is based, in part, on the caliber of leadership within the organization. Leaders must design an organizational process that works to overcome distrust and sustain the necessary level of trust. The leader's role in building high-trust organizations must include.

- Modeling trustworthy behavior
- Building trustworthy leadership teams
- Developing trust-sustaining organizational practices.

Trusting cultures are created by valuing openness, honesty, and collaborative processes that encourage involvement and autonomy (Robbins, 1984).

Summary. The literature search suggests that there is an inherent connection between organizational culture and organizational trust. Cultural elements can support or destroy trust over time. The ultimate goal should be to create a culture that reinforces the trust dimensions/elements (Shaw, 1997). Organizational culture combines the assumptions, values, and artifacts that give an organization a sense of identity and mission. Organizational trust establishes the framework needed for productivity. Early results of an ongoing research effort indicate a high positive correlation between the level of organization trust within companies and a company's performance (Blankenship, 2002). Trust creates an environment that encourages cooperation and permits employees to focus their attention on the tasks set before them (Daley & Vasu, 1998). The decision-making process can be affected by an individual's ability to trust. Trust enhances the quality of decision-making and the implementation of those decisions while stimulating productivity, since it gives people confidence that appropriate goals can be achieved (Zand, 1997).

It is generally recognized that creating a culture of trust is not accomplished easily. The role of management is necessary in order to construct an appropriate culture capable of developing and sustaining an environment of employee trust. The management culture can contribute positively or negatively to the trust building process. Employees trust when an environment for trust exists along with the trusting actions of the management team.

Research Question

This research seeks to answer the following question.

Is there a correlation between the culture of an organization and the level of employee trust in management? The hypothesis to be tested is as follows:

H₀: There is no positive correlation between culture and organizational trust.

H₁: There is a positive correlation between culture and organizational trust.

Methodology

Five organizations participated in an initial pilot study. The selected organizations depend heavily upon technology to accomplish their goals. These organizations will be referred to as organizations A, B, C, D and E.

Organization A operates in a research environment providing engineering services to a variety of governmental projects. This organization is recognized as playing an important role in our nation's security.

Organization B provides a variety of consultation services to other organizations. Some of the consultation support includes setting policies and procedures and laboratory analytical procedures,

Organization C is a governmental organization that provides support to various military organizations across the country, as needed.

Organization D provides consultation to other organizations on various technical issues such as physical and biological sciences.

Organization E produces a wide variety of chemicals for various operations. Additionally, the organization engages in a research projects involving chemical production.

In general, the test organizations in this pilot study, operate in a similar environment, have some similarities in management structure, and are located close to one another geographically. It was therefore, expected that they might yield similar results on the surveys. It is understood that a more diverse population of test organizations will be needed for the principal study.

Each of the organizations that participated in the study employs a staff that is highly specialized in their respective fields. Various technical skills are needed to ensure the success of each of the organizations. The data collection methods selected for this pilot study used validated survey instruments. The culture and trust survey instruments were delivered to management for distribution. Once completed, the survey instruments were returned to management. The survey instruments were then collected from the respective managers. The survey return rate was 67%. A total of 100 survey instruments were distributed. Only 67 completed instruments were returned. Out of the 67

instruments returned 3 survey instruments contained at least one unanswered question. These survey instruments were not used in the analysis. The data was analyzed using appropriate statistical methods that include the Analysis of Variance and the Pearson Correlation Coefficients methods.

Measuring Organizational Culture. There are many survey instruments available to measure various aspects of culture. These instruments differ in part due to variations in definitions used for organizational culture. All of the instruments except for one, measure elements of culture or various characteristics of the organization. The Organizational Culture Assessment survey (OCA) is the only instrument found that measures all five of the elements of culture identified by most engineering management practitioners and theorists. The OCA instrument was developed and validated by Reigle (2001) utilizing data collected from high-technology organizations. The OCA score for an organization is generated by determining the mean values for each survey completed. The instrument measures culture on a continuum scale from 1.0–8.0. Cultures displaying more organic characteristics will fall at the upper end and those displaying more mechanistic organizations will fall at the lower end of the continuum. The OCA instrument was selected for this evaluation based on its applicability to the topic and research objectives.

Measuring Organizational Trust. Two survey instruments were found that measure organizational trust. Mishra and Morrissey (1990) created the first instrument based on a four-dimensional model of trust. This instrument received limited base lining. Four hundred and twenty six surveys were distributed only one hundred forty-three surveys were completed. This survey instrument was not selected due to its limited base lining.

The second survey instrument was developed by Pamela Shockley-Zalabak et. al. (1999) and funded by the International Association of Business Communicators (IABC) Research Foundation. The base lining process consisted of surveying approximately 4,000 employees, encompassing fifty-three organizations across eight countries. The instrument measures trust on a continuum scale from 1-5. The Organizational Trust Index (OTI) survey instrument was selected and used to measure trust due to its extensive base lining. Additionally, the survey instrument is the only instrument available to measure organizational trust that focuses on the elements of trust being investigated in this research effort.

Demographics. Each participant provided demographic data including:

- Organization and work group names
- Individual job title
- Individual’s level within the organization.
- Organization type
- Organization size
- Individual gender
- Individual race
- Levels of management within the organization
- Management structure

Analysis Results

The results showed small incremental changes in employee trust in management as the culture moved from mechanistic toward organic on the culture continuum. Exhibit 5 summarizes the results for each organization. Company A and company E obtained the highest OTI scores of 3.79 and 3.71 respectively, falling on the culture continuum at 5.21. Organization B received a culture score of 5.12 and a trust score of 3.35. Organization C fell on the cultural continuum at 4.54 and received the lowest OTI score of 2.99. Organization D fell on the culture continuum at 4.65 while displaying an OTI score of 3.22. The overall results indicated that higher culture scores equal higher trust scores.

Exhibit 5. Culture/Organizational Trust Scores

Organization	Culture type	Culture	Trust
A	Mechanistic -organic	5.21	3.79
B	Mechanistic -organic	5.12	3.35
C	Mechanistic	2.54	2.99
D	Mechanistic	4.65	3.32
E	Mechanistic -organic	5.21	3.71

The culture scores were compared to Reigle’s culture type model shown in Exhibit 1. Each organization was assigned a culture type as shown in Exhibit 5. The results show that as an organization approaches the organic region of the culture continuum, employee trust tends to increase. These results are consistent with known characteristics for each organization.

To the outside observer, organizations C and D have cultures that are mechanistic. Organization C operates under a complex matrix organization structure. Decisions are governed by procedures and policies that are dictated by various governmental and regulatory agencies. Organization D operates in a procedure-driven environment with the decision-making seemingly exclusively coming from the chain of command and standard operating procedures.

Organizations A and B appear to have cultures that is more towards the organic side of the continuum. Organization A maintains some level of flexibility in order to meet the ever-changing demands of its customer. The management structure encourages communication. However, adherence to procedures and policies set by the customer are always followed. Additionally, at the time of data collection, organization A was faced with possibility of a workforce restructuring. Organization B operates in a research environment where some level of autonomy and flexibility is practiced. However, procedures compliance is still required in order to meet customer expectations. Little is known about the management structure of organization E. The culture scores obtained during this experiment linking each organization to a distinctive culture seem to be in line with the outside observer observations, based on the cultural characteristics as outlined by Schoderbek, Cosier, and Alpin cited earlier.

A correlation coefficient (Pearson's) was calculated utilizing the data listed in Exhibit 5. Correlation of the organization culture scores and the organizational trust scores yields a relatively strong value of 0.842. An Analysis of Variance was performed and resulted in a P value of 0.073. The P value is compared to an alpha value of 0.05. This analysis indicates that culture has an effect on the level of employee trust in management. Exhibit 6 and 7 presents a graphical representation of the results.

Exhibit 6. Culture/Organizational Trust Results

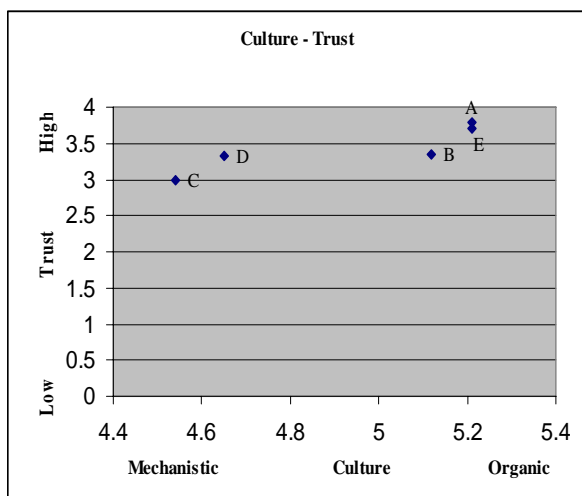
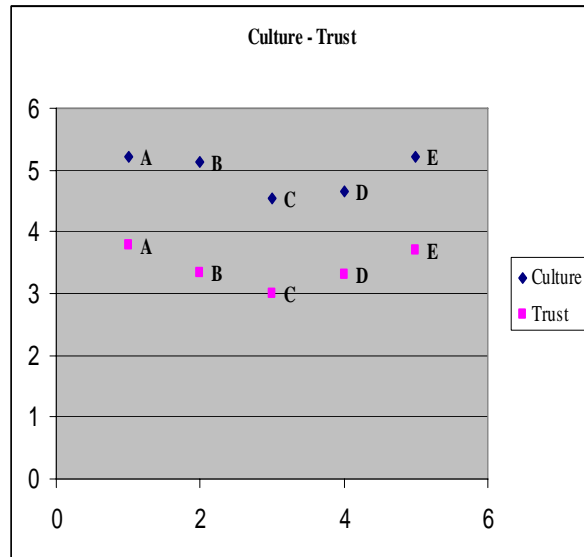


Exhibit 7. Culture/Organizational Trust Results



It was noted that the spread of data was small. This can be attributed to the similarity of the organizations surveyed in the pilot. Two of the five organizations have cultures that are mechanistic. These two organizations have similar management systems in place. Two other organizations have cultures that are mechanistic-organic. These organizations have similar management systems in place, along with a highly skilled work force.

Lesson learned. Reassurance of survey confidentiality must be accomplished prior to survey distribution. Survey distribution can be complicated in an organization that is being threatened with the possibility of a workforce restructuring that may result in the lost of jobs. Data preparation and interpretation in itself is a lengthy and tedious process. Organizing surveys by organization can add ease to the data entry and the analytical process.

Conclusion

Based on the literature review and the pilot study, there are indications that culture may have something to do with the level of trust within an organization. However, though the results of the pilot study suggest some validity to the hypothesis that, as the culture of an organization tends to move toward organic, the level of trust employees have in management increases, additional data collection in a wider range of organizations is needed to give credibility to these findings.

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