The impact of leadership styles on organizational culture and firm effectiveness: An empirical study

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Abstract

This research project seeks to contribute to the literature on management by presenting and testing a model of leadership linking leadership styles directly to culture type and indirectly to firm effectiveness. The authors selected a four-factor theory of leadership and examined how it directly impacted organizational culture, and indirectly impacted organizational effectiveness (via an organization's culture). Using surveys designed to measure attitudinal and behavioral indicators of organizational culture, leadership, and effectiveness, we collected data from 2,662 individuals in 311 organizations. The results generally support the hypotheses that organizational effectiveness is related to type of culture and that cultural norms are related to type of leadership styles. The results have implications for management and organizational development practices and processes. The results indicate that the leadership skills of managers and supervisors are critical factors in the creation and reinforcement of cultural norms. Furthermore, cultural norms seem to positively impact organizational effectiveness.

INTRODUCTION

This research project seeks to contribute to the literature on organizational behavior by presenting and testing a model of leadership linking leadership styles directly to culture type and indirectly to firm effectiveness. The authors selected a four-factor theory of leadership and examined how it directly impacted organizational culture, and indirectly impacted organizational effectiveness (via an organization's culture). Using surveys designed to measure attitudinal and behavioral indicators of organizational culture, leadership, and effectiveness, we collected data from 2,662 individuals in 311 organizations. The results support the hypotheses that organizational effectiveness is related to type of culture and that cultural norms are related to type of leadership styles. The results have implications for management and organizational development practices and processes.

Research that explores ways in which leadership is linked to organizational culture has become more frequent in recent years, but it still suffers from shortcomings in the quality of the data set available for analysis (Fleenor & Bryant, 2002; Xenikou & Simosi, 2006). It is generally accepted that leaders can have a significant impact on the people in their orbit, through goal setting, motivation to achieve those goals, and other methods used to approach their daily tasks (Bowers & Seashore, 1966;

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Kotter, 1996). This current research project seeks to enlarge on this theme by identifying how leader behavior can reinforce organizational cultural norms, which, in turn, impact the firm's overall effectiveness. Our results suggest that specific types of cultures were significantly and positively related to dimensions of facilitative and supportive leadership. Based on these findings, it appears that managers and supervisors have a significant impact on the operating cultures of their departments, divisions, and organizations by virtue of the task- and people-oriented leadership behaviors they exhibit. The results indicate that the behavior of leaders is systematically related to culture type, with significant implications for firm effectiveness.

Leadership and culture theorists have made significant efforts toward explaining aspects of the relationship among leadership, culture, and effectiveness (Schein, 1985, 1992; Nadler, 1998; Pfeffer, 1998). Little empirical work has been done, however, to simultaneously operationalize the leadership and culture constructs to establish the mechanisms that create a strategic fit. This research seeks to contribute to our understanding of the fit between these critical organizational constructs.

THEORY DEVELOPMENT AND HYPOTHESES

Cooke and Szumal (2000) have developed a conceptual framework of causal factors and outcomes of operating culture and this study uses their framework to focus on the leadership skills and qualities of a firm's workplace. In the conceptual model, causal factors such as leadership styles affect outcomes both directly and indirectly, through the firm's operating system (Szumal, 2001). Our study focuses on the direct link between leadership styles and organizational culture, on the one hand, and between culture and organizational effectiveness, on the other.

Leadership styles

During the post-war era up till the mid-1970s, probably the most active area of research within the leadership literature was concerned with the relationship between style, situation, and performance (Van Wart, 2003; Antonakis, Cianciolo, & Sternberg, 2004; Bass & Bass, 2008; Daft, 2008; Gardner, Lowe, Moss, Mahoney, & Cogliser, 2010; Day & Antonakis, 2011). Much of this work was done in a small group context and sought to identify those styles that would be most effective in particular situations (Fiedler, 1967; Hersey & Blanchard, 1967; House, 1971; Vroom & Yetton, 1973). A point of contention between the contributors concerned the issue of whether individual leaders could learn to use a range of different styles so that they could adapt their style to the demands of the situation or whether leaders with identifiable and inflexible styles needed to be matched to situational contingencies through recruitment and selection processes (as argued, e.g., by Fiedler, 1967). Contingency theories tended to fade from prominence as leadership researchers gave more attention to the process of steering large-scale changes in organization culture through transformational leadership (Bass, 1990; Daft, 2008). This research generated a greater understanding of the dimensions of 'productive culture', but neglected to draw from contingency theory to address the question of the relationship between different leadership styles and productive culture. We consider this issue to be of practical significance since, if it is assumed that leaders have, or can develop, some capacity to choose their leadership style, then this choice should be strategically guided by its impact on organizational culture. Thus, this paper is based on the proposition that the leadership skills and qualities of members can have a significant impact on shaping, reinforcing, and maintaining the operating culture of organizations. They can also impact its effectiveness (Schein, 1983; Lawler, 1996; Szumal, 2001).

Four different leadership styles are assessed in this paper, based on the research of Bowers and Seashore (1966). Although Bowers and Seashore is rather dated, we believe it still includes the important determinants of leader outcomes. We measured these styles using the corresponding items

TABLE 1. INTERNAL CONSISTENCY AND INTER-RATER RELIABILITY: THE FOUR DIMENSIONS OF LEADERSHIP SCALES

Skills/qualities	Mean (SD)	Internal consistency Cronbach's α	IRR	
			F-ratio	η²
Interaction facilitation	3.64 (0.98)	0.78	2.94	0.28
Task facilitation	3.23 (1.06)	0.86	2.26	0.23
Goal emphasis	3.89 (0.94)	0.85	2.51	0.25
Consideration	3.87 (1.01)	0.88	2.38	0.24

Notes. $n = 2,662$, all F-ratios are significant at $p < .001$.
IRR = inter-rater reliability.

provided in the Organizational Effectiveness Inventory (OEI) (see Appendix for a detailed description of the items that comprise these four measures).

These styles include:

- Interaction facilitation (i.e., the extent to which managers encourage their members to work as a team).
- Task facilitation (i.e., the extent to which managers help their direct reports solve problems and implement better procedures).
- Goal emphasis (i.e., the extent to which managers reinforce expectations for excellence).
- Consideration (i.e., the extent to which managers are personally supportive of their direct reports).

The four-dimensions framework enables us to examine leadership in relation to organizational outcomes, including organizational culture. The four-dimensions framework allows us to conceptualize leadership in terms of four social process functions, or four kinds of behavior that are indispensible in work groups if they are to function effectively.

These leadership variables identify behaviors that can have a significant impact on the performance and satisfaction of followers. The leadership dimensions are grounded in task interdependence as well as social interdependence. Under ideal circumstances, the application of these dimensions results in a work group striving together effectively toward the accomplishment of a common objective.

The theory behind the four-dimensions framework isolates certain characteristics of leadership and assumes that leadership is a socially constructed concept and is only meaningful in the context of two or more people. As one member of a group advances some behavior toward other members of the group, a common aim is advanced. Thus, our definition of leadership is 'organizationally useful behavior by one member of an organizational family toward another member' (Bowers & Seashore, 1966: 240).

Bowers and Seashore (1966) extracted four dimensions which are, as mentioned above (1) interaction facilitation, (2) task facilitation, (3) goal emphasis, and (4) consideration. These four concepts appear in most of the major formulations listed above, and have been tested for validity and reliability as part of other research projects (Szumal, 2001). We also tested the scales as used in this study for reliability as well (see Table 1).

Leadership and organizational culture

Prominent researchers in leadership and culture have opined that leader behavior helps culture evolve and change (Schein, 1992; Kotter, 1996). Leaders control mechanisms through which they influence

the culture, including adapting to their environment, establishing and evolving workgroups, empowering sub-cultures that represent ideal norms, creating systems of task forces and committees to manage the culture, and other techniques (Schein, 1992). Leadership can shape culture through the development of competencies such as creating trusting relationships and establishing personal credibility (Becker, Huselid, & Ulrich, 2001; Brockbank, Ulrich, & Yakonich, 2002). Leadership that possesses 'personal credibility competencies' (Brockbank, Ulrich, & Yakonich, 2002) may have a significant impact on business results. These can include strategic management domains such as culture management, managing change, strategic decision making, and market-driven integration and connectivity.

Researchers in the area of organizational culture point out that there are several obstacles to assessing culture's impact on performance, including how to define organizational culture and difficulties in its measurement (Lim, 1995). Still, most organizational scholars seem to believe that culture 'matters' and it is worth exploring how it functions in organizations.

Constructive versus defensive organizational cultures

An organizational culture emerges as a collective creation of members' interaction with others as they strive to make sense of their environment. Leadership and management decisions and styles strongly influence the human interactions in the firm. What emerges from these interactions are shared views of reality and agreed-upon behaviors that are considered important and appropriate compared to alternate behaviors (Trice & Beyer, 1993).

Researchers have attempted to determine whether there are specific characteristics of corporate cultures that enhance or detract from firm productivity. Kotter and Heskett (1992) and Nadler (1998) maintain that an important element, which separates constructive from defensive cultures, is the quality of firm leadership. In firms that create constructive cultures, the core leadership team creates a focus early in the firm's life on three key constituencies; customers, employees, and stockholders. Over time, the leadership reinforces these key values by emphasizing the importance of the three constituencies in the firm's success. If competent leadership is being developed throughout the organization, continued success creates a broad group of future leaders committed to these values, and constructive norms are embedded in the firm.

The Organizational Culture Inventory (OCI) assesses culture in terms of 12 behavioral norms clustering into three factors (Cooke & Rousseau, 1988). The three factors are constructive, passive-defensive, and aggressive-defensive.

The constructive cultures reflect behavioral norms that balance a concern for people with a concern for tasks. Members are expected to approach tasks and interact with people in ways that help them meet their higher-order satisfaction needs. The theoretical underpinning of the OCI is the seminal Ohio state and Michigan behavioral leadership research, coupled with Maslow's hierarchy of needs theory. Extensive research with the OCI suggests that firms with constructive cultures outperform firms with defensive cultures on a variety of effectiveness outcomes (Cooke & Rousseau, 1988; Cooke & Szumal, 2000; Klein, 2003). Based on previous research, this study uses the constructive cultural norms as contained in the OCI to represent productive cultural norms, and uses defensive norms to represent less productive cultural norms.

Organizational outcomes

'Quality of service' has often been used as an indicator of organizational effectiveness (Seashore, 1965; Hitt, 1988; Kreitner & Knicki, 2011; Szumal, 2001). Quality of service has also been identified as an outcome of organizational culture and behavioral norms (Band, 1991; Klein, 1992; Cooke & Szumal, 2000). We use 'quality of service' as the criterion for organizational-level quality, and it is derived

from a 6-item scale (see Appendix for scales) and measures the extent to which members believe the organization provides high quality service and products to external clients.

Hypotheses

Hypothesis 1: Across organizations, task and interaction facilitation, goal setting, and supportive leadership will be positively related to constructive cultural norms.

Hypothesis 2: Across organizations, task and interaction facilitation, goal setting, and supportive leadership will be negatively related to defensive cultural norms.

Constructive cultures reflect behavioral norms in which members are expected to interact with others and approach tasks in ways that will help them achieve their higher-order satisfaction needs. The passive-defensive cultures reflect behavioral norms in which members are expected to maintain and protect their security through their interactions with people. Finally, aggressive-defensive cultures reflect behavioral norms that implicitly require members to approach their jobs and tasks in forceful, aggressive ways that protect their status and lower-order security needs:

Hypothesis 3: Across organizations, organizational-level quality is positively related to the strength of constructive cultural norms and negatively related to the strength of defensive cultural norms.

Hypothesis 3 is based on the proposition that constructive norms lead to desirable outcomes and that defensive norms lead to less desirable outcomes. Culture has this impact by fostering an atmosphere among members that enhances (constructive) or detracts from (defensive) a firm's ability to exploit market opportunities or avoid threats. Research using the OCI suggests that firms with defensive cultures have lower levels of effectiveness than do firms with constructive cultures (Cooke & Rousseau, 1988; Cooke & Szumal, 2000; Klein, 2003).

METHOD

Participants and data collection

A cross-sectional survey-based data set was analyzed to examine the proposed framework linking leadership styles and cultures of organizations to their effectiveness. The data analyzed were collected through the use of two standardized and previously validated questionnaires – The OCI (Cooke & Lafferty, 1986) and the OEI (Cooke, 1997).

Data were available for analysis from a total of over 2,600 members of more than 300 sub-units or departments of various organizations. The sample included organizations from a broad spectrum of industry groups, in both manufacturing and service sectors, ranging in size from sole-proprietorships to major corporations with tens of thousands of employees. The surveys were originally administered as part of classroom teaching and learning projects directed by the author and carried out by graduate students enrolled in change management seminars at a major university in the United States. The students administering the surveys were employees of the target firm (when students surveyed their own organizations, they generally focused on departments other than their own).

The number of persons surveyed within each unit ranged from a minimum of five to maximum of 15. In very small organizations, all members were surveyed; in larger organizations, the data collection effort focused on a selected unit, department, or work group. When large units within an organization were targeted, a random sample of respondents was selected to keep the n within 15. The employees surveyed within each unit generally held jobs at the same level of responsibility and reported to the same manager, so their frame of reference was that of a cohesive work group.

The respondent-level survey data were aggregated to the unit level, producing an analysis file of slightly more than 300 work units with the variables based on the mean responses of, on average, eight members per work unit. The initial individual-level and aggregated data files represent strength of the study, given that they are sufficiently large to allow for both reliability and validity testing (unit the unit-level data set).

Measures

Organizational culture

Cultural norm was assessed using the OCI, which is a validated survey instrument that is widely used both in organizational consulting and for academic research purposes. The OCI measures the cultures of organizations in terms of 12 sets of behavioral norms and expectations. These norms cluster into three groups of factors representing distinct types of cultures: constructive, passive-defensive, and aggressive-defensive. The inventory includes 120 items on a Likert scale that measure behaviors, ten associated with each of the 12 styles. The respondents are asked to identify the extent to which these behaviors 'help people to fit in and meet expectations' in their organizations. The response items range from 1 to 5, with 1 = 'not at all' and 5 = 'to a very great extent.' A low score reflects weak norms and a high score, strong expectations for a cultural style. The responses of members of the same work unit were averaged and an aggregated profile for the work unit was created.

The validity and reliability of the OCI scales have been assessed in journal articles (Cooke & Szumal, 1993, 2000). Reliability and validity tests were also performed on the data set in this article as well. Table 2 contains construct validity results for factor analysis with varimax rotation of OCI sample used in this research project. Table 3 contains the results of the reliability analysis for the OCI. The Cronbach's α for the 12 styles ranged from 0.75 to 0.92.

TABLE 2. CONSTRUCT VALIDITY: FACTOR ANALYSIS WITH VARIMAX ROTATION FOR ORGANIZATIONAL CULTURE (THREE COMPONENTS EXTRACTED)

Scale	Factor one Constructive	Factor two Aggressive-defensive	Factor three Passive-defensive
OCI scales			
Achievement	**0.88**	0.12	−0.30
Self-actualizing	**0.91**	−0.02	−0.26
Humanistic	**0.91**	−0.23	−0.15
Affiliative	**0.93**	−0.19	0.11
Approval	−0.02	0.38	**0.81**
Conventional	−0.25	0.38	**0.82**
Dependent	−0.23	0.34	**0.84**
Avoidance	−0.54	0.45	**0.54**
Oppositional	−0.18	**0.70**	0.29
Power	−0.16	**0.86**	0.28
Competitive	−0.02	**0.86**	0.20
Perfectionistic	−0.02	**0.72**	0.35
Eigenvalue (before rotation)	6.07	2.73	0.96
Total variance explained (%) (after rotation)	31	26	23
Cumulative variance explained (%)	31	57	81

Notes. $n = 2,662$.
OCI = Organizational Culture Inventory.

TABLE 3. INTERNAL CONSISTENCY AND INTER-RATER RELIABILITY AGREEMENT FOR ORGANIZATIONAL CULTURE MEASURES

Scale	Mean (SD)	Internal consistency Cronbach's α	Inter-rater reliability	
			F-ratio	η^2
OCI scales				
Achievement	36.36 (6.78)	0.86	2.56[a]	0.26
Self-actualizing	33.09 (6.62)	0.83	2.31	0.24
Humanistic	35.22 (7.91)	0.91	2.81	0.27
Affiliative	36.80 (7.68)	0.92	2.65	0.26
Approval	26.33 (7.14)	0.85	1.83	0.19
Conventional	27.05 (7.55)	0.87	2.60	0.26
Dependent	29.64 (6.54)	0.80	2.13	0.22
Avoidance	20.58 (7.26)	0.88	2.27	0.23
Oppositional	22.08 (5.65)	0.75	1.85	0.19
Power	24.29 (7.60)	0.86	2.20	0.27
Competitive	22.69 (7.80)	0.88	2.37	0.24
Perfectionistic	29.25 (6.97)	0.82	2.27	0.23

Notes. $n = 2,662$.
[a] All F-ratios are significant at $p < .001$.

Leadership

Leadership was assessed using a four-factor model of leadership behavior, which includes task facilitation, interactive facilitation, goal emphasis, and consideration (see Appendix for the items comprising the scales). The leadership items were originally derived from Bowers and Seashore (1966). The items are part of the OEI, a survey which measures behavioral and attitudinal indicators of effectiveness and also measures the internal factors, such as leadership, that can impact effectiveness (Szumal, 2001).

The internal consistency and inter-rater reliability of the leadership scales have been independently established (Szumal, 2001) and were also assessed for this data set. The results are in Table 3, which contains the results of the reliability analysis of the leadership scales for this research project. The Cronbach's α for the four leadership behaviors ranged from 0.75 to 0.88, all in the acceptable range.

Outcomes (organizational-level effectiveness)

The variable, 'organizational-level effectiveness' is measured through examining the 'quality of service,' produced by the organization. The scale was derived from the OEI and indicates 'the extent to which members believe the organization provides high quality products and services to external clients' (Szumal, 2001: 6). Quality of service is frequently used to indicate organizational effectiveness (Seashore, 1965; Friedlander & Pickle, 1968; Hitt, 1988; Kreitner & Kinicki, 2011). It has been identified as an outcome of organizational culture and behavioral norms (Zeithaml, Parasuraman, & Berry, 1990; Cooke & Szumal, 2000). This scale consists of six items (see Appendix).

The internal consistency of these scales has been independently established (Szumal, 2001) and was also assessed for this study using Cronbach's α. The results ranged from 0.76 to 0.88, all in the acceptable range.

This research presumes that the causal factors (leadership styles) and outcomes (quality of service) measured by our scales are related to culture, so correlational analyses were performed between the relevant leadership and outcome scales and the OCI measures of culture. The relationships to be expected between the OCI and these scales are based on previous studies (Cooke & Szumal, 1993;

TABLE 4. INTERCORRELATIONS

	1	2	3	4	5	6	7
Culture							
1. Constructive factor	1						
2. Passive-defensive factor	0	1					
3. Aggressive-defensive factor	0	0	1				
Skills/qualities							
4. Interaction facilitation	0.54**	−0.28**	−0.16**	1			
5. Task facilitation	0.54**	−0.17**	−0.15**	0.73**	1		
6. Goal emphasis	0.55**	−0.30**	−0.20**	0.76**	0.73**	1	
7. Consideration	0.51**	−0.28**	−0.28**	0.71**	0.74**	0.80**	1

Notes. $n = 2{,}662$.
**$p < .01$.

Kosmoski-Goepfert, 1994; Klein, Masi, & Weidner, 1995; Szumal, 2001). Thus, leadership styles should be positively related to constructive cultures and negatively related to passive-defensive and aggressive-defensive styles. Quality of service should also be positively related to the OCI's constructive cultures and negatively related to passive-defensive and, to a somewhat lesser degree, aggressive-defensive cultures.

Analytic techniques

A correlation matrix showing the relationship among the variables measured is presented in Table 4. The correlation analysis using Pearson product–moment correlations provides preliminary tests of the hypotheses and checks the strength of linear relationships. The hypotheses are tested primarily through the use of multiple regression analysis. β coefficients and *t*-values were obtained by regressing each of the three cultural styles (separately) on the independent (leadership style) variables, which were task facilitation, interaction facilitation, consideration, and goal emphasis. We expected to see a positive relationship between these variables and the constructive culture and a negative relationship between these variables and the defensive cultures. We also regressed organizational-level quality of service on the three cultural styles. We expected to see a positive relationship between the variable and the constructive cultural styles and a negative relationship with the defensive styles.

RESEARCH RESULTS

Hypothesis testing

The correlations among the variables for culture and leadership style are presented in Table 4. Constructive norms were significantly associated with all four leadership styles. Passive-defensive and aggressive-defensive norms were negatively associated with all four leadership styles, which is consistent with Hypotheses 1 and 2.

Hypothesis 1: Across organizations, task and interaction facilitation, goal setting, and supportive leadership will be positively related to constructive cultural norms.

The standardized regression coefficients and *t*-values obtained when cultural norms were regressed on leadership style, as shown in Table 5, indicate positive and significant correlations between

TABLE 5. REGRESSION ANALYSIS: EFFECTS OF LEADERSHIP STYLES ON ORGANIZATIONAL CULTURE

| | Dependent variables | | | | | |
| | Constructive culture | | Aggressive-defensive culture | | Passive-defensive culture | |
Independent variables	β	t	β	t	β	t
Leadership						
Interaction facilitation	0.18	2.41*	0.03	0.30	−0.10	−1.11
Task facilitation	0.22	2.87**	0.10	1.43	0.20	2.25*
Goal emphasis	0.21	2.45*	0.01	0.14	−0.23	−2.29*
Consideration	0.03	0.42	−0.39	−3.93***	−0.17	−1.75
Adjusted R^2	0.35		0.07		0.10	
F-ratio	42.8***		7.22***		9.57	

Notes. $n = 310$.
*$p < .05$, **$p < .01$, ***$p < .001$.

constructive cultural norms and three of the four measures of leadership behavior (interaction facilitation: $\beta = 0.18$, $t = 2.41$, $p < .05$; task facilitation: $\beta = 0.22$, $t = 2.87$, $p < .01$; goal emphasis: $\beta = 0.21$, $t = 2.45$, $p < .05$; consideration: $\beta = 0.03$, $t = 0.42$. Only consideration does not appear to be significantly related to constructive cultural norms. Thus, Hypothesis 1 is largely supported.

Hypothesis 2: Across organizations, task and interaction facilitation, goal setting, and supportive leadership will be negatively related to defensive cultural norms.

Table 5, again, contains the results for Hypothesis 2. Consideration leadership styles, however, are strongly and negatively related to the aggressive-defensive cultural norms ($\beta = -0.39$, $t = 3.93$, $p < .001$), consistent with Hypothesis 2. The β coefficients for the remaining leadership measures are not significant for aggressive-defensive cultural styles (interaction facilitation: $\beta = 0.03$, $t = 0.30$; task facilitation: $\beta = 0.10$, $t = 1.43$; goal emphasis: $\beta = 0.01$, $t = 0.14$).

Finally, two of the leadership measures, task facilitation ($\beta = 0.20$, $t = 2.25$, $p < .05$) and goal emphasis ($\beta = -0.23$, $t = -2.29$, $p < .05$) are related to the strength of passive-defensive norms. The findings for task facilitation, however, are positive, thus not in the direction expected. This would indicate that efforts by managers to facilitate the work of subordinates appear to accentuate norms for dependent, approval, and conventional behaviors, which was unexpected for task facilitation. In contrast, the results for goal emphasis leadership styles are in the predicted direction, with a weak emphasis on goals promoting passive-defensive norms. β coefficients for the other two leadership variables are not significant in terms of passive-defensive leadership styles (interaction facilitation: $\beta = -0.10$, $t = -1.11$; consideration: $\beta = -0.17$, $t = -1.75$). Thus, Hypothesis 2 is only partially supported.

Hypothesis 3: Across organizations, organizational-level quality is positively related to the strength of constructive cultural norms and negatively related to the strength of defensive cultural norms.

β coefficients and t-values were obtained by regressing organizational-level quality on the three cultural styles, as is revealed in Table 6. The β coefficients are expected to be positive for the constructive styles and negative for the defensive styles.

The results in Table 6 demonstrate a significant and positive relationship between the strength of constructive norms and quality ($\beta = 0.51$, $t = 10.72$, $p < .001$), which is consistent with

TABLE 6. (HYPOTHESIS 3) REGRESSION ANALYSIS: ORGANIZATIONAL-LEVEL OUTCOMES

| Independent variables: cultural norms | Dependent variable: organizational-level outcomes | |
| | Organizational-level quality | |
	β	t
Constructive norms	0.51	10.72***
Aggressive-defensive norms	−0.12	2.60**
Passive-defensive norms	−0.17	−3.65***
Adjusted R^2	0.30	
F-ratio	45.08***	

Notes. n = 310.
p < .01,*p < .001.

Hypothesis 3. The data also reveal significant and negative relationships between aggressive-defensive norms and quality ($\beta = −0.12$, $t = 2.60$, $p < .01$) and passive-defensive norms ($\beta = −0.17$, $t = −3.66$, $p < .001$), consistent with this hypothesis. The cultural styles, taken together, account for 30% of the variance in the quality measure (adjusted $R^2 = 0.30$), providing support for Hypothesis 3.

DISCUSSION AND APPLICATION OF THE FRAMEWORK

Relationship between leadership styles, cultural norms, and organizational quality

The research results provided some insights into, first, the relative importance of leadership when examining cultural norms. Generally speaking, leadership seeks to foster an atmosphere conducive to implementing organizational goals and strategies (Kotter, 1996). Organizational cultures emerge both from the bottom-up choices made by members as well as the top-down decisions of management. It seems reasonable to assume that managing culture relies on effective leadership coupled with the commitment and capacity of members who occupy the culture (Schein, 1992). Managing corporate culture may entail members discarding old values and embracing new ones, learning new behaviors, and managing the anxiety associated with change. Leaders who possess the technical and interpersonal skills to shape the firm's culture are an essential ingredient in this equation. Leaders play critical roles in part because they are charged with selecting new firm members who will fit in and meet expectations. Leaders also have the legitimate authority to challenge existing norms that may impede the achievement of corporate goals. Although bottom-up transformations in values and behaviors do occur (Beer, Spector, & Eisenstadt, 1990), strong leadership and acceptance of changes initiated from above seem to be a *sine qua non* for these changes to gain legitimacy.

Three of our four leadership measures – interaction facilitation, task facilitation, and goal emphasis – were found to be significantly related to constructive cultures where members are expected to both support their co-workers and take on challenging and significant assignments. Consideration behaviors, where the manager exhibits warm, friendly, and caring attitudes toward subordinates, are missing from aggressive-defensive cultures, consistent with Hypothesis 2. The study may bear out the maxim that 'dominance reflects power, but leadership requires building consensus.' The results

indicate that the leadership skills of managers and supervisors are critical factors in the creation and reinforcement of cultural norms.

The final research question focused on the relationship between organizational culture and effectiveness, operationalized as organizational-level quality of service. The results provided strong support for the proposition that cultural norms influence quality, and support the general proposition that 'culture matters,' in spite of being a very challenging construct to work with.

The results provide clear insights regarding the importance of cultural norms to the perceived quality of a firm's products and services. Firms with constructive cultures can engage the entire organization to build a cohesive focus and collective commitment to delivering high-quality products and services. It seems that firms with constructive cultures manage to send signals to members that encourage teamwork, development of knowledge, skills, and abilities, and a commitment to meeting customer needs. The results seem to be products and services rated highly by both employees and managers.

These results reinforce the idea that organizational culture can serve as a powerful tool for enhancing product quality. Behavioral norms and expectations are the ether through which management sends its strategies, plans, hopes, and dreams to its members. By helping us understand why members in certain organizations behave as they do, culture is a valuable tool for aligning behavior with customer-focused and quality-focused norms. As the pressure to attain higher quality standards continues to increase, the challenge of developing effective levels of collaboration, creativity, and innovation will fall to the keepers of the cultural flame.

STUDY LIMITATIONS AND FUTURE RESEARCH

It is noted that many factors influence organizational culture, not just leadership. Consequently, when one is attempting to explain the strength or direction of culture, it is important to consider and control for as many causal variables as possible. A research model can be constructed that will include a significant number of independent variables besides leadership, such as systems, structure, and job design technology. Other factors that may shape and reinforce cultural norms include goal setting, training and development, reward and punishment, and espoused values. Future research in this area can certainly include a broader set of variables.

There are also limitations in the sample. The respondents were members of work organizations and had already been pre-screened by their employers, at least as far as their suitability for work and membership is concerned. Though this pre-screening could reduce variability compared to the general population and may limit generalizability of the results, it could be argued that most, if not all, organizational members are pre-screened as such. A more important factor is that the employees surveyed were from a single unit of their respective organizations. Given that organizations tend to be sub-cultural, it is possible that the sub-cultures of their units do not reliably generalize to the cultures of the larger organization.

These limitations are balanced by the strength of the size of the sample. The sample is unusually large for a study of this type, i.e., there is a large k at the work-unit level and a large n at the individual level ($k = 311$ and $n = 2,662$, respectively). This large sample ensured that data would be available on a wide variety of organizations and provide the necessary statistical degrees of freedom to test the hypotheses.

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APPENDIX

Scales of Leadership Variables

1. Leadership styles.
   a. Interaction facilitation
      …encourages people to work as a team
      …holds group meetings with you and your co-workers
      …encourages members of your workgroup to exchange ideas.

   b. Task facilitation
      …offers ideas to help you solve work-related problems
      …helps you plan your work
      …shows you how to improve your work

   c. Goal emphasis
      …sets an example by working hard
      …maintains high standards of performance
      …encourages people to give their best effort

   d. Consideration
      …pays attention to your opinions
      …willingly listens to your problems
      …is friendly and easy to approach

2. Organizational-level quality of service

    …the quality of your organization's products/services meets customer expectations

    …the quality of products/services is inconsistent – subject to variability

    …you would choose to do business with your organization (if you were in the market).

    …your organization has a reputation for superior customer service

    …your organization will get repeat business from its present customers

    …you would recommend this organization to potential customers.