



Organizational culture and transformational leadership as predictors of business unit performance

Athena Xenikou

Department of Psychology, University of Thessaloniki, Thessaloniki, Greece, and

Maria Simosi

*Department of Product and System Design Engineering,
University of Aegean, Ermoupolis, Greece*

Abstract

Purpose – The aim of the study was to examine the relationship between transformational leadership and organizational cultural orientations, as well as the joint effect of transformational leadership and organizational culture on business unit performance.

Design/methodology/approach – About 300 employees of a large financial organization in Greece filled in a number of questionnaires measuring organizational culture orientations and transformational leadership. The measurement of business unit performance was obtained by the organization under study.

Findings – A path analysis showed that the achievement and adaptive cultural orientations had a direct effect on performance. Moreover, transformational leadership and humanistic orientation had an indirect positive impact on performance via achievement orientation.

Research limitations/implications – A research limitation is that the causal direction of the relations between the predictors and the criteria has been partially established by controlling for the effect of past performance on the perceptions of organizational culture and leadership.

Practical implications – On a practical level the findings suggest that constructive and positive social relations at work need to be accompanied by goal setting and task accomplishment if high organizational performance is to be achieved.

Originality/value – The originality of this study concerns the finding that organizational culture mediates the effect of transformational leadership on business unit performance.

Keywords Organizational culture, Transformational leadership, Business performance

Paper type Research paper

Organizational culture and transformational leadership have been theoretically and empirically linked to organizational effectiveness. During the 1990s a number of comparative studies on the culture-performance link showed that certain culture orientations are conducive to performance (Calori and Sarnin, 1991; Denison, 1990; Denison and Mishra, 1995; Gordon and DiTomaso, 1992; Kotter and Heskett, 1992; Smart and St. John, 1996). As far as transformational leadership is concerned, Bass (1985) has suggested that transformational qualities lead to performance beyond expectations in organizational settings; research has empirically demonstrated that there is a relation between transformational attributes and organizational measures of effectiveness (Howell and Avolio, 1993; Lowe *et al.*, 1996; Waldman *et al.*, 2001).



Although a considerable number of researchers have argued that there is a constant interplay between organizational culture and leadership (Bass and Avolio, 1993; Schein, 1992; Trice and Beyer, 1993; Waldman and Yammarino, 1999), there are limited empirical studies examining the relation between leadership and culture as well as their joint effect on important organizational outcomes. This study set out to investigate whether there is an interrelation between transformational leadership and organizational culture, and both leadership and culture have a joint effect on important organizational outcomes. In other words, the question that we address concerns the effect of transformational leadership on the cultural orientations that characterize a specific organization, as well as the combined effect of transformational leadership and culture on performance.

In order to investigate the interrelation between leadership and culture, as well as their joint effect on performance, we primarily reviewed the literature on the culture-performance link to identify the culture dimensions that should be included in this study. Denison and his colleagues (Denison, 1990; Denison and Mishra, 1995; Denison *et al.*, 2004) have developed and empirically supported a theory of organizational culture and effectiveness that identifies four cultural traits that are positively related to organizational performance, namely involvement and participation, consistency and normative integration, adaptability, and mission. In addition, Cooke and his associates (Cooke and Rousseau, 1988; Rousseau, 1990; Cooke and Szumal, 1993; Cooke and Szumal, 2000) have demonstrated that efficient, as well as innovative, organizations have group norms that promote achievement, self-actualisation, participation in decision making, cooperation, social support, and constructive interpersonal relations. One has to note that Cooke's model proposes that organizational culture is conducive to effectiveness given that a humanistic orientation is combined with an achievement orientation.

In another exploratory model of the relation between organizational culture and performance Marcoulides and Heck (1993) showed that culture as reflected in task organization had a positive direct effect on performance. Petty *et al.* (1995) found that a cultural emphasis on cooperation and teamwork were conducive to organizational effectiveness. Similarly, Smart and St. John (1996) showed that support, innovation, and goal orientations were related to higher performance in American colleges and universities in comparison to bureaucratic orientation.

On the basis of previous findings we propose that there are primarily two cultural orientations that are predictors of effectiveness within organizations. The first of these traits concerns a "humanistic orientation" and reflects the "human relations movement" in the workplace. Humanistic orientation is characterised by cooperation among organizational members, emphasis put on teamwork, employees' self-actualisation and empowerment, development of people's creative potential, participation in decision making, constructive interpersonal relations, and social support. Organizational norms that encourage cooperation, teamwork, and participation are related to performance because they facilitate group coordination and synergy of divergent organizational resources. Moreover, self-actualisation and employee development are the basis of creating a large pool of organizational resources that reflect the human capital within organizations and lead to organizational efficiency.

The second cultural trait concerns an "achievement orientation" and involves assumptions, values and practices on task organization, goal setting, organizational

objectives, experimentation, and an emphasis put on being effective. Organizations that promote a “norm of efficiency and achievement” motivate employees by setting difficult, but attainable goals, and providing feedback on employees’ performance, which in turn, promotes perceived competence and feelings of self and collective efficacy. Apart from setting goals and organizational objectives an achievement orientation is characterized by experimentation and putting new ideas into action, which enables an organization to protect itself from the reported negative effect of goal setting on a long-term orientation.

We formulated two hypotheses to test the proposition that business unit performance is related to the humanistic and achievement culture orientations:

- H1.* Humanistic orientation was anticipated to be positively related to business unit performance.
- H2.* Achievement orientation was expected to be positively associated with business unit performance.

Moreover, there is research on the culture-performance link that has focused on a set of contingency factors, mainly the competitive environment, that moderate the relation between culture traits and effectiveness. Kotter and Heskett (1992) argued that only cultures which help an organization to adapt to external changes contribute to higher performance in the long run. They found that the theme of tougher competition helping to create culture-environment mismatches was frequently reported by managers of lower performing organizations. Gordon (1985, 1991), on the other hand, suggested that differences in the competitive environment, that is, stable versus dynamic marketplaces, moderate the effect of culture traits on performance. Gordon and DiTomaso (1992) found that adaptability was associated with effectiveness in dynamic rather than stable business environments. Finally, Calori and Sarnin (1991) found that in a stable-mature industry a firm’s growth performance, but not profitability, was related to adaptation. Therefore, the contingency approach to culture-performance link has identified a third culture orientation as an important predictor of organizational effectiveness, namely “adaptive orientation”. Regarding the relation between an adaptive culture orientation and organizational effectiveness we formulated the following hypothesis:

- H3.* Adaptive orientation was anticipated to be positively associated with business unit performance given that the competitive environment is dynamic.

The effect of transformational leadership on organizational culture, and their joint effect on performance

Bass and Avolio (1993) have argued that leadership and culture are so well interconnected that it is possible to describe an organizational culture characterized by transformational qualities. The literature on transformational leadership makes an attempt to approach leadership as a social process by putting emphasis on how leaders stimulate their followers to transcend their own self-interests for the sake of their team and the larger organization. Transformational leaders are typically described as those who inspire their followers to adopt goals and values that are consistent with the

leader's vision. According to Bass (1985), transformational leaders do work within the culture as it exists but are primarily concerned with changing organizational culture. Bass proposes that transformational leadership promotes a working environment characterised by the achievement of high goals, self-actualisation, and personal development. Similarly, Bass and Avolio (1993) suggested that transformational leaders move their organizations in the direction of more transformational qualities in their cultures, namely, accomplishment, intellectual stimulation, and individual consideration, therefore, suggesting that transformational leadership has a direct effect on culture. Block (2003) found that employees who rated their immediate supervisor high in transformational leadership were more likely to perceive the culture of their organization as adaptive, involving, integrating, and having a clear mission.

As far as the relationship between charismatic leadership and organizational culture is concerned, Pillai and Meindl (1998) found that charismatic leadership is associated with the presence of collectivistic values in work groups and a heightened sense of community. Moreover, Waldman and Yammarino (1999) have proposed that there is a reciprocal causation between charismatic leadership in senior managers and adaptive organizational cultures; a charismatic leader is in a position to have an impact on organizational culture and adaptive cultures tend to precede or allow for the emergence of charismatic leaders.

On the basis of the relevant literature we hypothesized that transformational leadership has a direct effect on achievement, humanistic, and adaptive culture orientations.

H4. Transformational leadership was expected to be positively related to achievement, humanistic, and adaptive cultural orientations.

With regard to the joint effect of organizational culture and transformational leadership on organizational performance, Ogbonna and Harris (2000) have conducted the only study, to our knowledge, that provides some empirical evidence on this issue. They found that supportive and participative leadership were indirectly and positively linked to performance via the innovative and the competitive[1] cultures, whereas instrumental (task oriented) leadership had an indirect negative effect on performance. Ogbonna and Harris argued that these results show that the relationship between leadership style and performance is mediated by the form of organizational culture that is present. Moreover, Lim (1995) has proposed that culture might be the filter through which other important variables such as leadership influence organizational performance.

There are thus some theoretical propositions and preliminary findings suggesting that organizational culture might be the filter through which leadership influences various organizational outcomes (Lim, 1995; Ogbonna and Harris, 2000). Therefore, we hypothesized that transformational leadership is related to performance through its effect on organizational culture:

H5. Transformational leadership was expected to have an indirect positive effect on performance via achievement, humanistic, and adaptive cultural orientations.

Method

Participants and business units

About 300 employees of a large financial organization in Greece participated in the present study. There were 162 (55 per cent) women and 131 (45 per cent) men. 11 per cent were between 20 and 29 years old, 31 percent were between 30 and 39 years old, another 25 per cent were between 40 and 49 years old, and 11 per cent were above 50 years old. Concerning hierarchical position, 55 per cent did not hold a management position, 38 per cent were middle managers, and 7 per cent were upper level managers. Finally, only 2 (less than 1 per cent) participants reported being with the organization less than six months, 66 (23 per cent) between six months and four years, and 225 (76 per cent) more than four years.

The business units that were studied were 32. Each business unit is a branch of the large-divisional corporation and operate autonomously to a great extent. The branches are directed by a general director, who is accountable to the top management of the corporation. The number of employees working in the branches included in this study ranges between 10 and 36 employees. More specifically, there were 14 branches with 10-18 employees, 14 branches with 19-27 employees, and 5 branches employing 28-36 people.

Measures

Culture orientations

The three culture orientations measured in the current study were the humanistic, achievement, and adaptive orientations. Two of the culture orientations, namely humanistic and achievement were measured by using two subscales of the Organizational Culture Inventory (OCI; Cooke and Lafferty, 1989). The OCI was designed to measure behaviours that are expected or implicitly required by members of an organization. The 12 subscales of the OCI contain ten items each, which are measured on a 1-5 Likert scale (1 = not at all, 5 = to a very great extent). The OCI has been shown to be a reliable and valid measure of organizational culture (Cooke and Rousseau, 1988; Cooke and Szumal, 1993; Xenikou and Furnham, 1996). The subscales of the OCI that were used in the present study are labelled by the constructors as "humanistic/helpful" and "achievement". The humanistic/helpful subscale measures whether members are expected to be supportive in their dealing with one another, the organization is managed in a participative and person-centred way, and an emphasis is put on cooperation and constructive interpersonal relations. The achievement subscale contains items referring to behavioural norms that place a value on goal setting, the accomplishment of objectives, and the pursuit of a standard of excellence.

The adaptive culture orientation was measured by using Denison and Mishra's (1995) subscale labelled "adaptability". The subscale includes two items measured on a 5-point Likert scale (1 = not at all, 5 = to a very great extent). The adaptability subscale measures whether the organization focuses on customer demands and whether it is responsive to environmental changes. Denison and Mishra have demonstrated the reliability as well as the convergent and discriminant validity of the subscale.

Multifactor leadership questionnaire (Avolio et al., 1999)

The multifactor leadership questionnaire (MLQ) (Form 5X) was used to measure transformational leadership. Participants were asked to describe their immediate

supervisor's leadership on 20 items using a 5-point Likert scale (5 = frequently, if not always; 1 = not at all). In the MLQ (Form 5X) transformational leadership is measured by the usage of three transformational scales, namely charisma/inspirational (12 items), intellectual stimulation (4 items), and individual consideration (4 items). Avolio *et al.* (1999) reported that the MLQ's (Form 5X) coefficient α 's range from 0.92 to 0.63 and showed the validity of the inventory by conducting a number of confirmatory factor analyses.

Organizational performance

Two separate objective measures of financial performance were provided by the organization for 32 of its business units. Both performance measures concern the percentage of annual performance goal met by each business unit. The annual performance goal of each branch is set by the organization's top management and it contains a number of financial indices such as the sale of insurance products, the number and size of saving accounts, and the issue of new loans and credit cards. The percentage of goal that is achieved by each branch is used to rate each branch's performance on a 4-point scale (4 = above 85 per cent, 3 = 85 per cent to 50 per cent, 2 = 25 to 50 per cent, 1 = below 25 per cent). According to the clarifications provided by top management, goal setting is determined by each branch's sales volume during the past three years, the personnel and local market profile of each branch, as well as the general financial objectives of the organization as a whole. The first performance measure was taken five months prior to the collection of this study's data and is labelled "past performance", whereas the second performance measure was taken seven months following this study's data collection and is labelled "performance".

Procedure

Participants were reached at work and were asked to fill in a set of questionnaires concerning various aspects of work life. They were told truthfully that the HR department was interested in doing a "staff survey" and that a report would be written to which they had access. It was also made explicit in the introductory section of the inventory that they were not required to identify themselves by name. The questionnaire normally took around 45 minutes to complete. Participants filled in the questionnaires either at home or at work.

Results

Descriptive statistics, Cronbach's α s, and correlations among all relevant variables are presented in Tables I and II. The coefficients of internal reliability reached acceptable

Variables	M	SD	α
Achievement orientation	29.48	6.65	0.87
Humanistic orientation	28.60	8.21	0.93
Adaptive orientation	4.55	1.65	0.64
Transformational leadership	68.54	16.59	0.94
Charisma	42.51	9.58	0.91
Performance	2.92	1.07	—
Past performance	1.63	1.04	—

Note: $N = 300$

Table I.
Means, standard
deviations, and Cronbach
 α coefficients of the
variables

levels for all the variables included in the present analyses. Table II presents the correlations among culture orientations, transformational leadership, and business unit performance.

The achievement orientation was significantly and positively correlated with business unit performance whereas humanistic orientation was not correlated with performance. Therefore, organizational norms that promote goal setting, productivity, and effectiveness were associated with higher performance. The correlation between adaptive orientation and business unit performance was marginally significant and negative showing that a focus on change might possibly have a negative effect on performance or that high performance systems have a tendency to avoid change. Regarding the relationship between transformational leadership and organizational culture there were moderate positive correlations between transformational leadership on the one hand and achievement, humanistic, and adaptive orientations on the other. Finally, as far as the link between leadership and performance is concerned, there was a marginally significant positive correlation between transformational leadership and business unit performance, whereas charisma had a significant positive correlation with performance.

In order to further examine the relationship between cultural orientations and performance, the link between culture and transformational leadership, and the combined effect of culture orientations and leadership style on business unit performance two separate path analyses were carried out. Path analysis (Pendhazur, 1982) involves conducting a number of multiple regression analyses to construct a model of associations among the predictor variables and the criterion. Direct and indirect effects[2] of the predictor variables on the criterion can be calculated, which illustrate more precisely the nature of the relations between the predictors and the criterion.

Table III reports the results of three hierarchical regression analyses that were carried out to construct the path model showing the relations among culture orientations, transformational leadership, and business unit performance[3] after controlling for the effect of past performance. Individual responses were aggregated to the business unit level since the criterion variable is an organizational level construct. Prior to conducting the hierarchical regression analyses we calculated the intra-class correlations (Bliese, 2000) for humanistic orientation (ICC1 = 0.11, ICC2 = 0.51), achievement orientation (ICC1 = 0.06, ICC2 = 0.35), adaptive orientation (ICC1 = 0.03, ICC2 = 0.21), and transformational leadership (ICC1 = 0.07, ICC2 = 0.39). The findings of the hierarchical regression analyses demonstrate that

Table II.
Correlation coefficients of
all relevant variables

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Achievement orientation	(1) —					
Humanistic orientation	(2) 0.82***	—				
Adaptive orientation	(3) 0.41***	0.39***	—			
Transformational leadership	(4) 0.62***	0.57***	0.24***	—		
Charisma	(5) 0.63***	0.55***	0.25***	0.97***	—	
Performance	(6) 0.18**	0.09	-0.10 ^a	0.12 ^a	0.13*	—
Past performance	(7) 0.06	-0.01	0.05	0.05	0.07	0.24***

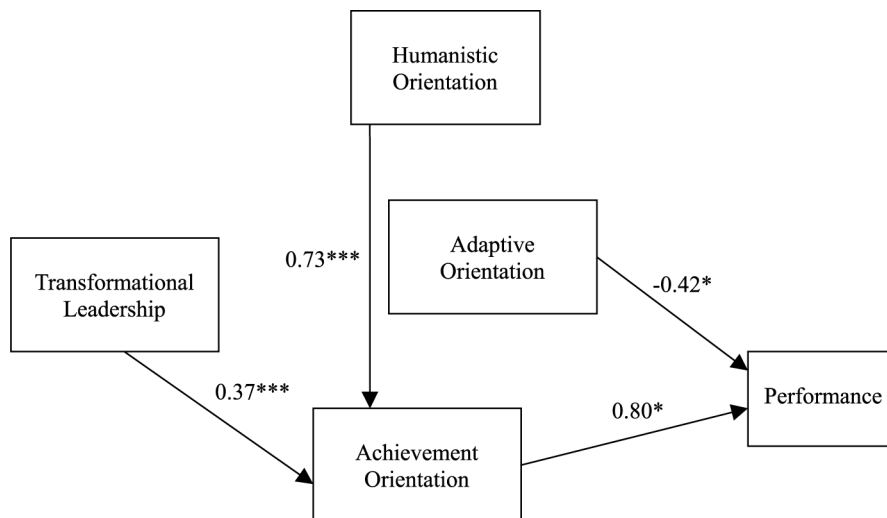
Notes: N = 300; ^ap ≤ 0.10; *p ≤ 0.05; **p ≤ 0.01; ***p ≤ 0.001

Criterion	Predictor(s)	R^2	ΔR^2	β	p
<i>1. Performance</i>					
Step 1: $F(1,31) = 0.96, p = \text{ns}$	Past performance	0.03		0.17	ns
Step 2: $F(5,27) = 3.64, p = 0.012$	Past performance	0.40	0.37	0.23	ns
	Achievement orientation			0.80	0.012
	Humanistic orientation			-0.29	ns
	Adaptive orientation			-0.42	0.015
	Transformational leadership			-0.13	ns
<i>2. Achievement Orientation</i>					
Step 1: $F(1,31) = 0.16, p = \text{ns}$	Past performance	0.01		-0.07	ns
Step 2: $F(4,28) = 20.95, p = 0.001$	Past performance	0.75	0.74	0.08	ns
	Humanistic orientation			0.73	0.001
	Adaptive orientation			-0.01	ns
	Transformational leadership			0.37	0.001
<i>3. Adaptive orientation</i>					
Step 1: $F(1,31) = 0.54, p = \text{ns}$	Past performance	0.02		0.13	ns
Step 2: $F(4,28) = 1.21, p = \text{ns}$	Past performance	0.15	0.13	0.18	ns
	Achievement orientation			-0.11	ns
	Humanistic orientation			0.40	ns
	Transformational leadership			-0.16	ns

Note: $N = 32$

Table III.
Three hierarchical regression analyses showing the impact of culture orientations and transformational leadership on business unit performance controlling for past business unit performance

all three measures of culture and transformational leadership are directly and/or indirectly related to business unit performance. In specific, achievement and adaptive orientations exert a direct effect on performance (Figure 1). In addition, humanistic orientation and transformational leadership have a purely indirect effect on business unit performance.



Notes: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

Figure 1.
The path analysis model of culture orientations, transformational leadership, and business unit performance

The achievement culture has a strong positive and direct effect on performance that indicates the important role of task orientation and accomplishment in organizational effectiveness. Interestingly, the humanistic orientation was found to have a marginally significant negative direct effect, as well as an indirect positive effect via the achievement culture, on business unit performance. Therefore, *H1* was rejected while *H2* was supported. Moreover, the adaptive orientation had a direct negative impact on business unit performance that contradicts *H3*.

The path model also unravels the way that transformational leadership affects organizational culture and business unit performance. The results showed that transformational leadership had an indirect positive effect on performance through achievement orientation and therefore, *H4* and *H5* were partially supported. It appears that the process of transformational leadership facilitates goal-oriented behaviour and task accomplishment (the achievement orientation) by offering intellectual stimulation, and new ways of framing and solving problems, which in turn has a positive influence on performance.

Because the literature on charismatic leadership has theoretically proposed and empirically found an association between charismatic leadership and organizational culture, we carried out another path analysis in which transformational leadership was replaced by charisma as measured by the MLQ (Avolio *et al.*, 1999). However, the results of this second analysis were very similar to the findings of the first analysis (Table IV).

Discussion

The results of the first path analysis showed that achievement and adaptive culture orientations had a significant and direct effect on business unit performance. It was found that achievement orientation had a direct positive effect, whereas adaptive orientation had

Criterion	Predictor(s)	R^2	ΔR^2	β	p
<i>1. Performance</i>					
Step 1: $F(1,31) = 0.96$, $p = \text{ns}$	Past performance	0.03		0.17	ns
Step 2: $F(5,27) = 3.53$, $p = 0.014$	Past performance	0.40	0.37	0.23	ns
	Achievement orientation			0.63	0.026
	Humanistic orientation			-0.18	ns
	Adaptive orientation			-0.42	0.016
	Charisma			0.08	ns
<i>2. Achievement orientation</i>					
Step 1: $F(1,31) = 0.16$, $p = \text{ns}$	Past performance	0.01		-0.07	ns
Step 2: $F(4,28) = 15.21$, $p = 0.001$	Past performance	0.69	0.68	-0.02	ns
	Humanistic orientation			0.80	0.001
	Adaptive orientation			-0.03	ns
	Charisma			0.25	0.027
<i>3. Adaptive orientation</i>					
Step 1: $F(1,31) = 0.54$, $p = \text{ns}$	Past performance	0.02		0.13	ns
Step 2: $F(4,28) = 1.21$, $p = \text{ns}$	Past performance	0.15	0.13	0.18	ns
	Achievement orientation			-0.09	ns
	Humanistic orientation			0.43	ns
	Charisma			0.02	ns

Note: $N = 32$

Table IV.
Three hierarchical regression analyses showing the impact of culture orientations and charisma on business unit performance controlling for past business unit performance

a direct negative effect on organizational performance. Therefore, work environments that promote goal setting, the accomplishment of objectives, and high standards of performance are conducive to performance. A possible explanation of the negative effect of adaptive cultural orientation on performance is that group norms promoting innovation and adaptability to environmental changes might decrease short-term financial performance, while it can possibly be conducive to long-term organizational performance comprising of financial, economic and other business-related factors. The energy and time spent by organizational members in constructing an innovative working environment might reduce the positive effect of goal setting and accomplishment on performance in the short run. On the other hand, an adaptive orientation might be a better predictor of long-term performance as longer periods of time might be necessary for the coordination of innovation and the accomplishment of goal alignment.

Contrary to our expectations, humanistic orientation was found to have a marginally significant negative direct effect on business unit performance. A possible explanation of this unexpected finding is that social support and a friendly work environment might enable employees to act towards meeting personal goals that are incompatible with organizational goals, as well as assisting their co-workers in meeting their own personal interests that are in conflict with the interests of the organization. For example, organizational members might help each other to do less work and take time off work that are not entitled when there are positive social relations among colleagues and at the same time behavioural norms do not emphasize goal accomplishment. As, however, there was also an indirect positive effect of humanistic orientation on performance via its effect on achievement orientation, it is possible to suggest that a cooperative social environment and constructive social relations at work are conducive to organizational performance given that cooperation and team spirit are closely related to keeping an eye on goal accomplishment.

Indeed, it might be helpful to future research exploring the combined effect of achievement and humanistic orientation on performance if the humanistic orientation was treated as a three-dimensional construct containing:

- (1) social support and positive relations at work;
- (2) cooperation in goal accomplishment; and
- (3) participation in decision making.

In accordance with Cooke and Rousseau's (1988) model of organizational culture we propose that achievement and humanistic orientations have a combined positive effect on effectiveness; but it seems that a distinction between having positive social relations at work, on the one hand, and using these positive relations to accomplish organizational goals, on the other, might be important to understand the precise nature of the culture-performance link.

As far as the effect of transformational leadership and organizational culture is concerned, the results indicate that transformational leadership leads to an achievement cultural orientation. Our research design do allow for making causal inferences, which are not though as strong as in experimental settings, since we controlled for the effect of past organizational performance when investigating the relationship between leadership and culture. Past organizational success or failure might have an effect on the organizational norms that are endorsed within an organization as well as perceptions of leadership style. Therefore, it is possible to suggest that transformational leadership

stimulates goal setting, task accomplishment, and an achievement orientation. Bass's (1985) proposition that transformational leadership leads to performance beyond expectations can be further elaborated on the basis of these findings. More specifically, transformational leadership might create group expectations for higher performance (achievement cultural orientation), which, in turn affect levels of performance.

One of the main questions that this study set out to explore was whether organizational culture is the filter through which leadership has an effect on performance. We found that two culture orientations had a direct effect on organizational performance and that transformational leadership had an indirect positive effect on performance via its impact on achievement orientation. These findings support the proposition that, when leadership is seen as a social process that involves leaders, followers and social situations, organizational culture is found to be a filter through which leadership influences performance. The present study showed that organizational culture mediates the effect of transformational leadership on performance. The mediating role of organizational culture in the leadership-performance link has also been demonstrated by Ogbonna and Harris (2000) in a study of multi-industry organizations. In specific, Ogbonna and Harris found that supportive, participative, and instrumental leadership styles had an indirect effect on performance via their impact on organizational culture. Therefore, the mediating role of organizational culture has been demonstrated by using different models of leadership.

A limitation of the current study is that the causal direction of the relations between the predictor variables and the criteria has been partially established. By controlling for the effect of past performance on the perceptions of organizational culture and leadership style we are in a position to argue that culture and leadership have an effect on performance. One though has to acknowledge that the question of causality can be more thoroughly addressed by longitudinal research designs in which all the variables are measured at different points in time (Wilderom *et al.*, 2000). A cause always precedes its effect and therefore, it is possible to find the causal direction of a relationship by taking measures at different time intervals. However, the theoretical elaboration of the association of predictors with criteria variables and the findings of correlational studies are invaluable sources in our effort to unravel causality.

On a practical level the findings on the relation between cultural orientations and short-term financial performance can be used in order to offer suggestions to practitioners on how to work with culture at a functional level. Constructive and positive social relations at work need to be accompanied by goal setting and task accomplishment in order to be conducive to organizational performance. An emphasis on adaptability and innovation does not always seem to have a positive impact on performance. A focus on adaptability might indeed undermine short-term performance while being conducive to long-term organizational performance.

These findings also have practical implications for the training and development of managers. Training and development management programmes could teach managers of the important role that culture plays in order to run an effective organization. Managers may potentially be able to increase performance by working on firm or subgroup culture (Adkins and Caldwell, 2004). Leadership must be guided by a realistic vision of what types of culture enhance performance and systematically work towards strengthening or even creating these cultural traits.

Notes

1. An important point that should be noticed concerning Ogbonna and Harris's study is that the measurement of competitive culture included a considerable number of items tapping achievement rather than competition. Therefore, one needs to be careful when interpreting the findings of this study since the positive effect of competitive culture on performance reported by Ogbonna and Harris can be as well interpreted as a positive effect of an achievement orientation on performance.
2. Direct effects are the beta weights of the multiple regressions. Indirect effects are the cross products of sequential beta weights. Total effects are the sum of direct and indirect effects.
3. The "enter" method for variable inclusion was used in all the hierarchical regression analyses.

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About the authors

Athena Xenikou is an Assistant Professor in Social and Organizational Psychology in the Department of Psychology at the Aristotle University of Thessaloniki. She has research interests in leadership, organizational culture, attributional processes in organizational settings, and job motivation. Athena Xenikou is the corresponding author and can be contacted at: axenikou@psy.auth.gr

Maria Simosi is a Lecturer in Organizational Theory in the Department of Product and System Design Engineering at the University of Aegean. Her research interests include organizational conflict and conflict resolution, leadership, and organizational commitment. E-mail: maria_simosi@hotmail.com