

Organizational culture and firm effectiveness: An examination of relative effects of culture traits and the balanced culture hypothesis in an emerging economy

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Abstract

Efforts to delineate the performance implications of organizational culture elements continue. The study examines the effects of four major organizational culture traits, involvement, consistency, adaptability, and mission, on measures of firm effectiveness, using data collected from manufacturing firms in Turkey. It is hypothesized that each cultural trait will exert positive effects on overall firm performance and a wide variety of effectiveness measures, independently from the effects of others. In addition, the view that a balanced combination of the four traits yields superior firm performance than an imbalanced combination is subjected to empirical testing. The results indicate that the mission trait is the most prominent of the four traits in terms of fostering overall firm performance, sales growth, market share growth, and ROA. In addition, a firm's ability to develop successful new products is influenced primarily by the adaptability and consistency traits. Employee satisfaction is determined for the most part by the involvement trait. Finally, while imbalanced combinations of certain pairs of cultural traits exert the expected negative effects on performance indicators, others seem to have positive effects.

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Keywords: Adaptability; Balanced culture; Consistency; Hypothesis; Involvement; Mission; Organizational culture; Organizational performance

1. Introduction

A growing research stream in organizational sciences views organizational culture as a principal aspect of an organization's functioning and a critical driver of effectiveness (e.g., Schein, 1983, 1984, 1985, 1992). Manifested in the shared fundamental beliefs and assumptions, values, attitudes, and behaviors of the organization's members, culture is theorized to be the prime factor (1) shaping organizational procedures

(Deal & Kennedy, 1982; Jarnagin & Slocum, 2007), (2) unifying organizational capabilities into a cohesive whole (Day, 1994), (3) providing solutions to the problems faced by the organization (Schein, 1984), and, thereby, (4) hindering or facilitating the organization's achievement of its goals (Denison, 1990). Furthermore, given its inherently "socially complex" and "causally ambiguous" nature, a comparative advantage gained through a culture-driven organizational capability is usually difficult to imitate, thus constituting a valuable source of sustained competitive advantage and superior performance (Barney, 1986; Hall, 1993; Peteraf, 1993; Wernerfelt, 1984).

Accordingly, researchers have presented empirical studies to characterize the organizational culture phenomenon and its impacts on organizational pro-

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cesses and outcomes, particularly on effectiveness (e.g., Carmeli & Tishler, 2004; Cooke & Rousseau, 1988; Denison & Mishra, 1995; Hofstede, Neuijen, Ohayr, & Sanders, 1990; Jermier, Slocum, Fry, & Gaines, 1991; O'Reilly, 1991; Powell & Dent-Micallef, 1997).¹ From a managerial standpoint, these efforts have produced valuable insights pertaining to the roles of specific cultural traits as predictors of effectiveness, drivers of organizational change, and bases of comparison between highly productive firms and less productive ones. The present study aims to extend and expand the state of knowledge in this emerging paradigm that links *organizational culture* elements with *effectiveness*. Specifically, we present evidence with regard to the following relatively under-researched areas.

First, note that, given the broad conceptualization of the construct of organizational culture, researchers have generally focused on a selected (and inevitably limited) set of cultural traits and examined their effects on (another, restricted set of) selected performance indicators. As Denison and Mishra (1995) assert, however, culture influences a wide variety of performance indicators through a multitude of mechanisms. In addition, each culture trait relate to specific measures of performance in its own unique way. Accordingly, to facilitate the development of a more general theory of organizational culture and effectiveness, we employ a *broader* set of culture traits in our research and examine their effects on *multiple* dimensions of effectiveness.

Second, in addition to the direct effects of specific culture traits, we investigate the impacts of putting excessive focus on some cultural traits and relatively less emphasis on others, that is, an imbalanced combination of critical culture traits, on organizational effectiveness. Culture theoreticians have repeatedly noted the paradoxical nature of organizational functioning and relevant cultural orientations (e.g., Cameron, 1986; Denison, 1990; Fisher, 1997; Quinn, 1988). This view suggests that, to compete effectively, all organizations face a number of contradictory challenges. Most notably, organizations need to simultaneously complement internal integration and coordination with external adaptability, attain a balanced composition of stability and flexibility, and blend top-down control with bottom-up involvement. Unless such paradoxical pressures are

managed with a *balanced* composition of pertinent cultural traits, the organization may easily become ineffective by attending “to one challenge or need exclusively to the point of dysfunction” (Denison, 1990; Cameron, 1986: p. 12). We investigate the viability of this “balanced culture” hypothesis.

And third, our research also responds to calls by many researchers (e.g., Denison, Haaland, & Goelzer, 2003a, 2003b) to investigate the organizational culture phenomenon in different cultural contexts, particularly in non-western nations. Research examining the extant theoretical postulates in a multitude of industries and different cultural contexts, and most importantly in emerging economies, is likely to improve our understanding of the global dimensions of the link between organizational culture and effectiveness. Our study presents evidence with regard to the organizational culture → effectiveness link using (multiple informant) data from 100 firms representing 18 major manufacturing industries in Turkey. Note that firms in Turkey operate in a volatile economy with highly unstable growth and inflation rates, and therefore different effectiveness outcomes from those reported previously can be expected in this particular empirical context.

Our empirical analyses are based on Denison's theory of organizational culture and effectiveness (Denison, 1990, 2000; Denison, Cho, and Young, 2000; Denison & Mishra, 1995; Denison & Neale, 1996). This framework focuses on four broadly defined cultural traits – involvement, consistency, adaptability, and mission – as key determinants of business performance. Using data from 1176 informants from the 100 sampled firms, we test the individual and combined effects of these four broad cultural traits on several dimensions of firm performance, i.e., financial performance indicators, market-based performance indicators, quality improvements, innovativeness, and employee satisfaction. Denison (2000) contends that the four major cultural traits of involvement, consistency, adaptability, and mission highlight major tensions or contradictions faced by modern organizations to perform effectively—most specifically, the trade-offs between stability and flexibility and between internal focus and external focus. We therefore turn our attention to the dynamic contradictions between the four traits next and examine the extent to which an imbalanced combination of these traits affects firm-level performance indicators. To these ends, we first provide a brief overview of Denison's model and develop rationales for our hypotheses. Next, we present the sampling, data collection, and analyses procedures employed in the study. Finally, we discuss the implications of our findings.

¹ These researchers have (either explicitly or implicitly) contended that the culture phenomenon is a measurable aspect of organizations that can be studied as a *variable with outcomes*, through both quantitative methods (e.g., surveys) and qualitative methods (e.g., in-depth interviews).

2. Denison's theory of organizational culture and effectiveness: an overview

Rooted in earlier works to reveal the functional relationships between culture and organizational outcomes (e.g., Denison, 1984; Gordon, 1985; Wilkins & Ouchi, 1983), Denison's model grew out of his efforts to develop an integrative theory of organizational culture that (1) explains how culture relates to organizational effectiveness, (2) identifies a broad set of traits and value dimensions enabling a fuller understanding of the culture → effectiveness relationship, and (3) provides further insights as to the specific processes by which these traits facilitate or inhibit effectiveness. Following Schein (1984), at the core of Denison's model are the underlying beliefs and assumptions that represent the deepest levels of organizational culture. These fundamental assumptions provide the foundation from which (1) more surface-level cultural components such as values and observable artifacts – symbols, heroes, rituals, etc. – are derived, and (2) behavior and action spring (Denison, 2000). Despite this central role attributed to the underlying beliefs and assumptions, however, and consistent with the predominant view in culture research (e.g., Hofstede, 1991), Denison's model makes comparisons of organizations based on relatively more “surface-level” values and their manifest practices. Such values are deemed both more accessible than the assumptions and more reliable than the artifacts (Denison, 2000).

Accordingly, Denison's model states that the four broadly defined cultural traits of involvement, consistency, adaptability, and mission, collectively facilitate an organization's capabilities for integrating and coordinating internal resources as well as its adaptation the external environment, thereby leading to superior organizational performance. The model further specifies that each trait is measured by three indexes (i.e., value dimensions). The *involvement* trait, for instance, is composed of the component indexes of “empowerment,” “team orientation,” and “capability development.” Organizations that value (1) individual authority and employee initiatives, (2) working cooperatively toward common goals, and (3) the development of employee skills are theorized to score high on this trait. According to Denison, a cultural profile scoring high on the involvement trait helps organizations to attain internal integration of resources by creating a sense of ownership and responsibility. Similarly, the *consistency* trait is also considered critical for achieving internal integration based on its ability to facilitate the coordination of activities. Unlike involvement, how-

ever, which emphasizes flexibility, consistency emphasizes stability and involves three components labeled “core values,” “agreement,” and “coordination and integration.” These three components refer, respectively, to the degree to which organizational members (1) “share a set of values which create a sense of identity and a clear set of expectations,” (2) “are able to reach agreement on critical issues and reconcile differences when they occur,” and (3) “work together well to achieve common goals” (Denison, 2000: p. 10).

The *adaptability* trait concerns how the organization copes with external contingencies and changes. This trait includes the component indexes of “creating change,” “customer focus,” and “organizational learning.” “Adaptable organizations are driven by their customers, take risks and learn from their mistakes, and have capability and experience at creating change” (Denison, 2000). Finally, the *mission* trait defines the organization's goals and provides the organization's members with a sense of purpose and meaning. As such, the mission trait emphasizes stability and direction, and helps the organization to orchestrate its relationships with the external world. Organizations with a well-defined and understood, clear set of values emphasizing “strategic direction and intent,” “goals and objectives,” and “vision” are considered performing high on the mission trait. Denison's theory has been tested using comparable samples of firms from the United States and Russia (Fey & Denison, 2003) as well as several North American, South American, and Asian nations (Denison et al., 2003a, 2003b), and considerable evidence has been revealed in favor of its fundamental premises. Evidence also suggests that the effect sizes of the culture traits on effectiveness indicators might differ from one culture to another (e.g., Denison et al., 2003a, 2003b). Whereas adaptability was found to be the prime driver of effectiveness for Russian firms struggling in a transition economy, for instance, for firms in the US the mission trait appears to be the strongest determinant of effectiveness (Fey & Denison, 2003).

3. Research hypotheses

Denison's theory states that each of the four major cultural traits promotes superior firm performance via different mechanisms (Denison, 1990; Fisher, 1997). For instance, the involvement trait helps the organization bring multiple viewpoints to the decisions made, creates a sense of ownership and responsibility, enables the activation of group dynamics for the solution of complex problems, enhances employee commitment and desire for the implementation of decisions; and

thereby facilitates internal integration, flexibility, and creativity (Denison, 1984; Denison & Neale, 1996; Fisher, 1997). As a result, organizations high on the involvement trait are expected to perform better in aspects that relate primarily to internal organizational dynamics and require flexibility, such as quality improvements (e.g., Denison, 1990). These organizations are also likely to enjoy more favorable employee attitudes. Alternatively, the consistency trait, with its emphasis on commonly accepted beliefs, values, and frames of reference, is theorized to enhance organizational efficiency and effectiveness by reducing the need for (and costs associated with) explicit control systems and by facilitating coordination and communication (e.g., Seashore, 1954; Fisher, 1997). Thus, consistency is posited as a specific predictor of financial performance indicators (Denison, 1990). The adaptability trait, on the other hand, facilitates the transformation of external signals and customer expectations into internal changes, and improves the organization's ability to cope with the increasing dynamism and volatility in its environments. Therefore, adaptability is generally seen as a specific predictor of a firm's ability to forge new territories (e.g., innovations and market development programs) as well as its defensive capacity in responding to unexpected environmental threats. Finally, the mission trait, based on its external focus, emphasis on stability, and its capacity to provide the organization with meaning and purpose, is seen as the strongest driver of market share, financial performance indicators, and overall firm performance (e.g., Collins & Porras, 1991).

The discussion in the preceding paragraph suggests two empirically testable statements: (1) each one of the four broad cultural traits exerts a significant effect on overall firm performance and a wide range of performance measures, independently from the effects of others, and (2) each trait affects a specific set of performance indicators with relatively stronger effect sizes than those of others. Observe that the first statement concerns the main effects of the culture traits on performance indicators (i.e., the unique effect of a specific culture trait on a given performance measure when the effects of the other three traits are controlled for), whereas the latter statement refers to their relative effects. Fey and Denison (2003) assert that the relative effects of culture traits on firm performances are contingent upon the national culture context. Whereas all four cultural traits are expected to exert independent positive effects on overall firm performance, the relative effect of each culture trait on specific performance indicators may vary from one culture to

another. We therefore examine the relative effects of the culture traits in our sampling context in an exploratory fashion. In order to provide a formal investigation of the effects of culture traits on indicators of firm performance, we suggest the following set of hypotheses.

H1. When the effects of the other three cultural traits are controlled for, each one of the cultural traits of (a) involvement, (b) consistency, (c) adaptability, and (d) mission exerts a significant positive effect on the performance indicators of (1) sales growth, (2) market share growth, (3) return on assets, (4) quality improvements, (5) new product development capability, (6) employee satisfaction, and (7) overall business performance.

Our next set of hypotheses concerns two critical dimensions of the overall culture profile and their effects on firm performances. First, as a natural extension of the preceding views with regard to the individual effects of each culture trait, Denison's model proposes that organizations displaying a higher combined measure of the four culture traits, that is, those that display a higher overall culture score, show higher levels of performance. Second, Denison (e.g., 1990) draws attention to the importance of a balanced combination of the culture traits. The four culture traits are often contradictory and present paradoxes in organizations (Denison, 1990). Organizations that perform best are those that manage such paradoxical demands effectively—i.e., those that can achieve internal integration and external adaptation simultaneously; which further entails the management of tensions and tradeoffs involving internal focus versus external focus, flexibility versus stability, and top-down control versus bottom-up involvement. Organizations overemphasizing (underemphasizing) one or more of the cultural traits are much likely to be dysfunctional. “Effective organizations are those that are able to resolve these contradictions without relying on simple tradeoffs” (Fey & Denison, 2003, p. 688).

No specific culture trait alone, unless it is balanced and complemented with the other three, can lead to increased effectiveness (Fey & Denison, 2003; Fisher, 1997). A high level of involvement, for instance, without the balance of consistency, adaptability, and mission, may result in uncoordinated efforts, inadequate emphasis on external processes, lack of a focused strategy and goals, and increased conflict. Likewise, an imbalanced focus on (1) consistency could lead to increased resistance to necessary changes and adaptations; (2) adaptability could lead to conflicting goals and

efforts; and (3) mission could lead to organization-wide narrow-mindedness and rigidity.² Accordingly, we suggest that the “overall magnitude” and “balanced combination” dimensions of the overall culture profile influence firm performances independently from one another.

H2. The higher is the overall (combined) score of the cultural traits of involvement, consistency, adaptability, and mission in organizations, the higher will be the levels of (a) sales growth, (b) market share growth, (c) return on assets, (d) quality improvements, (e) new product development capability, (f) employee satisfaction, and (g) overall business performance.

H3. The more imbalanced is the combination of the cultural traits of involvement, consistency, adaptability, and mission in organizations, the lower will be the levels of (a) sales growth, (b) market share growth, (c) return on assets, (d) quality improvements, (e) new product development capability, (f) employee satisfaction, and (g) overall business performance.

4. Method

4.1. Data collection

We test the hypothesized relationships with data from manufacturing firms located within the Kocaeli industrial district of Turkey. Top-level managers and employees of the participating firms responded to structured questionnaires administered in person. All manufacturing firms within the sampling area that have at least 50 employees were included in the sampling frame. In addition to the top-level managerial assessments obtained for each firm, multiple informants from disparate hierarchical levels and functional levels of the participating firms were interviewed to obtain firm-level measures of the culture traits.

Turkey has recently begun accession talks with the EU. This has resulted in a substantial flow of foreign direct investments and other forms of international attention into the country. As a result, the Turkish economy has been ranked 52nd out of 103 countries according to a recently released Business Competitiveness Index from the World Economic Forum. Interestingly, however, little is known in the international business literature about Turkish firms and the

determinants of their effectiveness. Research (e.g., Cetindamar, 2005; Erer & Cetindamar, 2003) indicates that, whereas the productivity of Turkish companies is as high, or often higher, than most Central and East European nations, Western European firms appear to be more innovative, more effective, and technologically stronger than Turkish firms. This dual picture and the need to understand more about the factors that determine/accelerate the productivity of firms in this particular market is another reason for its viability as an empirical setting for the present study. In addition, Kocaeli district was chosen as a pertinent sampling context for the purposes of the study because this district is the industrial heartland of Turkey’s emerging economy. Firms in this district export approximately 40% of their industrial outputs to other nations (predominantly to European countries), and a considerable proportion (25%) of these firms have some level of foreign ownership. Whereas firms in the sample may differ from their western counterparts in terms of cultural aspects, their general profile and the infra-structural aspects of the sampling context does not differ in any significant way from those of the major industrial zones in the U.S. and Western Europe.

First, multiple phone calls were made to the highest-level executives (mostly, general managers) of the 646 eligible firms in the sampled district to solicit their cooperation. Executives of 143 firms agreed to participate in the study. Each participating firm was then visited by one of the researchers. The top-level manager of each firm was asked first to respond to the survey items. Managers of nine firms were not to be reached or decided not to participate in the study after seeing the questionnaire items, however. The participating 134 managers responded to standardized survey questions pertaining to the cultural factors and provided assessments of firm performance relative to the competition. Next, the managers provided information with regard to the structural aspects and employee profiles of their respective organizations. Based on the information provided, employees to be surveyed subsequently were then selected. Depending on firm size, the number of informants for each firm ranged from 10 to 35 with a majority ($n = 87$) having less than 15 respondents. Those firms for which we failed to obtain multiple informants ($n = 34$) were dropped from further analyses. Thus, our firm-level sample size is 100, which corresponds to an effective response rate of 15.5%. Firms in the sample operate in 18 different industries, such as automotive, textiles, chemicals, packaged consumer goods, ships and boats building, furniture, pharmaceuticals, etc. In order to obtain a wide

² While conceptually appealing, to our knowledge, these effects have never been verified empirically.

spectrum of views and valid responses, specific emphasis was given to select (randomly) the multiple respondents for each firm from different functional departments and disparate hierarchical levels as well as to assure confidentiality. Among these respondents, those holding a managerial position ($n = 364$) answered the same set of items as the top-level executives ($n = 100$), and those at lower-level positions ($n = 712$) responded to a reduced form of the questionnaire that included items pertaining to the cultural factors only. The entire data collection process was completed in 8 months. In total, 1176 usable questionnaires were obtained. Nonresponse bias was assessed by comparing several sample characteristics (proportion of firms from each industry, number of employees in the participating firms, as well as respondent characteristics such as age, gender, and education) with the general figures of the sampling frame, and no significant differences were observed.

4.2. Measures

Measures of the cultural traits are adopted from Denison's (e.g., 2000) Organizational Culture Survey. This instrument includes 60 items, all of which are five-point Likert scales with anchors strongly disagree (=1) to strongly agree (=5). Denison has conceptualized the four major cultural traits as second-order, broader factors, each composed of three component indexes. Each one of these 12 component indexes is measured with five items (e.g., Denison et al., 2003a, 2003b). In adopting the questionnaire items, items in the original questionnaire were first translated into Turkish by one person, and then retranslated into English by another person, and the differences with the original items were then reconciled jointly.

For the measurement of firm performance(s), top and other senior-level managers of the participating firms were asked to assess their firm's average level of performances within the preceding three years on each performance criterion. Respondents were asked to provide preceding three years' firm-level performance evaluations in order to obtain more stable assessments. All seven performance items use five-point scales anchored at much worse than competition (=1) and much better than competition (=5). Each one of the first six items captures a different performance aspect, whereas the seventh item is used to assess overall firm performance. Finally, our study also employs measures of firm size (number of employees) and industry (an open-ended question asking the firm's major area of operation) as control variables. The coefficient alpha

estimates, Lisrel-based internal consistency estimates (i.e., composite reliability), and the average variance extracted in each multiple-item, reflective measure indicate that the measures are adequately reliable (Fornell & Larcker, 1981; Nunnally, 1978). Measurement items and the results of these reliability analyses are provided in Appendix A.

4.3. Measure validation

We assess the psychometric properties of the cultural trait measures by conducting a series of exploratory factor analyses and confirmatory factor analyses. We conduct our measurement analyses at the individual level, thus the effective sample size is 1176. First, in order to assess the unidimensionality of the 12 components indexes of the cultural traits, single-factor exploratory factor analyses were conducted on each component's five-item scale. For each five-item scale, a single factor was extracted (using a cut-off point of eigenvalue = 1), suggesting that the measurement scales for the 12 component indexes are unidimensional. Next, for the purpose of assessing the discriminant validity of the 12 component indexes, a confirmatory measurement model that conceptualized the 12 component indexes as (first-order) latent factors and the 60 measurement items as their (reflective) indicators was evaluated. This model displays a good fit with the observed covariances across the measurement items. While the estimation procedure resulted in a significant chi-square statistic ($\chi^2_{[1644]} = 4701$), as is usually the case with large sample sizes, the goodness-of-fit indices suggest that the model is in line with the observed data (comparative fit index, CFI = .90; goodness of fit index, GFI = .88; standardized root mean square residual, SRMR = .038; root mean square error of approximation, RMSEA = .044). Specifically, while the CFI and GFI are at acceptable values, the SRMR value of .038 and the RMSEA value of .044 indicate a very good model fit. In addition, all items load significantly on their respective constructs (with the lowest t -value being 6.3), providing support for the convergent validity of measurement items. Finally, discriminant validity is obtained for all constructs (component indexes) since the correlations across the latent factors are all significantly less than 1. We then evaluated the theorized measurement relationships with a second-order measurement model where the four broad cultural traits were posited as higher-order factors each reflecting the relevant three of the 12 component indexes as first-order factors. In support of the theorized measurement relationships, this model

Table 1
Descriptive statistics, latent factor intercorrelations, and firm-level scale intercorrelations

	Mean (S.D.)	1	2	3	4	5	6	7	8	9	10	11
1. Involvement	3.55 (.39)		.91	.90	.85							
2. Consistency	3.36 (.29)	.82		.91	.88							
3. Adaptability	3.66 (.32)	.85	.82		.91							
4. Mission	3.42 (.38)	.84	.84	.87								
5. Sales growth	3.39 (.77)	.41	.35	.41	.52							
6. Market share growth	3.50 (.78)	.31	.27	.36	.44	.84						
7. ROA	3.39 (.70)	.36	.35	.38	.47	.78	.71					
8. Quality improvements	3.85 (.62)	.45	.43	.46	.48	.55	.50	.54				
9. New product development	3.68 (.79)	.42	.48	.50	.47	.54	.52	.48	.64			
10. Employee satisfaction	3.46 (.70)	.66	.57	.62	.62	.59	.50	.46	.65	.55		
11. Overall performance	3.74 (.68)	.54	.48	.54	.56	.78	.70	.65	.66	.59	.77	

Notes: (1) Correlations above the diagonal are latent factor correlations obtained from the estimation of the second-order measurement model. Correlations below the diagonal are firm-level (aggregated) scale intercorrelations. (2) All correlations are significant at the $p < .01$ level or better.

fits the observed data well ($\chi^2_{[1692]} = 4900$; CFI = .90; GFI = .86; SRMR = .039; RMSEA = .044). In addition, the second-order model yields a parsimony goodness of fit index (PGFI) of .80, which compares favorably to that of the first-order model (PGFI = .78). The estimated latent factor correlations are displayed as the above-diagonal elements of the correlation matrix in Table 1. Observe that the correlation coefficients linking the cultural traits, while being overwhelmingly large, are all significantly less than 1, which indicates that the trait measures capture distinct cultural aspects.

4.4. Tests of hypotheses

We test the hypothesized relationships by estimating a series of regression models. Prior to these analyses, the 15 items measuring each cultural trait are averaged to create a composite score for each. The scores of the multiple respondents within each firm are then averaged to obtain measures of firm-level cultural traits. It is important to note that, since the measures for cultural traits are obtained from multiple informants most of whom are nonmanagerial employees and performance measures are obtained only from those holding a managerial position, concerns about same-source bias are minimal in our research.

The descriptive statistics for the culture traits and performance measures as well the zero-order correlations across these variables are displayed in Table 1. All correlation coefficients linking the culture traits with performance measures are significantly greater than zero. Next, Hypothesis 1 is tested via seven different regression analyses. In these analyses, the four cultural traits are posited as focal independent variables and the seven performance indicators are posited as dependent

variables. In addition, because firm-level performance indicators are influenced largely by firm size (number of employees) and industry factors, these two factors are controlled for in all regression analyses. We included dummy variables to control for the differences in the mean performance levels across the 18 industries in the sample. The results of these analyses are displayed in Table 2. Next, Hypotheses 2 and 3 are tested simultaneously by estimating a second set of regressions. In these latter analyses, the *overall culture score* and the *degree of imbalance* between the four major traits are posited as the independent variables (along with the control variables) predicting the performance indicators. The overall culture score of a firm is calculated as the sum of its scores on the four traits. The degree of imbalance is operationalized as the sum of the absolute values of the pair-wise differences between the culture traits. The results are provided in Table 3.

5. Results

5.1. Hypothesized effects

The results of the correlation analyses reported in Table 1 are in line with the findings of Denison et al. (2003a, 2003b) in the U.S. context. All correlation coefficients linking the cultural traits with performance indicators are significantly greater than zero. These correlations range between .27 (consistency \leftrightarrow market share growth) and .66 (involvement \leftrightarrow employee satisfaction). While the differences are modest, on average, the *mission* trait has the highest correlations with the performance indicators whereas the *consistency* trait has the lowest ones. The performance indicator that seems to have (1) the lowest average level of correlations with the culture traits is financial

Table 2
Results of regression analyses (main effects)

	Dependent variables						
	Sales growth	MS growth	ROA	Quality improvements	New products	Employee satisfaction	Overall performance
Independent variables							
Involvement	.12	.15	-.00	.41**	-.03	.37**	.34**
Consistency	-.22	-.35**	-.13	-.02	.27*	.02	-.13
Adaptability	-.11	-.02	.06	.02	.29*	.14	.07
Mission	.72***	.66***	.51***	.16	.02	.17	.33**
Firm size	.20**	.30***	.13*	.21**	.16*	.17**	.17**
Industry 1	.13	.30**	.28**	.12	.07	.04	.16
Industry 2	-.03	.01	.08	-.29**	-.06	-.06	-.05
Industry 3	-.02	-.14	.12	.00	-.14	-.03	-.05
Industry 4	-.16*	-.03	-.01	-.11	-.03	-.10	-.02
Industry 5	.13	.28**	.28**	.04	.09	-.07	-.15
Industry 6	.07	.13	.28	-.08	.00	-.01	-.07
Industry 7	-.02	.13	.07	-.02	.05	-.00	-.04
Industry 8	.04	.16	.13	-.12	-.04	.01	.12
Industry 9	-.17	-.08	-.11	-.02	-.14	-.18	-.11
Industry 10	.08	.24*	.15	.13	.11	-.00	.10
Industry 11	.05	.04	.13	-.06	.10	-.02	.05
Industry 12	.05	.15	.27*	-.06	.02	-.09	.08
Industry 13	-.01	.10	.18	-.20*	-.07	-.17	-.07
Industry 14	-.09	-.04	.12	-.05	.00	-.11	-.09
Industry 15	.03	.13	.14	-.11	-.11	-.08	.05
Industry 16	-.01	-.03	.11	.06	.05	-.00	-.02
Industry 17	.09	.19	.21*	.08	.04	-.02	.09
R^2	.43	.45	.40	.47	.37	.53	.45
F (d.f. ₁ = 22; d.f. ₂ = 77)	3.2***	3.4***	2.7***	3.6***	2.4***	4.5***	3.3***

Standardized regression coefficient. Industry 18 (chemicals) is excluded from the regressions so that the model is not overdetermined.

* $p < .1$.

** $p < .05$.

*** $p < .01$.

performance (ROA) and (2) the highest average level of correlations is employee satisfaction.

Next, to reveal the main and relative effects, the performance indicators are regressed against the culture traits and the control variables. As shown in Table 2, all regression models explain a significant portion of the observed variances in the performance indicators, with the R^2 's ranging from .37 to .53 and the F -statistics ranging from 2.4 to 4.5 (d.f. = 22; 77). As to the specific predictors of each performance component, *sales growth* ($R^2 = .43$; relates significantly to the mission trait (standardized regression coefficient, $b_i = .72$, $p < .01$) and firm size ($b_i = .20$, $p < .05$). *Financial profitability* (ROA) ($R^2 = .40$) is also positively related to the mission trait ($b_i = .51$, $p < .01$) and firm size ($b_i = .13$, $p < .1$). *Market share growth* ($R^2 = .45$) is found to be associated with mission ($b_i = .66$, $p < .01$), consistency ($b_i = -.35$, $p < .05$), and firm size ($b_i = .30$, $p < .01$). In sharp contrast to our expectations, however,

the regression coefficient linking consistency with market share growth is negative. With regard to *quality improvements* ($R^2 = .47$), involvement is the strongest predictor ($b_i = .41$, $p < .05$) and firm size is another significant antecedent ($b_i = .21$, $p < .05$). *Innovativeness* (new product development capability) ($R^2 = .37$) is influenced by adaptability ($b_i = .29$, $p < .1$), consistency ($b_i = .27$, $p < .1$), and firm size ($b_i = .16$, $p < .1$). *Employee satisfaction* ($R^2 = .53$) is shown to be associated with the involvement trait ($b_i = .37$, $p < .05$) and firm size ($b_i = .17$, $p < .05$). Finally, *overall firm performance* ($R^2 = .45$) is found to be associated with involvement ($b_i = .34$, $p < .05$), mission ($b_i = .33$, $p < .05$), and firm size ($b_i = .17$, $p < .05$).

As to the effects of the overall culture score and the degree of imbalance across culture traits on performance indicators, all regression models explain a significant portion of the observed variances in the relevant performance indicators (see Table 3), with the

Table 3
Results of regression analyses (combined effects)

	Dependent variables						
	Sales growth	MS growth	ROA	Quality improvements	New products	Employee satisfaction	Overall performance
Independent variables							
Overall culture score	.51***	.49***	.43***	.54***	.51***	.66***	.59***
Overall degree of imbalance	.06	.10	.06	.00	-.01	.04	.03
Firm size	.23**	.34***	.16*	.22***	.15*	.17***	.18**
Industry 1	.15	.31**	.31*	.08	.10	.01	.12
Industry 2	-.02	.02	.08	-.27**	-.08	-.04	-.04
Industry 3	-.02	-.15	.11	-.00	-.14	-.02	-.06
Industry 4	-.19*	-.07	-.03	-.12	-.01	-.11	-.00
Industry 5	.14	.29**	.29**	.02	.10	-.08	.13
Industry 6	.07	.11	.27	-.08	.00	-.01	.05
Industry 7	.02	.16	.10	-.05	.06	-.01	-.04
Industry 8	.06	.19	.15	-.13	-.03	.00	.11
Industry 9	-.18	-.10	-.11	-.04	-.11	-.20*	-.13
Industry 10	.13	.28	.19	.09	.11	-.02	.08
Industry 11	.09	.09	.16	-.06	.08	-.01	.06
Industry 12	.07	.16	.29	-.08	.03	-.10	.06
Industry 13	.05	.17	.21	-.20*	-.08	-.16	-.05
Industry 14	-.06	-.02	.14	-.07	.01	-.12	-.09
Industry 15	.05	.14	.14	-.10	-.12	-.08	.05
Industry 16	.03	.02	.13	.07	.02	.00	-.00
Industry 17	.12	.21	.24*	.06	.04	.00	.09
R^2	.38	.40	.38	.46	.36	.52	.44
F (d.f. ₁ = 20; d.f. ₂ = 79)	2.8***	3.0***	2.7***	3.9***	2.6***	4.9***	3.5***

Standardized regression coefficient. Industry 18 (chemicals) is excluded from the regressions so that the model is not overdetermined.

- * $p < .1$.
 ** $p < .05$.
 *** $p < .01$.

R^2 's ranging between .36 and .52 and the F -statistics ranging between 2.6 and 4.9 (d.f. = 20; 79). In all seven regression models, the overall culture score is shown to exert robust positive effects on the individual performance indicators and overall performance, with standardized effect sizes ranging from .43 on ROA to .66 on employee satisfaction. In addition, firm size is found to relate positively to all performance indicators as well. Contrary to Hypothesis 3, however, when the overall culture score, firm size, and the industry factors are controlled for, the degree of imbalance across the culture traits is unrelated to the performance indicators.

5.2. Post hoc analyses

One plausible explanation for the nonsignificant effects revealed for the overall degree of imbalance across the cultural traits is that the effect(s) of an imbalance within a given pair of cultural traits might be offset by the imbalances in other pairs. Therefore, exploring the individual effects of imbalances in each

pair of cultural traits may provide valuable insights towards further delineating this issue. Accordingly, we estimated seven additional regression models where the absolute values of the individual differences within all possible pairs of cultural traits are posited, along with the overall culture score, firm size, and industry dummies, as predictors of the performance indicators.³ The results of these exploratory analyses (see Table 4) support the view that imbalances across differing pairs of cultural traits impact performance indicators differently. Whereas imbalances in some pairs are found to inhibit firm performances, others are shown to

³ The standard procedure to analyze the effects of these paired imbalances would be to examine the effects of individual cultural traits first and then to examine the incremental effects of paired imbalance factors in a following step, using hierarchical regression analyses. However, we are constrained to not include the individual culture traits in the analyses and to control for their potential effects using the overall culture score as a predictor variable due to problems associated with severe cases of multicollinearity/tolerance.

Table 4
Results of regression analyses (post hoc analyses)

	Dependent variables						
	Sales growth	MS growth	ROA	Quality improvements	New products	Employee satisfaction	Overall performance
Independent variables							
Involvement–consistency	−.06	−.08	−.05	−.05	−.23**	−.14	−.13
Involvement–adaptability	.12	.10	.11	−.12	.02	−.05	−.07
Involvement–mission	.22**	.20**	.02	.16	−.02	.30***	.29***
Consistency–adaptability	.21**	.27**	.13	.12	.02	.22**	.29***
Consistency–mission	.03	.03	.09	−.10	.07	−.08	−.10
Adaptability–mission	−.39***	−.37***	−.20**	−.06	.08	−.22**	−.34***
Overall cult	.39***	.32***	.38***	.48***	.62***	.57***	.47***
Firm size	.20**	.29***	.11	.23**	.11	.17	.17*
Industry 1	.08	.24*	.24	.13	.03	.01	.14
Industry 2	−.05	−.01	.07	−.27**	−.04	−.05	−.05
Industry 3	−.03	−.14	.09	.06	−.13	.02	.00
Industry 4	−.17	−.04	−.02	−.11	−.03	−.10	.00
Industry 5	.12	.28**	.27**	.06	.09	−.05	.16
Industry 6	.02	.08	.23	−.04	−.01	−.00	.08
Industry 7	−.03	.12	.03	.02	.01	.02	.00
Industry 8	.03	.15	.11	−.10	−.06	.01	.12
Industry 9	−.18	−.10	−.13	.00	−.14	−.16	−.09
Industry 10	.07	.23	.12	.15	.07	.00	.12
Industry 11	.06	.04	.12	−.04	.09	−.01	.06
Industry 12	.04	.12	.24	−.03	.01	−.07	.10
Industry 13	−.01	.10	.16	−.17	−.07	−.15	−.04
Industry 14	−.09	−.04	.09	−.01	−.01	−.07	−.04
Industry 15	.02	.12	.12	−.07	−.10	−.06	.07
Industry 16	−.04	−.05	.07	.11	.04	.00	.00
Industry 17	.06	.15	.18	.09	.02	.01	.09
R^2	.47	.48	.42	.49	.40	.58	.50
F (d.f. ₁ = 25; d.f. ₂ = 74)	3.0***	3.2***	2.4***	3.3***	2.3***	4.7***	3.5***

Standardized regression coefficient. Industry 18 (chemicals) is excluded from the regressions so that the model is not overdetermined.

* $p < .1$.

** $p < .05$.

*** $p < .01$.

improve certain performance indicators. Specifically, an imbalanced combination of *adaptability and mission* is shown to exert the strongest negative effects on a wide variety of performance indicators, including overall performance ($b_i = -.34$, $p < .01$), sales growth ($b_i = -.39$, $p < .01$), market share growth ($b_i = -.37$, $p < .01$), ROA ($b_i = -.20$, $p < .05$), and employee satisfaction ($b_i = -.22$, $p < .05$). In addition, an imbalanced combination of *involvement and consistency* negatively influences innovativeness ($b_i = -.23$, $p < .05$). Aside from these negative effects, however, the degree of imbalance between *involvement and mission* is found to enhance overall firm performance ($b_i = .29$, $p < .01$), sales growth ($b_i = .22$, $p < .05$), market share growth ($b_i = .20$, $p < .05$), and employee satisfaction ($b_i = .30$, $p < .01$). Likewise, the degree of imbalance between *adaptability and consistency* is

found to improve overall firm performance ($b_i = .29$, $p < .01$), sales growth ($b_i = .21$, $p < .05$), market share growth ($b_i = .27$, $p < .05$), and employee satisfaction ($b_i = .22$, $p < .05$).

Next, another issue that deserves further exploration concerns whether *direction of the imbalances* matter. Specifically, given that imbalances in *adaptability and consistency* as well as in *involvement and mission* are found to foster certain performance outcomes, it is important to ensure that it is the degree of balance/imbalance between trait pairs rather than primacy of one culture trait to another that yields superior performance.⁴ The question of whether, for instance, it is

⁴ We are grateful to one of the anonymous Journal of World Business reviewers for bringing this issue into our attention.

adaptability exceeding consistency or vice versa, or the degree of balance between the two traits, that explains firm-level performance differences, needs to be addressed. To this end, we estimated six different regression models separately for each one of the seven performance outcomes (42 different regression analyses in total). The same set of predictor variables as those in Table 4 (i.e., analyses for the effects of absolute trait difference scores) were included in these analyses except that in each model the absolute difference score for one of the trait combinations was replaced with the algebraic difference between the same traits (e.g., the consistency score minus the adaptability score). The purpose of these analyses was to explore whether algebraic trait differences (i.e., directionality) yield more explanatory power than absolute trait differences (i.e., balance).⁵ Amongst these 42 different regression estimations each of which involved an algebraic difference term as one of the predictors variables, the explained variance in the dependent variables increased, in comparison to the equivalent model with the absolute difference score, in only four cases. The effect sizes of the algebraic trait difference scores were negative and statistically significant (i.e., $p < .05$) in all four of these cases, and all of them concerned the effects of *consistency score minus adaptability score* on performance outcomes (sales growth, market share growth, employee satisfaction, and overall firm performance). For 38 cases, the explained variances in performance outcomes with algebraic difference terms were actually lower than those with absolute difference terms, which indicate that it is in general the notion of balance/imbalance rather than directionality of trait differences that drives firm-level performance differences. Still, however, the four specific cases where the algebraic difference score between *adaptability and consistency* explains firm performances better than the absolute difference score needs to be taken into account in drawing meaningful conclusions from the study results. The implications of the study findings are discussed next.

6. Discussion

Efforts to delineate the impacts of organizational cultural characteristics on firm effectiveness continue. The present study contributes to this growing research

stream by examining the effects of Denison's four major organizational culture traits, involvement, consistency, adaptability, and mission, on several dimensions of organizational effectiveness. The study is conducted using data from manufacturing firms in Turkey. It provides evidence with regard to a non-western business context that is structurally similar to but culturally disparate from those in most published research. The results of the pair-wise correlation analyses are in line with the findings in prior research in that all four cultural traits are positively correlated in a significant manner with each of the performance indicants. In addition, consistent with the findings in western contexts, the mission trait appears to be the most prominent of the cultural traits in terms of fostering a wide variety of performance indicants.

The mission trait consists of value dimensions such as strategic direction and intent, common goals and objectives, and a long-term vision. These dimensions emphasize productivity and goal alignment, and are generally manifested in such behavioral orientations of organizational members as emphasis on stability, working towards a shared meaning, and alertness to external contingencies. Therefore, empirical evidence indicating that the mission trait is the most important culture component for effective organizational functioning is not surprising (Jarnagin & Slocum, 2007). Indeed, our analyses examining the effects of the four cultural traits on performance indicants provide further evidence in support of this critical role of the mission trait. When the effects of the other cultural traits are statistically removed, we find the mission trait as the strongest determinant of sales growth, market share growth, and financial profitability (ROA). Organizations that are below average on the mission trait seem to experience major shortcomings particularly in terms of marketplace and financial outcomes.

These findings with regard to the critical importance of the mission trait do not suggest that companies aspiring for superior performance should focus exclusively on the mission trait, however. Whereas the mission trait is a critical determinant of marketplace and financial performance indicators, we find that other traits are crucial for specific performance measures that may ultimately prove even more important in the long run. Specifically (1) a firm's ability to develop successful new products (innovativeness) is influenced primarily by the adaptability and consistency traits and (2) employee satisfaction is determined for the most part by the involvement trait. Innovativeness is highly unlikely in a cultural context that fails to value learning, risk taking, and a customer focus. In addition, firms

⁵ We were unable to examine the effects of algebraic trait differences directly by including all of them in a single analysis because of the extreme level of collinearity across these variables.

with a cultural environment characterized by value sharing and harmony are more likely to achieve successful innovations. Similarly, developing positive employee attitudes requires a cultural orientation that values empowerment, team orientation, and capability development. We also show that the overall culture score (the sum of the firm's scores on all four cultural traits) has robust positive effects on all performance indicators. These findings, combined, provide strong evidence that organizations aiming for a culture that will operate as a competitive resource for effective functioning need to focus on all four traits and not just on one or two.

One interesting issue that may require further explanation is the contradictory findings with regard to the pair-wise effects of the consistency trait and its effects when those of other traits are controlled for. The consistency trait has positive pair-wise correlations with all performance indicators. However, when the effects of other traits are controlled, the effect of consistency on market share growth moves to the point of being negative and statistically significant. This unexpected finding may relate to the conflicting views with regard to the strong culture explanations of superior organizational performance (see, for instance, [Peters & Waterman, 1982](#)). The concept of cultural strength has much in common with the consistency trait in that it concerns (1) "who and how many [of the organization's members] accept the dominant value set and (2) how strongly, deeply, or intensely the values are held" ([Fisher, 1997](#), p. 47; [Schein, 1985](#)). Strong organizational cultures are characterized by consistent and coherent sharing of meaning amongst subculture members — individuals, groups, departments, and so on ([Harris, 1998](#)). In addition, the dominant values are held so deeply and intensely in strong culture firms that individuals adhere to them with great commitment. Accordingly, many authors (e.g., [Mike & Slocum, 2003](#)) have asserted that cultural strength is imperative for sustained effectiveness because a strong organizational culture (1) enhances coordination and communication, (2) increases horizontal and vertical efficiencies, and (3) facilitates goal alignment. On the other hand, strong cultures are also associated with organizational deficiencies in terms of (1) flexible thinking, (2) open sharing of ideas, and (3) adapting to changing conditions (e.g., [Kotter & Heskett, 1992](#)). The opponents of the strong culture explanation of organizational effectiveness suggest that these deficiencies could hinder an organization's ability to forge new territories—thus having immediate negative effects particularly on its sales and marketing performance. It

appears that, after controlling for the effects of other cultural factors, our analyses have brought this negative role of the consistency trait on the surface. As a result, our research provides evidence in support of both of the aforementioned dual effects of cultural consistency (strength) on organizational effectiveness.

Another interesting issue concerns the finding that, when the effects of the overall culture score are statistically removed, the overall degree of imbalance across the culture traits does not seem to exert the expected negative effects on the performance measures. Based on a series of post hoc, exploratory analyses, we further find that the nonsignificant effects revealed for the overall degree of imbalance could be due to the fact that the effects of an imbalance within a given pair of cultural traits are offset by the imbalances in other pairs. While imbalances between certain pairs of cultural traits exert the expected negative effects on performance indicators, others seem to have positive effects.

Specifically, the degree of imbalance between the mission trait and the adaptability trait is found to exert negative effects on several performance indicators including sales growth, market share growth, employee satisfaction, and overall firm performance. More important, the degree of imbalance between mission and adaptability is the only imbalance factor that exerts a statistically significant effect on the financial profitability criterion (ROA). A cultural orientation emphasizing adaptability at the expense of the mission trait can generate efforts focusing on conflicting goals and uncoordinated actions. This, in turn, may result in inefficiencies in internal operations as well as in mixed signals sent to the customers and partners. Similarly, excessive focus on the mission trait (at the expense of adaptability) could lead to an organization-wide narrow-mindedness and rigidity, which in turn may cause the organization miss several opportunities in dynamic marketplaces such as those in Turkey. As a result, both situations (imbalances between mission and adaptability in both directions) involve shortcomings for organizational effectiveness, particularly in terms of marketplace performance and profitability.

Next, the degree of imbalance between the consistency trait and the involvement trait is shown to have negative effects on an organization's new product development capability (innovativeness). A high level of the consistency trait at the expense of the involvement trait leads to inadequate voicing of viewpoints and opinions, and creates resistance to change. This, in turn, seems to deteriorate the organization's chances to efficiently forge new terri-

tories. Likewise, as the level of involvement increases at the expense of consistency, the organization may suffer from uncoordinated efforts, increased conflict, and the chaotic environment created by “too much” voicing of views and opinions.

Finally, perhaps most intriguing among our findings are the results suggesting that imbalances in two pairs of cultural traits, between mission and involvement and between adaptability and consistency, may in fact have certain elements that contribute positively to organizational effectiveness. Effectiveness measures (such as sales growth, market share growth, employee satisfaction, and overall firm performance) are influenced positively as the degree of imbalances in both of these pairs of traits increase. Note that these two pairs of traits represent the strongest forms of contradictory demands faced by organizations. Therefore, efforts to keep them at some *forced* level of balance may indeed have certain negative consequences. Note also that the observed positive relationships involve the partial effects of these two imbalances when the effects of others are statistically removed—and therefore should be interpreted accordingly. That is, certain elements within these two traits (but not the whole of the traits) may fail to work well together in terms of fostering effectiveness. For instance, the inherent strong-mindedness, goal orientation, and top-down vision characterizing organizations high on the mission trait may not be compatible with the flexibility, open-mindedness, and internal orientation aspects of the involvement trait. Indeed, much anecdotal evidence exists that organizations with strong participation often have trouble in establishing direction, particularly when value coherence does not exist among its members. A similar line of reasoning can be suggested for the observed positive effects of the adaptability–consistency imbalance. Organizations high on the consistency trait are generally less receptive to changes and risk taking. Therefore, attempts to develop adaptability and consistency simultaneously may decrease the organization’s ability to capitalize on the specific features of each. Indeed, our additional exploratory analyses with the algebraic difference score of the two traits support this view and further indicate that the directionality of the imbalance also matters. It appears that, in Turkey’s highly dynamic and volatile marketplaces, the extent to which adaptability exceeds consistency is positively related to firm performances. Thus, overall, whereas all cultural traits are important for effective functioning, our results suggest that keeping those cultural traits that represent the strongest paradoxical challenges (i.e., the mission-involvement and the adaptability–consistency

pairs) at some reasonable levels of imbalance⁶ may in fact facilitate organizational effectiveness.

7. Limitations and future research directions

Our research has several limitations. We shall focus specifically on those limitations that also suggest directions for future studies. One such issue concerns the results about imbalances between pairs of cultural traits and their impacts on effectiveness. For decades, works about organizational culture have consistently asserted that effective organizations are those that are able to manage the competing demands imposed on the organization by keeping the four major cultural traits at a balance. Contrary to this view, however, our findings suggest that imbalances between certain cultural traits facilitate effectiveness. Nonetheless, these findings are exploratory in nature and require further verification. Given the lack of a well-developed theory, much research is required to reveal the exact nature of these relationships. The absence of an articulate theory with regard to the effects of the imbalanced combinations of the cultural traits also presents several methodological problems and interpretation difficulties. Specifically, because of the absence of prior research providing guidance as to which specific imbalances are critical, we focused simultaneously on all pairs of imbalances, but this has complicated the analytical procedures and worsened the interpretability of the results.

Next, note that the study relies on measures of cultural traits obtained from a broad range of organizational members. This constitutes a major advantage over prior studies that used single informants only and relied mostly on top manager perspectives—thus failing to control for informant bias as well as to reflect differing perspectives. Nevertheless, the reliance on multiple informants bears the problem of aggregating the multiple responses to the firm level. While alternative aggregation methods exist (e.g., Bruggen, Lilien, & Kacker, 2002), we used simple averages of respondent reports for each firm in our analyses. In addition, although the study takes same-respondent bias into account, another potential reason for the observed strong relationships is that all measures are based on similar Likert-type survey responses. Finally, whereas the use of preceding three years’ firm performance assessments improves the stability of effectiveness

⁶ Unfortunately, the question of “how much is too much” is outside the scope of this study and remains as an interesting research question for future studies.

measures, this may also cast doubts on the assumed directionality of the culture → performance relationship. The fact that organizational culture is a relatively rigid phenomenon and takes substantial time to change increases our confidence on the assumed directionality of the relationships observed, however.

8. Conclusion

Overall, the results are in line with the view that each of the cultural traits of involvement, consistency, adaptability, and mission influence firm effectiveness. Managers aiming to improve a broad spectrum of effectiveness measures should therefore focus on increasing their organizations' scores on all trait measures and not just one or two. The study also provides insights regarding the balanced culture hypothesis. We show that, while imbalances between adaptability and mission and between involvement and consistency exert the expected negative effects on relevant measures of firm effectiveness, imbalances between mission and involvement and between adaptability and consistency may in fact improve certain effectiveness measures. That is, whereas for the former pairs of cultural traits opting for balance may improve

effectiveness, for the latter pairs of traits some reasonable level of imbalance might in fact yield even better performance outcomes. Further analyses reveal that, considering the trait pairs of adaptability and consistency, the directionality of the imbalance also matters in that more of adaptability in comparison to consistency yields better performance outcomes. Note that these results are largely free from same-source effects and single informant biases that seem to have been major issues in prior culture research. Our study, therefore, (1) presents credible evidence with regard to the critical importance of organizational culture elements for effective functioning and (2) provides further insights and raises several questions for future research regarding the balanced culture hypothesis and how balances/imbalances in pairs of culture traits relate to organizational performance.

Acknowledgments

This research has been funded by the Scientific and Technological Research Council of Turkey. The insightful comments and suggestions of the two anonymous Journal of World Business reviewers are gratefully acknowledged.

Appendix A. Measurement scales and analyses

Scale	Factor loading	Alpha	Variance extracted	Composite reliability
<i>In this firm, our shared views, values, and practices are such that...</i>				
Involvement				
Empowerment	.93	.76	.43	.78
(1) Most employees are highly involved in their work	.68			
(2) Decisions are usually made at the level where the best information is available	.53			
(3) Information is widely shared so that everyone can get the information he or she needs when it is needed	.70			
(4) Everyone believes that he or she can have a positive impact	.68			
(5) Business planning is ongoing and involves everyone in the process to some degree	.67			
Team orientation	.91	.82	.48	.82
(1) Cooperation across different parts of the organization is actively encouraged	.68			
(2) People work like they are part of a team	.75			
(3) Teamwork is used to get work done	.68			
(4) Teams are our primary building blocks	.68			
(5) Work is organized so that each person can see the relationship between his or her job and the goals of the organization	.66			
Capability development	.95	.75	.40	.77
(1) Authority is delegated so that people can act on their own	.62			
(2) The "bench strength" (capability of people) is constantly improving	.68			
(3) There is continuous investment in the skills of employees	.65			
(4) The capabilities of people are viewed as an important source of competitive advantage	.63			
(5) Problems often arise because we do not have the skills necessary to do the job (R)	.57			

Appendix A (Continued)

Scale	Factor loading	Alpha	Variance extracted	Composite reliability
Consistency				
Core values	.92	.75	.40	.77
(1) The leaders and managers “practice what they preach”	.74			
(2) There is a characteristic management style and a distinct set of management practices	.64			
(3) There is a clear and consistent set of values that governs the way we do business	.56			
(4) Ignoring core values will get you in trouble	.61			
(5) There is an ethical code that guides our behavior and tells us right from wrong	.60			
Agreement	.93	.78	.45	.79
(1) When disagreements occur, we work hard to achieve “win-win” solutions	.57			
(2) There is a “strong” culture	.73			
(3) It is easy to reach consensus, even on difficult issues	.77			
(4) We often have trouble reaching agreement on key issues (R)	.54			
(5) There is a clear agreement about the right way and the wrong way to do things	.67			
Coordination and integration	.91	.79	.46	.81
(1) Our approach in doing business is very consistent and predictable	.72			
(2) People from different parts of the organization share a common perspective	.73			
(3) It is easy to coordinate projects across different parts of the company	.65			
(4) Working with someone from another part of this organization is like working with someone from a different organization (R)	.54			
(5) There is a good alignment of goals across levels	.74			
Adaptability				
Creating change	.97	.77	.40	.77
(1) The way things are done is very flexible and easy to change	.68			
(2) We respond well to competitors and other changes in the business environment	.60			
(3) New and improved ways to do work are continually adopted	.70			
(4) Attempts to create change usually meet with resistance (R)	.63			
(5) Different parts of the organization often cooperate to create change	.55			
Customer focus	.72	.74	.40	.77
(1) Customer comments and recommendations often lead to changes	.60			
(2) Customer input directly influences our decisions	.63			
(3) All members have a deep understanding of customer wants and needs	.80			
(4) The interests of the customer often get ignored in our decisions (R)	.50			
(5) We encourage direct contact with customers by our people	.60			
Organizational learning	.98	.76	.42	.77
(1) We view failure as an opportunity for learning and improvement	.62			
(2) Innovation and risk taking are encouraged and rewarded	.64			
(3) Lots of things “fall between the cracks” (R)	.76			
(4) Learning is an important objective in our day-to-day work	.60			
(5) We make certain that the “right hand knows what the left hand is doing”	.58			
Mission				
Strategic Direction and Intent	.91	.82	.50	.83
(1) There is a long-term purpose and direction	.69			
(2) Our strategy leads other organizations to change the way they compete in the industry	.61			
(3) There is a clear mission that gives meaning and direction to our work	.80			
(4) There is a clear strategy for the future	.80			
(5) Our strategic direction is unclear (R)	.58			
Goals and objectives	.98	.86	.55	.86
(1) There is widespread agreement about goals	.70			
(2) Leaders set goals that are ambitious, but realistic	.79			
(3) The leadership has “gone on record” about the objectives we are trying to meet	.75			
(4) We continuously track our progress against our stated goals	.75			
(5) People understand what needs to be done for us to succeed in the long run	.72			

Appendix A (Continued)

Scale	Factor loading	Alpha	Variance extracted	Composite reliability
Vision	.98	.83	.50	.83
(1) We have a shared vision of what the organization will be like in the future	.74			
(2) Leaders have a long-term viewpoint	.80			
(3) Short-term thinking often compromises our long-term vision (R)	.58			
(4) Our vision creates excitement and motivation for our employees	.74			
(5) We are able to meet short-term demands without compromising our long-term vision	.64			
Firm performance measures (<i>anchors: much worse than competition; much better than competition</i>)				
(1) Sales growth				
(2) Market share growth				
(3) Return on assets				
(4) Quality improvements				
(5) New product development capability				
(6) Employee satisfaction				
(7) Overall firm performance				

Notes: Items in the Denison Organizational Culture Survey are copyrighted and owned by Denison Consulting. Items are used in this research and printed above with permission from the copyright owner. (R) denotes reverse coded item. Factor loadings for the component indexes of the cultural traits are from the second-order factor model. Factor loadings for the individual items are from the first-order measurement model.

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