

Two-Factor Theory of Culture Change Management: Distinguishing between Critical Success and Critical Failure Factors*

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This paper presents the findings from a comprehensive questionnaire survey of critical success factors and critical failure factors in culture change management. Data from 89 South Korean organizations are analyzed to study the effect of 10 independent variables on the performance of attempts to manage culture change. Six turned out to be significant factors. When the performance continuum was divided into two (success and failure), three of the six variables loaded significantly on the success scale, whereas the other three loaded significantly on the failure scale. Based on these results, a ‘two-factor theory’ of culture change management is proposed. The study concludes that companies undertaking culture change should focus on critical failure factors to prevent failure and on critical success factors to succeed.

Keywords: culture change management, two-factor theory, critical success factor, critical failure factor

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Although change management is a common phenomenon in many organizations, there are more failures than successes, with up to 75% of change efforts ending in failure (Mourier & Smith, 2001). According to many authors, this high failure rate is because organizational change cannot be achieved without a change in organizational culture (Kotter, 1995; O’Neill, 1990; Schein, 1992). In this regard, Laabs (1996) has suggested

*Some parts of this paper have already been published in the first author’s paper (Park, 2001) since two papers share the same data base. However, the theme and the major content are different.

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that a change effort is governed by a '20-50-30 rule', according to which only about 20% of the people in any given organization will be positively responsive to the change, 50% will be ambivalent, and the remaining 30% will actively resist.

If change management is difficult because of the persistence of organizational culture, it would seem to be even more difficult to change the culture itself. Indeed, there is debate as to whether culture change is manageable at all. The unsuccessful or obscure results of attempts at culture change have left many executives and managers cynical about its feasibility and/or efficacy, and there has been a tendency to dismiss the previous interest in the subject as a passing fad.

Both the concepts of organizational culture and the success of culture change are quite nebulous. Different people have different definitions for them. Further, most studies on culture change management are anecdotally-based case studies considering only few variables. Therefore, most people think of the success of culture change as highly idiosyncratic and hard to generalize.

Why do many organizations fail even though they try hard? Why is culture change often perceived as so difficult? Is it because it is innately so? Because we hear of some successful cases of culture change, treating it as an innately difficult problem would be like evasion of responsibility. What then is the problem? Wouldn't the problem be in the methodology of culture change management? What if methods to avoid a failure do not have the same effect as methods to pursue a success? What if not-to-fail methods are different from methods to succeed? There are many cases where a small amount can be of benefit to human health while an overdose can become a cause of death.

Doubts about whether culture management can be managed are due to two main factors. The first is that it is difficult to find convincingly documented cases of culture change (Fitzgerald, 1988; Kotter & Heskett, 1992). The second is that many of the studies in this area have shortcomings. The four most common shortcomings are: (i) a heavy reliance on case-study methodology; (ii) limited inclusion of independent variables; (iii) small sample size; and (iv) reliance on performance criteria predetermined by the researcher.

Case-study methodology has been widely employed in this area of study. A case

study is, in itself, not an inappropriate methodology when studying the culture per se of a single organization (or a small number of organizations). However, in studies that purport to assess the *performance of attempts to change culture*, rather than culture itself, the use of an objective methodology is preferable. Moreover, most papers that have utilized case-study methodology in this field have presented only one or two cases. (An exception was the study conducted by Cowling (1989), which discussed 15 cases.) It is thus apparent that the results from case studies in this area of research have tended to focus on a few cases with few variables, and this presents significant difficulties in terms of generalizability of findings. Only two studies (Laabs, 1996; Schiemann, 1992) have been based on a survey methodology; however, it should be noted that these two studies were based on surveys of experts' opinion on the issue of organizational change, rather than surveys of organizational members based on which either the characteristics or the effectiveness of the culture change were measured.

In relation to these issues, Reichers and Schneider (1990, p. 25) have observed that:

culture researchers have rarely advocated or used a quantitative approach to studying culture [although] the study of organizational culture could be enhanced by the increased use of quantitative methods such as questionnaires.

Two decades have passed since Reichers and Schneider (1990) called for greater use of questionnaire methods in cultural studies. It would obviously be advantageous for both researchers and practitioners to have access to generalizable results from comprehensive objective studies (such as those from survey analysis).

Finally, with respect to the choice of a dependent variable, the few studies that have attempted to measure the performance of culture change have used a predetermined criterion (or criteria) chosen by the researcher (e.g., net income growth, average yearly return on invested capital, and average yearly increase in stock price in the case of Kotter & Heskett, 1992). These criteria were believed to be suitable for the small case-study samples involved; however, for studies of several organizations involving larger sample sizes, a common performance criterion for all organizations is unlikely

to be appropriate because different organizations have different reasons for undertaking corporate culture change.

The present study addresses the following questions:

- How successful are attempts to change organizational culture?
- What factors are critical to the success or failure of attempts to produce culture change?

The overall aim is to develop a practical and generalizable model for the management of culture change. In pursuing this aim, the study contends that the factors that significantly affect the success of culture change management might be different from the factors that significantly affect its failure.

I. Literature Review

1. Culture Change: Definition and Measures

Organization culture refers to assumptions and values that are shared by the people in an organization and that tend to persist over time even when organizational membership changes¹⁾ (Kotter & Heskett, 1992). Thus culture change often refers to the changes of values and assumptions shared among organizational members.²⁾ However, a variety of definitions exist for organizational culture, and thus for culture change also. Schein (1985) distinguished three levels of depth of culture: artefacts, values, and basic assumptions. Therefore, the success and failure of culture change depend on how an organization defines the range and depth of its culture change. That is, the success in organizational culture change means different things to different people.

The ultimate goal of culture change is the increase of organizational performance. Two well respected books (Kotter & Heskett, 1992; Collins & Porras, 1994) have

1), 2) 1 and 2 are the definitions of organization culture and of culture change provided within the questionnaire described later.

shown the relationship between corporate culture and corporate performance. However, a long time — four to ten years in the cases of medium and large-size companies (Kotter & Heskett, 1992) — is needed for a culture to be changed and to lead a change in organizational performance.

Further, since factors other than organizational culture also change during the long period of time and these also contribute to the changes of final organizational outcome, organizational performance cannot be accounted for by the culture change alone. However, ultimate change in organizational performance does occur via changes in performance-related cultural processes that exist in the medium stage. These performance-related cultural processes are climate formation, behavioral control, organizational learning, strategy formulation, social efficiency, and leadership (Saffold, 1988). Changes in these performance-related cultural processes can be looked into to assess the success of culture change.

2. Manageability of Culture Change

In general, most academics are critical of the notion that culture change can be managed. Nevertheless, practitioners are increasingly engaging in cultural intervention, with 94% of UK organizations having experienced some form of culture change (IRS, 1997; Ogbonna & Harris, 2002).

The literature on the management of corporate culture change can be categorized into three groups. The first takes the view that corporate culture can be managed (Bate, 1994; Deal & Kennedy, 1982; Kilmann, 1982; Ouchi, 1981; Peters & Waterman, 1982; Sathe, 1983; Schwartz & Davis, 1981; Silverzweig & Allen, 1976). The second contends that conscious management of organizational culture is not possible (Ackroyd & Crowdy, 1990; Alvesson & Melin, 1987; Gagliardi, 1986; Harris & Ogbonna, 1998; Krefting & Frost, 1985; Ogbonna, 1993). The third takes the view that the manageability of culture is possible, but that it is contingent upon certain conditions (Dyer, 1985; Martin, 1985; Schein, 1985; Wilkins & Patterson, 1985).

Although three decades have passed since culture change became a popular notion,

little research has been done in the area. Most of the information that is available is derived from: (i) isolated case studies of how single organizations were able (or unable) to achieve change; and (ii) advice presented by consultants on the basis of their accumulated experience. As Miner (1988) has observed, this does not represent a very solid basis for understanding.

One explanation for the lack of rigorous research in this area might be the absence of agreed theoretical models to aid empirical investigation (Silvester et al., 1999). Another might be the inherent difficulty of measuring the intangible elements of culture and the influence of culture on other parameters (Pettigrew, 1990; Wilkins, 1983).

3. Contributors to Success and Failure

As the two-factor theory of motivation (Herzberg, 1966) states, there are many cases where certain factors contribute mostly to one side of the continuum (e.g., satisfaction-dissatisfaction, success-failure) while other factors contribute mostly to the other side of the continuum. Thus, two-factor theory states that satisfaction and dissatisfaction (or success and failure) are not on a continuum with the one increasing as the other decreases, but are independent phenomena. This theory suggests that to achieve an effective culture change, managers must recognize and attend to both sets (i.e., CSFs and CFFs) and not assume that an increase in success lead to a decrease in failure.

In the case of project management, Pinto and Mantel (1990) studied the causes of project failure with 97 projects, and found that the critical factors associated with success were different from those of failure. They stated that it is interesting to note that the factors associated with failure are not simply one-minus the success factors (p. 374).

The need to separate the independent variables in culture change into two groups has been previously recognized by Mourier and Smith (2001). As a result of their consulting experiences, these authors (2001, p. 18) urged managers engaged in culture change to ... maximize the number of positive factors (change enablers) and minimize the number of negative factors (barriers or inhibitors) that affect the change process.

Table 1. Contributors to Success and Failure of Corporate Culture Change^a

	Quantitative Studies	Qualitative Studies	
Contributors to Success	CEO commitment	(6)	CEO commitment (5)
	Communication	(5)	Culture change in alignment with business strategy (4)
	Culture change in alignment with strategy	(4)	Employee participation (3)
	Employee participation	(3)	Continuous change (3)
	A structured long-term program	(3)	Communication (3)
	HRM training and development	(3)	Leadership (3)
	Improvements in teamwork	(3)	Managing the anxieties of change (3)
	Quality programs	(3)	Training and education (2)
	Regular feedback	(3)	Guaranteed mistakes (2)
	Linkage with other change	(2)	Disconfirmation of current assumptions (2)
	Continuous change	(2)	Long-term program (1)
	Increased understanding of organizational needs	(2)	Crisis due to external factors (1)
	Analysis of the characteristics of the culture	(2)	Empowerment (1)
	Devising culture labels or metaphors of present culture	(2)	Creating credibility for management's commitment (1)
	Recognizing the needs of individuals in organization	(2)	Feedback (1)
	Subcultural sensitivity	(2)	Transition rituals (1)
	Empowerment	(2)	Organization structure (1)
	Changes in HRM policies and practices	(2)	Identifying and eliminating barriers to accepting change (1)
	Organization structure	(1)	Managers who 'walk the talk' (1)
	Adequate staff and fund	(1)	Intrinsic forms of motivation (1)
	Power of HRM department	(1)	Changes in HRM policies and practices (1)
	Past experience of change	(1)	
	Developing a mission or culture statement	(1)	
	Creating metaphors for a new culture	(1)	
	Creating a vision (of desired future state)	(1)	
	Rewards for efforts in the right direction	(1)	
Employee willingness to change	(1)		
Creativity	(1)		
Use of pilot projects	(1)		
Extraorganizational demographic and psychological variables	(1)		
Managers who 'walk the talk'	(1)		
Documentation	(1)		
Contributors to Failure	Incomplete follow through	(2)	Looking for a quick-fix answer (2)
	Poor leadership of top management	(2)	Wholesale adoption of off-the-shelf programs (1)
	Misalignment of culture and strategy	(1)	Employee resistance (1)
	Employee resistance	(1)	Top management's failure to 'walk the talk' (1)
	Radical and direct transformation	(1)	Ignoring the strength of culture (1)
	Goal (and plan) vagueness	(1)	Failing to control subculture (1)

^a Numbers in the parentheses are frequencies appeared in 37 studies reviewed.

Despite the lack of studies on culture change per se, there have been studies that have attempted to explore the contributors to success (CSs) and/or contributors to failure (CFs) of culture change efforts. Table 1 presents a list of the CSs and CFs identified in 37 studies (both qualitative and quantitative) from the literature. These articles were identified based on the author's reading of the articles that were derived from the use of academic database search programs (e.g., Academic Search Complete, Business Search Complete, Emerald Journal Online, Science Direct) with key phrases of success/failure factors of culture change, contributors of culture change effectiveness, and critical factors of culture change management. The number in parentheses next to the contributor indicates the frequency with which the contributor was identified in the 37 articles.

CSs cited frequently in the qualitative studies were chief executive officer (CEO) commitment (Bice, 1990; Gonring, 1992; Lorsch, 1986; Sherriton & Stern, 1997; Wheeler, 1999); alignment with business strategy (Lorsch, 1986; Morgan, 1998; Schwartz & Davis, 1981; Wheeler, 1999); employee participation (Bice, 1990; Gonring, 1992; Mallak & Kurstedt, 1996); linkage with other types of change (Kilmann, 1985; Mourier & Smith, 2001); managing the anxieties of change (Atkinson, 1994; Gilmore et al., 1997; Schein, 1985); and training and education (Gonring, 1992; Umiker, 1999).

CSs cited frequently in the quantitative studies were CEO commitment (Eubanks, 1991; Kinkead & Winokur, 1991; Kotter, 1995; Mourier & Smith, 2001; Salama & Smith, 1994); communication (Botterill, 1990; Fullerton & Price, 1991; Kinkead & Winokur, 1991; Klunk et al., 1996; Singh & Hart, 1998); alignment with business strategy (Fullerton & Price, 1991; Morgan, 1998; Schiemann, 1992); and employee participation (Gallo & Stokely, 1998; Harris & Ogbonna, 1998; Schiemann, 1992).

Although there were small differences in the frequency of CSs in the qualitative and quantitative studies, CSs such as 'CEO commitment', 'alignment with strategy', and 'employee participation' were prominent in both types of studies.

In contrast, the CFs differed between the two types of study; moreover, the CFs (in general) differed from the CSs (in general). It thus appears that CSs are somewhat different from CFs in their nature, and this suggests that two separate sets of variables might exist with respect to the management of culture change.

II. Hypothesis

The following hypothesis has been proposed to test the fundamental proposition of this study that the cause of success and the cause of failure of attempts to manage organizational culture change should be understood as two separate categories. The hypothesis is formally proposed in the following terms:

***Hypothesis:** Contributors to success in corporate culture change are different from contributors to failure in corporate culture change.*

Unlike most previous studies, which have assumed that CSFs automatically function as CFFs, the present study proposes to differentiate the two. That is, it is proposed that variables that have a significant effect on the degree of success do not have similar effect on the degree of failure, and vice versa. Moreover, it should be noted that an important corollary of this proposal is that the degree of success and the degree of failure should be assessed on separate scales, rather than being assessed as the poles of a continuum. No previous studies in the literature have explicitly proposed and tested this hypothesis, although Mourier and Smith (2001) implicitly supported the proposition.

III. Method

1. Data Collection

As indicated in the preceding discussion, a comprehensive study based on an extensive survey was thought to be the most appropriate methodology to test the hypothesis. Data were collected from companies in South Korea. For about ten years from early 1990s, the Korean Chamber of Commerce and Industry (KCCI) had ran a Corporate Culture Forum, in which representatives of the member companies met every

other month to exchange ideas and experiences of culture change. The questionnaire was distributed to and collected from these member companies of the Forum by the KCCI. However, it was not only delivered to the KCCI officials but also indicated in the cover letter that the questionnaire should be sent out to and be answered by only the companies that had experienced organizational culture change within the preceding five-year period.

Two forms of the questionnaire were developed by two professors, including the author. The basic structure of both questionnaires consisted of three parts: (i) information about the respondent and his or her company; (ii) the company's method of managing culture change; and (iii) the performance of attempts at culture change. Each respondent took about 20 minutes to answer the 48-item questionnaire.

The two forms of questionnaires used in the survey were: (i) for individuals who actually led the culture-change activities at each organization ('change managers'); and (ii) for employees from each company that participated (approximately 30 employees from each company).

The former questionnaire was sent to each company's CEO, and was asked to be conveyed to a person who knows and can represent the company's culture-change activities in detail. The latter questionnaire was sent (in a bulk of 50) to Human Resource department of each company, and was asked to be distributed to the employees who were not in the department that led the culture-change activities. All questionnaires were provided with a return envelop so that each person's responses could be sent directly to the KCCI.

In the case of the questionnaire for change managers, respondents were instructed to ensure that their responses reflected the overall situation within their organizations, rather than the respondents' personal opinions. It was also suggested that respondents should have discussions with others in their organizations before answering the questionnaire. On the basis of these precautions, the responses from each organization were treated as 'company scores'.

In all, 102 companies received the questionnaires, and 96 responded. Among the 96 responded companies, only those that met the following two conditions were selected

Table 2. Characteristics of the Companies Surveyed^a

Total	89 (2,120)		
Industry: Broad		Number of Employees	
Manufacturing	40 (963)	100 to 200	1 (24)
Nonmanufacturing	49 (1,157)	200 to 300	1 (23)
		300 to 500	6 (130)
		500 to 1,000	13 (395)
Industry: Specific		1,000 to 3,000	26 (577)
Manufacture of basic metals	3 (107)	3,000 to 5,000	17 (401)
Foods & beverages	6 (136)	5,000 to 10,000	12 (276)
Wearing apparel & textile	6 (131)	More than 10,000	13 (294)
Paper	2 (39)		
Chemicals & chemical foods	8 (239)		
Other non-metallic mineral	2 (57)		
Metal & machinery	8 (158)	Sales ^b	
Manufacture of others	4 (111)	10 to 50 billion	4 (90)
Construction	5 (101)	50 to 100 billion	6 (107)
Whole sale & retail trade	6 (126)	100 to 500 billion	30 (712)
Transport & warehouse	2 (30)	500 to 1 trillion	13 (1,113)
Banking & finance	18 (432)	More than 1 trillion	36 (98)
Insurance	2 (52)		
Others	17 (401)		

^a Numbers of employees survey are in parentheses.

^b Sales volume is represented in Korean Won. One U.S. Dollar is about 1030 Won as of August 2014.

for analyses: (i) duration of culture change being longer than six months; and (ii) at least one year passed since the culture-change effort ended.

The companies that spent only six months or less for culture change were treated as those that did not spend minimum required time needed for culture change. Less than one year after the end of culture change effort was thought to be a time too early to assess success and/or failure of culture change. A sense of failure at less than 12 months might actually be a measure of the initial resistance to change or lack of a critical mass than a failure per se.

Some argue that at least a 36-month period is needed to assess the effect of ultimate

change. However, since many variables other than 3-year old culture change have either main or confounding effect, it would be very difficult to differentiate the sole effect of culture change after 36 months. Thus a ‘12-months afterwards’ was chosen as a practical alternative. 89 companies met these two conditions, and the characteristics of the 89 participating companies are shown in Table 2.

2. Measures

Independent variables. Ten independent variables that were believed to influence the performance of efforts to change culture were derived from the literature review and interviews conducted with change managers from 10 of the 102 companies surveyed later.

Five professors (including the author) in the area of Organizational Behavior and Human Resource Management were provided with Table 1 to sort out the ten most influential factors of culture change. They were allowed to rename the factors if needed. The seven factors that the panel of judges agreed to be important were:

- emphasis of CEO;
- participation of CEO;
- interest of employees;
- participation of employees;
- linkage with corporate strategy;
- linkage with other types of change; and
- duration (of the culture-change effort).

Some might question the difference between ‘emphasis of CEO’ and ‘participation of CEO’. These two focus on the difference between words and deeds. CEO’s emphasis (e.g., loud speech) of culture change without his/her participation (e.g., action or symbolic behavior) might not guarantee its success. In the case of employees, ‘emphasis of CEO’ was changed to ‘interest of employees’ to differentiate what is in the heart (i.e., interest) from what is revealed in the action (i.e., participation).

The three variables derived from the interviews were:

- scope of culture change;
- main body of culture change; and
- number of staff members working for culture change.

Since journal authors used different words to imply similar concept, some variables of Table 1 were renamed and combined. For example, leadership-related variables were included within either ‘emphasis of CEO’ or ‘participation of CEO’, whereas ‘continuous change’, ‘incomplete follow through’, and ‘looking for a quick-fix answer’ were included within the ‘linkage with other types of change’.

Not only the combination but also a differentiation was done. ‘Communication’ was the second most frequently cited CS in quantitative studies in the literature. However, it was felt that the degree of ‘emphasis’, ‘participation’, and ‘interest’ of CEO and/or of employees was closely related to the degree of communication among them. Since the ‘emphasis of CEO’ and ‘participation of CEO’ were already in the list, instead of including communication, ‘interest of employees’ and ‘participation of employees’ were added as a differentiation of communication. That is, to minimize multicollinearity, an attempt was thus made not to include conceptually overlapping (that is, not independent) variables in the set of independent variables. No variance inflation factor (VIF) value for any of the 10 independent variables exceeded 3.0 — which is less than the critical value of 10 (Hair et al., 1998). There was thus no evidence for the existence of multicollinearity.

The independent variables were *measured* as follows.

- Six variables (‘CEO emphasis’, ‘CEO participation’, ‘employee interest’, ‘employee participation’, ‘linkage with corporate strategy’, and ‘linkage with other types of change’) were measured on a 5-point interval scale ranging from 1 (‘very little’) to 5 (‘very great’).
- Two of the variables (‘scope of culture change’ and ‘main body of culture change’³⁾)

3) ‘Main body of culture change’ is the subject that manages or be in charge of the culture change,

were measured on a 3-point ordinal scale, in which 1 indicated 'department level', 2 indicated 'division level', and 3 indicated 'organization level'.

- The variable of 'number of staff members' was measured by asking change managers to write down the actual number of staff members working full-time on culture change management.
- The variable of 'duration of culture-change effort' was measured on a 6-point scale, in which 1 indicated 'less than 3 months', 2 indicated '36 months', 3 indicated '712 months', 4 indicated '1318 months', 5 indicated '1936 months', and 6 indicated 'more than 36 months'.

Dependent variable. There can be ambiguity in determining whether a culture change is a success or a failure. One reason is the ambiguity about the measurement of culture change success because the parties who are involved in culture change perceive its success and failure differently. For example, a culture change which is considered to be a success by the change manager might be considered a failure by top management, if the change outcome does not meet top management specifications, even though it might satisfy the change manager.

Change managers often focus on the changes within performance-related cultural aspects of their organizations (e.g., aforementioned performance-related cultural processes of Saffold, 1988) whereas top management focus often on changes of their business performance (e.g., net income, revenue, stock price). Changes in business performance deriving from the changes in organizational culture cannot be assessed within 3 or even 5-year period. Studies on culture-business performance relationship thus need much longer time to be studied as Kotter and Heskett (1992) or Collins and Porras (1994) did. However, even in such studies, the issue of causality and/or confounding effect of independent variables cannot be studied easily.

Several authors have attempted to relate culture to the general 'performance' of an organization (Wilderom et al., 2000). Measures have included financial performance (Gordon & DiTomaso, 1992; Kotter & Heskett, 1992; Siehl & Martin, 1990), organizational productivity (Kopelman et al., 1990), and the combined performance of

whereas 'scope of culture change' is an object or extent to which the culture change limits.

storage, costs, and personnel (Koene, 1996). However, there are inherent difficulties in measuring these dependent variables (especially financial performance) (Siehl & Martin, 1990), and this is probably why previous studies have often utilized measurement criteria predetermined by the researchers, rather than criteria nominated by the organizations they have studied. However, because different organizations use different performance criteria, the use of predetermined performance criteria was not appropriate in a large survey such as this.

Thus in this study, instead of long-term business performance, the success of organizational culture change was restricted to short or medium-term performance which, in practice, change managers and employees often focus on in their culture change approach. That is, changes managers and employees were told in advance in the instruction part of the questionnaire to consider the performance of their culture change in terms of the changes in performance-related cultural aspects such as values, assumptions, behavior, teamwork, leadership, and/or organizational learning. Then, within the restriction, the dependent variable of this study was thus established by asking 15-30 employees from each organization to evaluate the performance of attempts to produce culture change using the criteria of their own organizations.

Respondents were therefore asked to indicate their degree of agreement with the following statement: 'I think the corporate culture change effort of our company was successful'. Their degree of agreement was recorded on a 5-point interval scale from 1 ('strongly disagree') to 5 ('strongly agree'). These individual responses were aggregated to form organization-level scores, and the appropriateness of the aggregation was then tested using the statistical techniques of rwg (within-group agreement coefficient), η^2 , and ICC (intra-class correlation coefficient). Table 3 shows average rwg, η^2 , ICC(1), and ICC(2) for the surveyed organizations.

According to the criteria suggested by Klein et al. (2000), the coefficients in Table 3 show that it is appropriate to use the scores aggregated from the responses of the employees of each company as that company's 'change-performance' score.

By letting respondents read (in the questionnaire) the definitions of organizational culture and of culture change and the criteria to assess the performance of their culture

Table 3. Results of Various Statistical Techniques for Justifying Aggregation

Variable	η^2	ICC(1)	ICC(2)	\bar{r}_{wg}
Change performance	.27**	.20**	.88	.87

* $p < .05$ ** $p < .01$

change, efforts were put in to increase the validity of measurement. Further, the companies that spend less than six months to change their culture were excluded from the analysis to confine the sample to those that did try corporate culture change.

IV. Results

1. Performance of Attempts to Change Corporate Culture

The means, standard deviations, and intervariable correlations among variables are shown in Table 4.

The mean value of the variable designated as ‘culture-change performance’ was 2.92 across the 89 firms. There was no significant difference between the mean of the opinions of the change managers (3.04) and that of the employees (2.92); on the contrary, the responses were significantly correlated ($r = 0.56$, $p < 0.01$). Nevertheless, the responses from the employees were used in measuring the dependent variable in subsequent analyses (rather than using those from the change managers) because: (i) the former is a more objective score; and (ii) common method bias was avoided by using different sources of measure for the predictor and criterion variables.

The mean score of 2.92 among employees was less than the neutral point of 3. This implies that the efforts to produce culture change in the companies surveyed were, on average, unsuccessful. Nonetheless, some companies did achieve success.

Table 4. Means, Standard Deviations, and Correlations^a

Variables	M	SD	1	2	3	4	5	6	7	8	9	10
1. CEO emphasis	3.62	.98										
2. CEO participation	3.25	1.08	.64**									
3. Employee interest	3.04	.97	.41**	.51**								
4. Employee participation	2.78	.91	.48**	.54**	.78**							
5. Scope of culture change	2.62	.71	.25*	.36**	.31**	.19 [†]						
6. Main body of culture change	2.17	.91	.18 [†]	.22*	.33**	.30**	.30**					
7. Number of staffs	4.62	4.72	.09	.05	.26*	.11	.12	.00				
8. Duration of culture change	5.34	1.31	.13	.14	.41**	.19 [†]	.42**	.22*	.22*			
9. Linkage with strategy	3.72	1.01	.41**	.45**	.46**	.40**	.36**	.42**	.06	.25*		
10. Linkage with other change	2.35	.83	.06	.15	.29**	.19 [†]	.15	.18 [†]	.23*	.20 [†]	.14	
11. Overall performance	2.92	1.12	.54**	.57**	.64**	.76**	.34**	.38**	.12	.30**	.45**	.21 [†]

^a $n = 89$.

[†] $p < .10$

* $p < .05$

** $p < .01$

2. Critical Success and/or Failure Factors

Multiple regression analyses were undertaken with the 10 variables listed in Table 5 as independent variables and ‘performance of culture change’ as the dependent variable.

Success/failure treated as a continuum. A multiple regression of the dependent variable (with a full range of 15) revealed that certain variables had a significant influence ($p < 0.05$) on the performance of attempts at change in corporate culture. As shown in Table 5, these variables were: (i) ‘employee participation’; (ii) ‘CEO emphasis’; (iii) ‘CEO participation’; (iv) ‘scope of culture change’; (v) ‘linkage with corporate strategy’; and (vi) ‘employee interest’.

This indicates that corporate culture change is more likely to succeed if there is:

- a high level of participation from both employees and CEO;
- emphasis from CEO;

Table 5. Results of Multiple Regression Analyses^a

Independent Variable	Performance as a Continuum	Performance as Separate Dimensions	
		Failure	Success
Employee participation	. 712***	. 638***	. 065
CEO participation	. 298**	. 280*	. 145
Linkage with strategy	. 268**	. 301**	. 121
Employee interest	. 254*	. 177	. 512**
CEO emphasis	. 320**	. 138	. 410*
Scope of culture change	. 274**	-. 032	. 360***
Duration of culture change	. 151 [†]	-. 028	. 039
Main body of culture change	. 138 [†]	. 064	. 038
Linkage with other change	. 052	. 014	. 042
Number of staffs	. 078	. 088	-. 240
Constant	(. 266)**	(. 218)***	(. 360)***
R^2	. 609	. 507	. 360
Adjusted R^2	. 603	. 494	. 334
F	82. 886***	34. 794***	9. 819**
n	89.	78.	11.

^a Standard coefficients are reported. Standard errors are in parentheses.

[†] $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

- significant interest among employees;
- organization-wide effort; and
- a strong linkage with corporate strategy.

Success and failure treated as different scales. To test the hypothesis proposed above (that contributors to success in corporate culture change are different from contributors to failure in corporate culture change), two additional multiple regression analyses were undertaken: (i) a ‘failure scale’, with the dependent variable (‘performance’) ranging from 1 to 2.99 (rather than 15 as previously); and (ii) a ‘success scale’, with the dependent variable ranging from 3.01 to 5. The results are shown in Table 5.

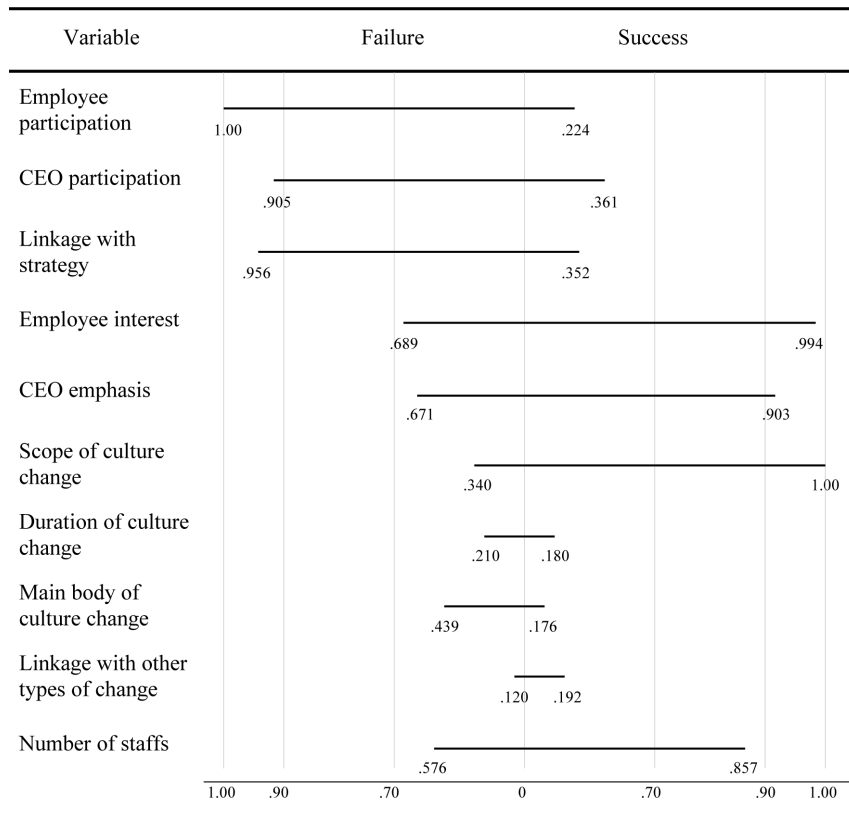


Figure 1. Differential Effects of Independent Factors on the Failure and the Success of Culture Change Management

The critical factors of ‘success’ companies were different from those of ‘failure’ companies. Three factors (‘employee interest’, ‘CEO emphasis’, and ‘scope of culture change’) were significant ($p < 0.05$) only for success, whereas the other three factors (‘employee participation’, ‘CEO participation’, and ‘linkage with corporate strategy’) were significant ($p < 0.05$) only for failure. These findings supported the proposed hypothesis.

Although the coefficient of determination decreased when the performance level of corporate culture was treated as separate scales, the two separate regression models were still significant ($p < 0.01$). Figure 1 provides a schematic representation of the differential effects of independent variables. Because the numbers in Figure 1 represent

each factor's significance level subtracted from 1.00, the length of each line represents the level of effect of each factor on the success and failure of culture change.

V. Discussion

The present study has identified six factors ('CEO emphasis', 'CEO participation', 'employee participation', 'linkage with corporate strategy', 'scope of culture change', and 'employee interest') as having a significant effect on the success and failure of attempts to change corporate culture. This result is in partial accordance with previous studies in that the factors cited most commonly in the literature (that is, the first four of the above list) also turned out to be significant factors in this study (irrespective of whether they were success factors or failure factors).

Brief comments can be offered on these and other factors considered in the present study.

'Linkage with other types of change' has been posited as an important factor by authors who have emphasized the *process* of change (Kilmann, 1985; Mourier & Smith, 2001). However, this factor was not found to be a significant factor in this study of the *performance* of culture change.

With regard to 'duration of culture change', some researchers (Kilmann, 1985; Williams et al., 1993) have warned that real culture change takes time. However, as Brown (1998, p. 196) has noted, "... there is little agreement on how long it takes to alter a culture". The results of the present study suggest that long duration, in isolation, does not necessarily guarantee the success of an attempt to effect culture change; rather, *how that time is used* appears to be more important to success.

The 'scope of culture change' is not mentioned as a factor in the Western literature, but was used in the present study as a result of interviews with Korean practitioners. It is logical to presume that the performance of a change effort will be enhanced if the scope of that effort involves the whole organization, rather than an isolated division or department. That is, if the object is to change the culture of the whole organization,

the scope of the change effort should logically include the whole organization. The absence of this factor from previous studies might be explained by this factor being considered self-evident.

The factors of ‘main body of culture change’ and ‘number of staff members working for culture change’ did not contribute significantly to change performance in the present study. Although the overall scope of culture change should be organization-wide, it would seem that the actual change efforts should be conducted at the departmental or divisional level. In keeping with this emphasis on change efforts being made at the departmental level, it would also seem that the overall number of staff members working solely on culture change is not a significant factor in successful change performance.

The three critical success factors (CSFs) identified in the present study were ‘scope of culture change’, ‘CEO emphasis’, and ‘employee interest’. This finding largely coincides with the findings of previous studies, in which ‘CEO commitment’ and ‘communication’ were the most frequently cited CSFs. However, other frequently cited success factors in earlier studies (such as ‘employee participation’ and ‘alignment with corporate strategy’) were found to be two of three critical *failure* factors (CFFs) in the present study (the other being ‘CEO participation’). This finding suggests that a company’s attempt to change corporate culture will fail if it does not attract employee and CEO participation and if the proposed culture change is not aligned with the company’s corporate strategy. These findings coincide with those of most previous empirical studies on CFFs, in which ‘employee resistance’, ‘poor leadership of top management’, and ‘misalignment of culture and strategy’ represented three of the five most commonly cited failure factors.

The most important finding of the present study is the emergence of a ‘two-factor theory’ of culture change management — that is, that the success or failure of corporate culture change should be treated as separate dimensions, rather than as the two poles of a continuum. The notion that the factors that account for the *success* of corporate culture change are different from those that account for the *failure* of such change is a new concept in the literature. It is acknowledged that different results might have

been obtained if the respondents had been asked to respond to two scales separated in advance. However, such *a priori* separation of scales can create scaling bias by restricting respondents' opportunities to register negative reactions to one set of factors and positive reactions to others (Gordon et al., 1974). In contrast, the present study is free from such scaling bias because respondents were asked to answer on an overall performance scale, with the division of the scale into two separate parts being undertaken *after* the measurement.

VI. Conclusion, Limitations, and Recommendations

The present study has found that many of the surveyed companies failed in their attempts to change their culture, despite a great deal of managerial effort being expended. Although this finding might suggest that culture cannot be managed, it is apparent that there were good reasons for failure, which might have been avoided. The information gathered from the companies surveyed in the present study can thus offer useful insights into successful management of culture change.

The 'two-factor theory' of culture change management proposed here implies that it is necessary to differentiate between critical success factors (CSFs) and critical failure factors (CFFs) if the management of culture change is to become more efficient and effective. A pattern appears as the two groups of factors are scrutinized. CFFs (i.e., linkage with strategy, CEO participation, employee participation) imply strategic culture change process with active participation of organizational members, whereas CSFs (i.e., scope of culture change, CEO emphasis, employee interest) imply organization-wide culture change process with sympathetic zeal of the members. That is, companies have to start with a strategically-aligned and action(or external behavior)-oriented change effort to avoid a failure, and then move toward a wider-scoped and commitment(or internal aspiration)-oriented change effort to pursue a success.

The findings of this study are not restricted to corporate culture change, but have applications in the broader range of change management. As Reichers and Schneider

(1990, p. 28) have observed: "... [it] is becoming increasingly difficult to differentiate contemporary writings on culture change from those on strategy and strategic change". Moreover, as Mourier and Smith (2001, p. 27) have noted: "... the critical positive and negative factors that affect change efforts are common across different types of organizational change". In accordance with these views, it is likely that the 'two-factor theory' proposed in the present study can profitably be applied to other aspects of change management.

Notwithstanding the significance of the findings, certain limitations in the study are acknowledged. In particular, there was a weakness in the research design of the study. By conducting a survey after culture change efforts had taken place, no manipulation or control of variables was possible. Problems with internal validity can therefore occur. Potential problems in this regard were compensated, to some degree, by an attempt to enhance external validity by including as many companies as possible in the survey. However, it is acknowledged that a sample of 89 companies was still not large enough for a comprehensive study of this type. Further, I do not expect the findings of this research to be applicable across all types of organizations in all kinds of countries. That is, there certainly is a limit in the generalization of this result.

Although statistical power can be maintained with a sample size of 89 and ten independent variables, statistical reliability became more questionable when the sample size of 89 was dichotomized into the successful group of 11 and the failure group of 78. Artificial dichotomization of a continuum into the two — success and failure — dimensions using the median split may draw attention as something intriguing. The practice of the dichotomization of quantitative measures, however, is rarely defensible (MacCallum et al., 2002). Thus, future studies with more samples large enough to trichotomize and show a noticeable difference between the success and the failure groups are recommended.

With regard to future studies, more research is needed to test (and enhance) the validity of the theory proposed by this study. Future research could take into account the methodological difficulties acknowledged here by undertaking a more comprehensive replication of the study. It would be helpful if more independent variables were tested

with a larger sample size. Given the low success rate of culture change, it will be difficult to include enough examples of organizations with successful culture change; however, future studies should attempt to ensure that the sample sizes of both ‘success’ and ‘failure’ are large enough for an adequate statistical comparison. Furthermore, the ‘two-factor theory’ proposed here could be tested with other types of organizational change. Given that 75% of attempts at corporate culture change are conducted in combination with other types of change (Mourier & Smith, 2001), the application of the proposed theory to other forms of corporate change management is likely to provide valuable insights into discriminating between the factors that produce success and failure in such endeavours.

Moreover, future research should focus not only on the identification of individual success/failure factors but also on the grouping of factors and explaining the interaction between them. Further, it would be very helpful if the relationship of factors with different stages of culture change’s life cycle is looked into. Such approaches have been done in the case of critical success factors of project management. That is, Belassi and Takel (1996) did the former and Pinto and Prescott (1988) did the latter. Nothing, however, has been done for success/failure factors of culture change management yet. As Zwikael and Globerson (2006) has proposed to move from critical success factor to critical success processes in the case of project management, more stage(or process)-related or even type-stage combined studies would result in better understanding of and decision-making for culture change management.

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