

*Drawing on survey and performance data for 34 corporations, this study shows that organizations that have participative corporate cultures and well-organized workplaces have better performance records than those that do not.*

# *Bringing Corporate Culture To the Bottom Line*

Daniel R. Denison

*T*he impact of corporate culture on the design and management of organizations is a constant theme in contemporary writing about American business. Most authors agree that "corporate culture" refers to the set of values, beliefs, and behavior patterns that form the

core identity of an organization. A "strong" culture that encourages the participation and involvement of an organization's members appears to be one of its most important assets.

The impact of corporate culture has 5

been cited as an explanation for the differences in productivity among American firms, and the differences in productivity between American and Japanese companies. Superior Japanese productivity consistently has been attributed, in part, to better organization of work, consensus decision making, and an elusive quality called the effective management of human resources. The "soft" side of management has seldom received so much attention.

Despite this attention, there is little solid evidence about the impact of an organization's culture on performance. The evidence that does exist is seldom presented in a form that is convincing to managers and executives and, therefore, these human resources issues often remain on the back burner.

#### BACKGROUND AND RESEARCH METHODOLOGY

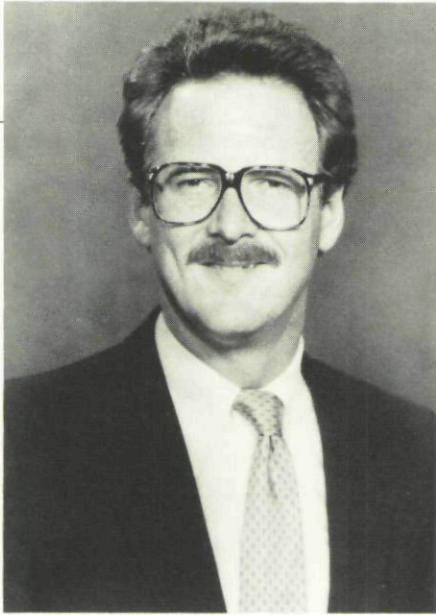
The study described in this paper directly addresses the problem of "no evidence" and

asks these questions: Do firms that organize their work well and involve employees in decision making really perform any better than firms that do not? If so, how much better, and under what conditions?

Using survey data as an indication of cultural managerial style and Standard and Poor's financial ratios as indicators of performance, this research compares a set of 34 large American firms in order to begin to test the relationship between corporate culture and performance. The results, presented in terms of return on investment and other financial indicators, indicate that companies with a participative culture reap a return on investment (ROI) that averages nearly twice as high as those in firms with less efficient cultures. The data presented here provide hard evidence that the cultural and behavioral aspects of organizations are intimately linked to both short-term performance and long-term survival.

#### *Measuring Corporate Culture*

The measurement of something as complex and amorphous as an organization's culture has been the subject of much debate. Some argue that each culture is unique and must be intuitively "sensed" rather than measured; others argue that the best way to uncover culture is through ethnographic studies that analyze the stories and accounts of events making up the folklore of every organization. Recent special issues of *Organizational Dynamics* and the *Administrative Science Quarterly* have focused exclusively on organizational culture and have elaborated on the new approaches that have been taken to study this phenomenon. The study described here takes still a different approach in measuring culture, but relies on an established research technique—the survey index.



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*Dr. Denison is currently studying the relationship between the quality of work life and the differences in effectiveness between units within a large manufacturing corporation. This research examines intraorganizational differences in much the same way that interorganizational differences are studied in this article.*

*The complete project upon which this article is based is described in the author's forthcoming book, Corporate Culture and Organizational Effectiveness: A Behavioral Approach to Financial Performance (Wiley-Interscience, 1985).*

ganizations in the same way. The results then provide a basis for comparison and generalization. For example, a set of items combined into an index of communication might indicate that one organization had better communication than a second organization that scored lower on the index. A finding that firms with better communication also were better performers then could be taken as evidence of a close relationship between communication and performance.

One disadvantage of the survey method is that there is no safeguard against overgeneralization. Comparing decision-making practices in organizations, for example, can sometimes be like comparing apples and oranges. Assigning an organization (or a division of an organization) a single score on decision-making practices implies that all decisions within that unit are made in the same way. It also implies that participative decision-making practices are similar and will have the same effects in a sales or banking organization as in a manufacturing company. If this basic comparison is not justified,

Using a survey technique to study organizational culture has both advantages and disadvantages. The key strength is that the same method can be applied to many or-



it can result in other unwarranted comparisons and generalizations.

Both the comparative survey methods used in this study and the ethnographic methods emphasizing the unique character of each organizational setting share a common focus: the set of values and beliefs that lie at the core of an organization's culture and the practices and patterns that stem from, and reinforce, those basic values. These issues reflect a recurring theme in organizational studies over the past 30 years: the central importance of values and beliefs to organizational life.

The data used in this study were based on individual perceptions of organizational practices and conditions; these perceptions were used to characterize the culture of each organization. The data on 34 companies were drawn from the Survey of Organizations archive at the University of Michigan's Institute for Social Research (ISR).

#### *Measuring Organizational Performance*

The method of measuring an organization's performance also is a controversial issue.

The approach taken by this study is a simple one, selected for its relevance to managers and executives as well as to researchers and academics. A number of financial ratios, including return on investment, equity, and sales, were computed for all 34 firms that were in the ISR archive and also were listed on either the New York or the American Stock Exchange. The financial data were taken from Standard and Poor's statistical service, COMPUSTAT. The ratios for each company were compared with those of its competitors within each industry to produce a standardized score representing the firm's competitive standing.

Although financial ratios are not the only, or even the best, indicators of organizational performance, effectiveness does imply that an organization can successfully meet the demands of a broad set of stakeholders: investors, shareholders, employees, customers, suppliers, and so forth. Of course, complete reliance on financial indicators of business performance often can bias a measure of effectiveness toward particular stakeholders. For example, risk-adjusted earnings per share is a favorite measure of business performance for market analysts, but shows a clear bias toward shareholders and investors.

This study's business-performance measures, emphasizing the organization's ability to generate income, are in keeping with a definition of effectiveness that focuses on an organization's capacity to acquire resources from its environment. This measure of success generally reflects the interests of all stakeholders, even though the strategies for acquiring resources often involve clear trade-offs among stakeholders. Future research may study corporate culture's impact on effectiveness with a more comprehensive set of measures.

### *The Survey Data*

The Survey of Organizations, a 125-item standardized questionnaire developed over the past 15 years at ISR, operationalized the theories of Rensis Likert, one of the original proponents of participative management. Since its genesis, the instrument has been periodically updated to incorporate new developments within the field of organizational behavior. The archive at the University of Michigan now incorporates survey data from over 300 organizations. The instrument's validated scales on organizational climate, work design, leadership, group functioning, and satisfaction focus on respondents' perceptions about the way their organization is managed, rather than on their own attitudes, so that a clear, diagnostic picture of an organization may emerge from the survey data.

The survey design presumes that certain social processes and relationships are common to all organizations and have a consistent correlation with performance and effectiveness. This controversial set of assumptions allows organizations to be compared on social, behavioral, and cultural dimensions in a way that case studies and anecdotes cannot be compared. In principle, other dimensions of culture also can be measured and compared in this same manner. Their relationship to performance at this point remains an empirical question.

This study was based on the perceptions of 43,747 respondents in 6,671 work groups in 34 companies that were included both in the Survey of Organizations archive and Standard and Poor's COMPUSTAT listing. These 34 companies represent 25 different industries as defined by Standard and Poor's four-digit industry code. A listing of the industries from which this sample was drawn is presented in Exhibit 5.

Each individual's responses to the survey items were averaged, by topic, into 22 indexes in the areas of organizational climate, leadership, peer relations, group process, work design, and satisfaction. Each of these individuals' index scores were then averaged with the other members of the same work group to get a group score. Finally, all work group scores were averaged to get a score for the entire organization on each index.

The companies in this sample were "self-selected"; they are client organizations that voluntarily chose to use the survey some time during 1966-1981. Since the companies also selected the divisions that would be included in the survey sample, not all members of all organizations are represented in the sample.

Performance data in all cases referred to the entire corporation as listed on the New York or American Stock Exchange. Several tests were done to make certain that a faulty match did not artificially account for the results of the study. When the poorest matches (e.g., survey data from one small division of a large corporation matched with



its entire performance data) were excluded, the observed relationship between the survey data and the performance data not only remained, but increased.

#### *The Financial Performance Data*

A number of COMPUSTAT's financial indicators initially were examined before settling on those reported here: income/investment and income/sales ratios. Income/equity ratios yield similar results but in several instances are more difficult to predict, given their sensitivity to debt-financing versus equity-financing strategies.

Since many theories predict that the relationships examined in this study would vary greatly in accordance with the business environment and industry, some means of comparing performance within the same industry category also was necessary. Still it was impossible to do any within-industry analysis, since no more than two firms within any particular industry were examined.

The COMPUSTAT data, however, are available for many firms within each industry category and thus provide a basis for standardization of the financial data for those firms that were in the study sample. The financial data of each firm for each year were compared with all firms listed by COMPUSTAT within the same industry in order to compute a standardized score. These standardized scores were then converted to a percentile score (scaled from 1 to 100) for the analyses presented here. The industries represented in the study, the number of firms in each industry, and the number of firms used for comparison are presented in Exhibit 5.

10 This standardization procedure accomplishes two important objectives: It al-

lows for a test of the impact of the behavioral and cultural variables on performance against competitors rather than according to an absolute measure of performance, and it eliminates the effects of the overall economic climate.

Return on investment and return on sales, and their standardized equivalents, were computed for each firm for the five years following the year in which the survey data were gathered. Not all survey data were gathered in the same year, but subsequent performance data are included as year 0 through year +5 for all companies. In this way, characteristics of the companies' management systems and practices, measured at one point in time, were used to predict performance for the five years that followed.

#### THE RESULTS: A FIVE-YEAR COMPARISON

The original results of this study were compiled as correlations between the survey measures and performance over time. A more graphic way to look at the results of this research, however, is to divide the sample of organizations in half and compare the organizations that are above average on the survey indexes with those that are below average. The results are presented here for two of the indexes that had the largest impact on performance: the organization-of-work index and the decision-making practices index.

Each of these indexes makes reference to a behavioral or cultural feature of an entire organization. For example, one of the items in the decision-making practices index asks: "People at all levels of an organization usually have know-how that could be of use to decision makers. To what extent is infor-

mation widely shared in this organization so that those who make decisions have access to such knowledge?" In general, measures like these that make reference to the management system of an entire organization are the best predictors of long-term performance. Indexes that refer to leadership styles or group functioning, rather than to the system as a whole, are generally better as predictors of short- to medium-term performance. Systemwide cultural characteristics seem to have the most enduring impact on performance.

The organization-of-work index is a composite of four survey items that reflect the degree to which work is sensibly organized, work methods are adapted to changing conditions, decisions are made at appropriate levels, and the goals of the organization are perceived by the individual as clear and reasonable. Each respondent's answers to the four items are compiled as an index that is then averaged for all members of his or her work group. The average of all work groups in an organization determines the index score for that organization as a whole.

The decision-making practices index is a two-item measure indicating the degree of involvement that individuals have

in the decisions that affect them, and the extent to which information is shared across levels of an organization in a way that brings the best information possible to decision makers.

The impact of these two indexes is presented in terms of two indicators of performance and their standardized equivalents: (1) *The income/investment ratio* compares income (after all expenses, income taxes, and minority interests, but before provisions for common and/or preferred dividends) with total investment (long-term debt, preferred stock, minority interest, and common equity). (2) *The income/sales ratio* compares income with net sales (gross sales reduced by cash discounts, trade discounts, returned sales, and other allowances).

These two financial ratios reflect quite different aspects of performance. Income/investment is a measure of the effective utilization of resources over time, while the income/sales ratio is more of an indicator of operating efficiency. The standardized ratios compare each company to competitors in the same general industry in the same year and then express performance compared with that of competitors as a percentile score.

Exhibit 1 compares return-on-in-

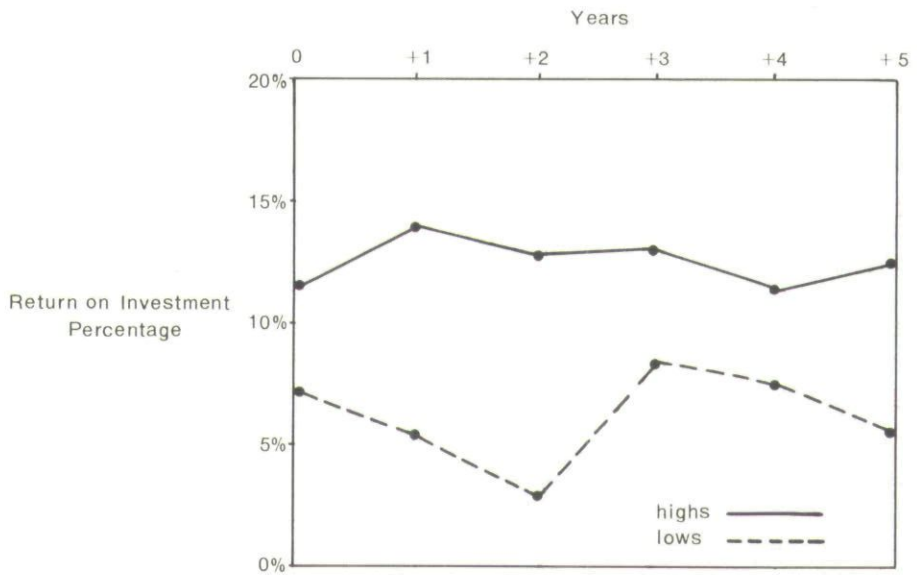
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*"The survey design presumes that certain social processes and relationships are common to all organizations and have a consistent correlation with performance and effectiveness."*

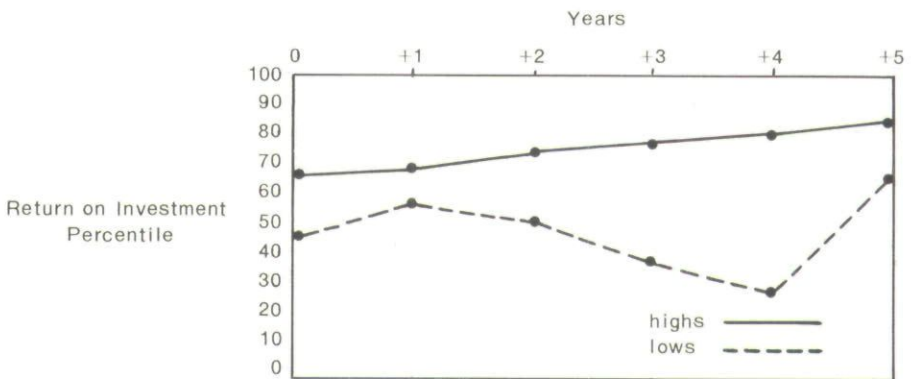
Exhibit 1

COMPARISON OF RETURN-ON-INVESTMENT RATES FOR COMPANIES HIGH AND LOW ON THE ORGANIZATION-OF-WORK INDEX (BY PERCENTAGE AND PERCENTILE FOR A FIVE-YEAR PERIOD)

Organization of Work and Return on Investment



Percentile Score by Industry



12 investment rates for the companies that are high and low on the organization-of-work index and the corresponding percentile scores for these ratios. As mentioned previ-

ously, this study divided the sample of organizations in half. The "highs" in Exhibits 1 and 2 simply represent those companies whose scores are above the 34-firm average



on the organization-of-work index, while the "lows" represent those that are below the 34-firm average. These data clearly show that those companies perceived as having a well-organized work environment as have a significantly higher return on investment. The highs, in fact, often have an ROI that is twice as high as the lows. Most importantly, these differences are not temporary—good work organization in year 0 is not only a good indicator of high performance today, but also seems to predict a high return on investment as far as three to five years into the future.

The same pattern also appears, but with more stability, in the percentile scores: the highs have a ranking within their industry that is from 15 to 50 percentage points higher than the lows' rank within their industry. This difference appears in all years, and with the exception of the last year (+5) the gap between the highs and lows appears to widen over the years. (The percentile comparisons also show that the sample of firms for which Survey of Organizations data were available typically performed slightly better than their competitors. This raises a few questions of interpretation, but doesn't call into question the basic underlying pattern. The relationship between culture and performance may, in fact, have appeared stronger if the study sample had included more firms that performed poorly.)

Exhibit 2 contrasts the second performance measure, return on sales, with the organization-of-work index. The high versus low contrast for this financial indicator of organizational efficiency is even more striking than the return on investment analysis. The differences between the highs and the lows are substantial in year 0 and grow consistently wider during years +1 through +5.

Both of these analyses show that companies with a culture that encourages the

development of adaptable work methods linking individuals to the goals of an organization have a clear competitive advantage. This advantage appears to be substantial when expressed in terms of return on investment, and seems to have an even stronger impact when presented in terms of the efficiency measure, return on sales. The organization-of-work index captures the potential of a company to efficiently reorganize and adapt both in the present and in the future.

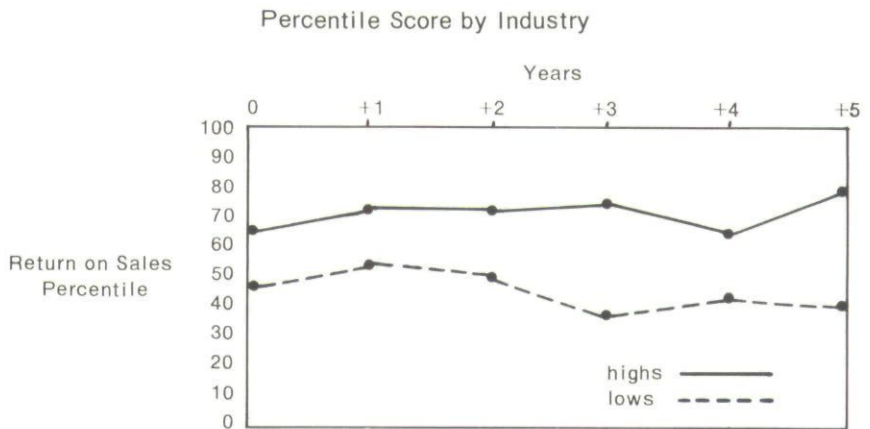
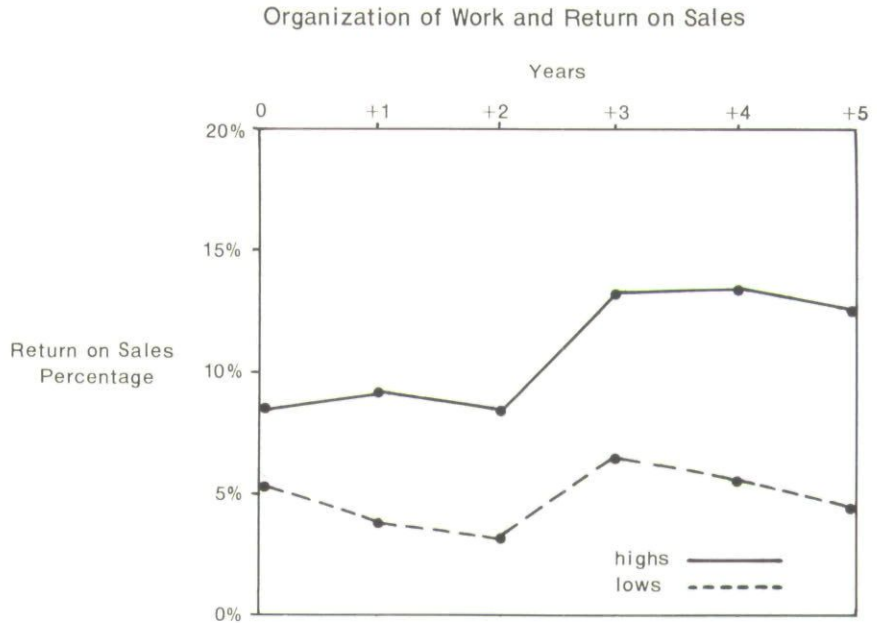
Exhibits 3 and 4 present the results in a similar way for the second survey index, decision-making practices. Exhibit 4 shows the differences in return on investment between those companies that rely on participative decision-making practices and those that do not.

These results show a very different pattern from the findings regarding organization of work. Large differences in return on investment do not appear at years 0, +1, or +2. The data for year +2, in fact, even seem to indicate that firms that have more participative decision-making practices have a slightly lower return on investment. This absence of a performance difference for years 0 through +2 dramatically reverses in years +3 through +5; however, the highs outperform the lows by a factor of two or three to one.

The percentile comparisons show a slightly different picture. When performance relative to competitors is examined, there appears to be a small initial advantage associated with a participative culture that steadily widens over the five-year period. Performance relative to competitors steadily increases for the highs in this sample, moving roughly from the 60th percentile to the 80th percentile over the five years that these firms were studied.

The relationships between involve- 13

*Exhibit 2*  
 COMPARISON OF RETURN-ON-SALES RATES FOR COMPANIES HIGH AND LOW ON THE  
 ORGANIZATION-OF-WORK INDEX (BY PERCENTAGE AND PERCENTILE FOR A FIVE-YEAR PERIOD)



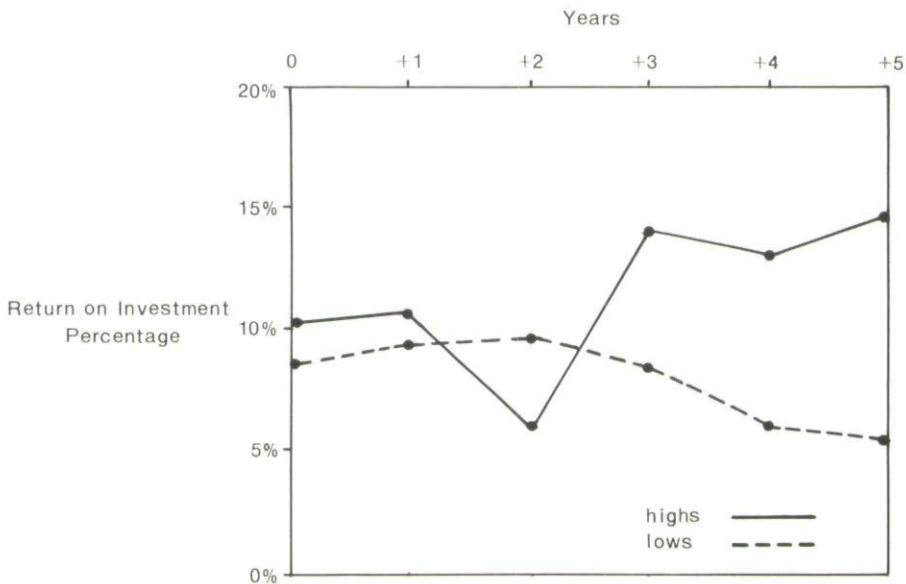
14 ment in decision making and performance and between organization of work and performance are different. Participation in decision making appears to be an investment,

and one that takes some time to pay off. Taking more time to involve managers, executives, or employees in a decision may not always be the quickest way to make a deci-

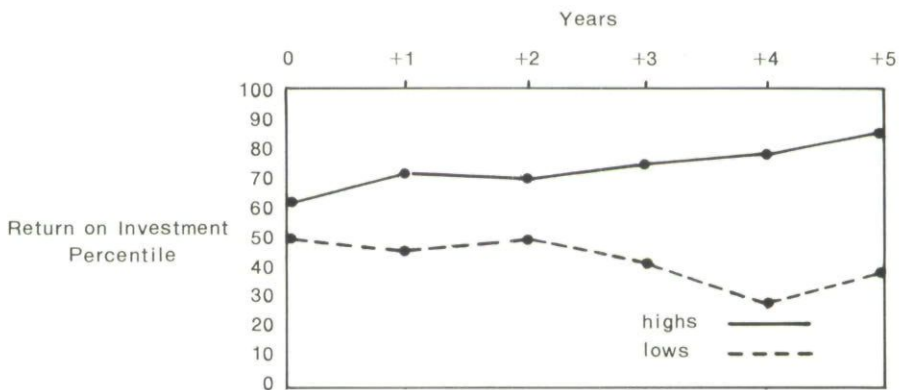
Exhibit 3

COMPARISON OF RETURN-ON-INVESTMENT RATES FOR COMPANIES HIGH AND LOW ON THE DECISION-MAKING PRACTICES INDEX (BY PERCENTAGE AND PERCENTILE FOR A FIVE-YEAR PERIOD)

Decision-Making Practices and Return on Investment



Percentile Score by Industry



sion, but the evidence here and in other studies suggests that it may lead to a better decision. More importantly, implementation is usually improved when those who will be

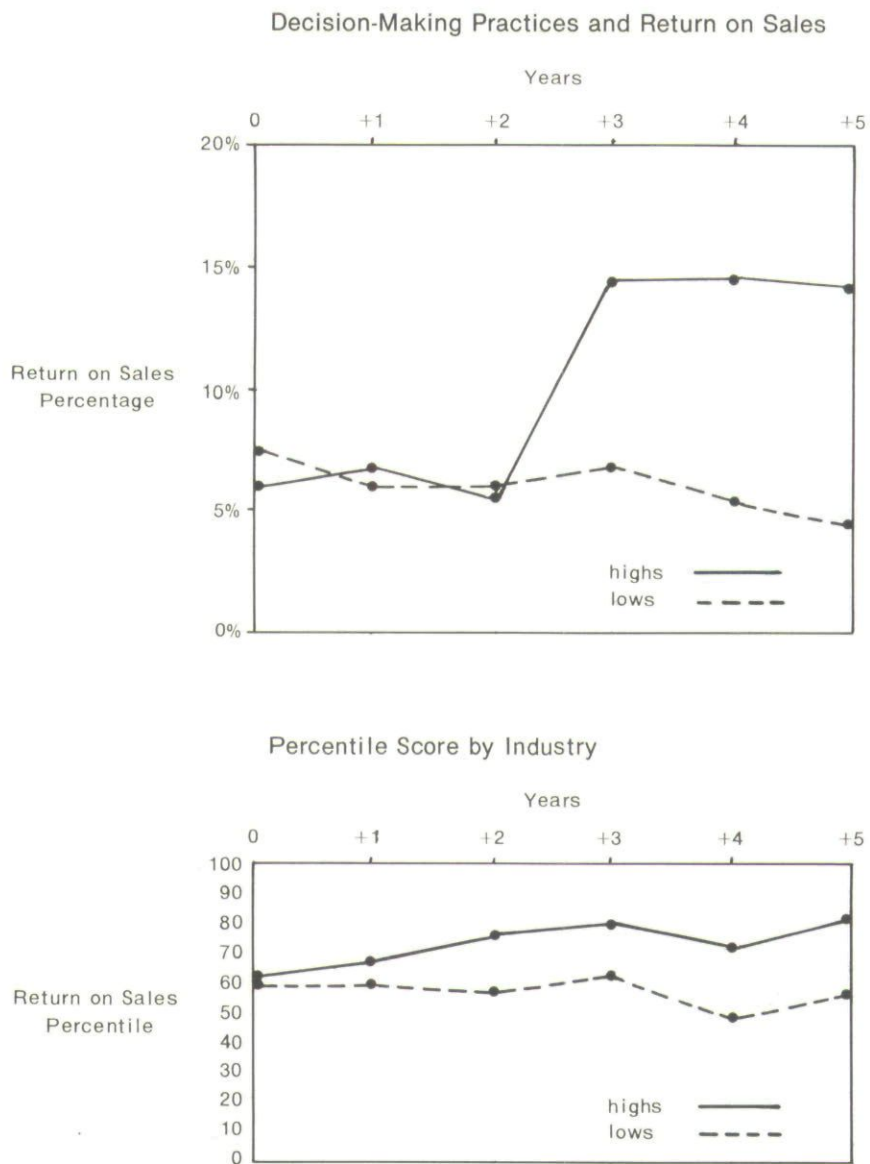
affected are involved in a decision before it is made.

Exhibit 4, the final set of results, compares return on sales for those firms that 15



Exhibit 4

COMPARISON OF RETURN-ON-SALES RATES FOR COMPANIES HIGH AND LOW ON THE DECISION-MAKING PRACTICES INDEX (BY PERCENTAGE AND PERCENTILE FOR A FIVE-YEAR PERIOD)



are high and low on participation in decision making. These results look very similar to the return on investment analysis presented in Exhibit 3; the initial differences between

the high- and low-participation companies are small, but they grow consistently wider over the five-year period that was studied.

The results presented in Exhibits 3

and 4 illustrate the impact that a participative culture can have on performance against competitors. Standardizing the performance measures by industry makes the relationship more, not less, apparent. Standardization also resolves some of the confusion caused by the absence of a positive relationship between participation in decision making and performance in years 0 through +2 that appear in the analysis of the unstandardized performance measures in Exhibits 3 and 4.

The most interesting feature of this study is that the same general pattern appears when performance against competitors is used in place of the simple performance measures. Many interpretations of contingency theory would predict that the relationship should be diminished when performance is standardized by industry. Contingency theory predicts that in stable environments, participation should have an adverse effect on performance, while in changing environments, participation should have a positive effect. Since characteristics of the business environment vary by industry, combining companies from a diverse set of industries should diminish the observed performance impact of participation. This effect does not show up in the results. The implications of this for the "contingency" versus "one best way" debate are further addressed later on in this article.

These results may come as a surprise to those who think of corporate culture or participatory decision making as being too soft or too amorphous to have practical implications. Nevertheless, this research shows that performance differences do exist. The impact on companies is substantial, and this study suggests, as have many theorists, that the management of an organization's culture (whether implicit or explicit) should be one of the fundamental elements of a corporation's strategy for staying in business.

These findings also give an indication of the potential that exists for monitoring an organization's management system and culture and for predicting their impact on performance in the future. As this capacity for prediction develops, the potential for diagnosing, directing, and managing an organization's culture will also become much clearer. These initial results have focused on two basic aspects of an organization's culture and have shown that each has a direct and long-lasting effect on the financial performance of a set of organizations. Soft measures do, in fact, predict hard outcomes.

#### ADDITIONAL FINDINGS

This article has described a small, but highly relevant part of a much larger study. The results from only 2 of 22 survey indexes have been presented in a simplified manner to make the point as directly as possible. There are many other interesting findings from the study, some equally strong and some more tentative. Some of these findings follow.

*The unit of analysis.* The survey data included individuals' attitudes toward their immediate work groups, their supervisors, other groups with whom they interact, and the organization as a whole. The system-level attitudes were the best predictors of performance, particularly in the long run. Attitudes regarding respondents' work groups or supervisors worked moderately well as predictors of short- to medium-term performance, but did not predict longer-term performance.

These results seem to indicate that (1) studies that attempt to predict performance often "mismatch" units of analysis, and often cannot pinpoint an outcome variable that reflects true performance while still allowing for comparison between organiza-



tions; and (2) a close match between the units of analysis for independent and dependent variables, along with an accurate and comparable measure of performance seems to be necessary to uncover the true relationship. Furthermore, these results seem to highlight the tremendous inertia in an organization's culture and management system; it is the system-level characteristics that influence performance far into the future.

*The importance of high ideals.* The study included a limited amount of information about preferred patterns of leadership gleaned from questions that asked respondents to rate their ideal supervisor on a number of dimensions. In several cases, these ratings of the ideal leader were better predictors of performance than were the ratings of actual supervisory behavior. The lowest performers in this study were those organizations in which ideals seemed unimportant or unclear. These data seem to provide some support for one of the most significant contributions of the emerging cultural theory of organizations: the importance of a symbolic vision as a means of providing direction and integration. The ideal or vision that an organization's members hold appears to be as important to performance as the actual behavior of the company's employees.

*Consistency, agreement, and conformity.* The data presented from the organization-of-work and decision-making practices indexes compared the level of responses on those indexes with organizational performance. A different way to conceptualize the relationship between management practices and performance is to look at the consistency of responses across groups within each organization and the level of agreement about management practices throughout the organization. Such a consistency measure is one way of looking at the effects of conformity

and is a good way to operationalize the degree to which an organization has a strong culture.

The results of this part of the study are intriguing, even though they probably raise more questions than they answer: High consistency is associated with high current performance and short-term performance, but is associated with low long-term performance. One interesting interpretation of this finding is that consistency is an indication of a system that is currently well coordinated and integrated, and that currently performs well. In the longer term, however, the lack of variety connected with such a system limits the organization's ability to adapt to changes in the environment. Such speculation is difficult to prove or disprove with these data, but clearly suggests areas for future study. The interaction of a strong and participative culture may well lead to the most favorable performance conditions, but these ideas have not yet been fully examined.

#### KEY QUESTIONS RAISED BY THIS STUDY

The findings of this study raise some key questions about organizational theory and how organizations are studied. Several of these questions are addressed below.

#### *Why Participation Works*

The data presented here provide evidence that participation works but little information on why it works. The question is a complicated one, but at least four processes seem to be associated with high participation and involvement.

1. A participative culture encourages a higher degree of inclusion of the individual



in the work environment. Workers become more than "hired hands" and develop a sense of ownership over their efforts within the organization and a pride in their contributions to the workplace. An environment is created that requires an organization's members to become psychologically involved and to become aware of and concerned with the consequences of their actions.

2. Coordination within a participative culture becomes an a priori condition of planning, problem solving, and decision making, rather than an afterthought or an element in some post hoc implementation plan. The actors are informed and seek to minimize the transaction costs associated with conflicts while defining a course of action that furthers their *collective* interests.

3. Participation fosters the long-term development of responsible work habits on the part of individual members. When participation is a part of an organization's culture, individuals tend to develop a view of themselves and the organization that extends beyond their immediate job or working situation. Over time, identification with organizational goals develops.

4. Groups of people do a better job of solving complex, multifaceted problems than do individuals. This is particularly true if the interactions of group members are struc-

tured in an effective manner. A set of norms that capitalize on this fact probably helps some organizations to consistently make better decisions.

#### *Contingency Theory versus One Best Way*

The results presented here could be taken as a triumph of "one best way" theories over theories that argue that the best form of organization is dependent on the situation and the business environment. In reality, both points of view are probably correct, and the two ideas are not nearly so inconsistent as the years of debate have made them seem. It is more likely that there are some universals and, at the same time, many factors that are situationally dependent. Contingency theory might even be viewed as a two-factor, one best way theory that pairs autocracy with stability and participation with turbulence.

The more relevant questions to ask would seem to be, What is the relative impact of the "main effect" (participation) and the "contingent effect" (the business environment)? and Under what conditions does the relative impact change? The data presented here appear to support the argument that participation seems to have a positive effect in a broad range of situations, but do not

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*"Contingency theory might even be viewed as a two-factor, one best way theory that pairs autocracy with stability and participation with turbulence."*

rule out the possibility that the positive effect may be much greater in those situations in which the business environment changes rapidly. Overall economic stability and more global rates of change also may alter the relative impact of contingent effects.

### *Corporate Culture and Participation*

The results and discussion presented here are not meant to equate organizational culture and participation. Participation is only one element of corporate culture that may have a clear impact on organizational performance. Future research will soon expand the list of universal or situationally-specific cultural aspects of organizations that influence performance.

One consistent theme in the culture literature concerns the impact of a strong culture on organizational performance. The hypothesis is that an organization with a high level of shared meaning, a common vision, a "clanlike" attitude toward members, and a high level of normative integration will perform well. Some authors have argued that this theory has universal application, while others have argued that the culture of an organization, in addition to having these characteristics, must also fit the business environment.

The strong-culture hypothesis bears an interesting relationship to the participation hypothesis; both emphasize *inclusion*. The culture literature has tended to emphasize shared meaning, while the participation literature has focused more on managerial practices and style; however, both have stressed the central importance of the psychology of inclusion.

The *content* of an organization's culture, however, need not include participation. At this point the strong-culture hy-

pothesis and the participation hypothesis diverge and make quite different predictions. An organization that is rigid, autocratic, conflict-ridden, and individualistic, could, under the strong-culture hypothesis, still perform very well as long as it fit a stable business environment and met the criteria for inclusion, meaning, vision, and integration. In that case the participation hypothesis would predict poor performance, while the strong-culture hypothesis would predict the opposite. It is hoped that future comparative research will resolve this paradox and other key issues in the study of organizational culture and performance.

### CONCLUSION

This article has shown that the cultural and behavioral characteristics of organizations have a measurable effect on a company's performance. Organizations with a participative culture not only perform better than those without such a culture, but the margin of difference that widens over time suggests a possible cause-and-effect relationship between culture and performance. Much more research will be needed to substantiate these findings, but the results are very encouraging.

This research allowed for comparison between organizations on their cultural characteristics, management practices, and key precepts. Clearly, more research needs to be done along these lines. The numerous and exciting ideas generated by the recent literature on organizational culture need to be tested, so that the importance of this aspect of organization and management will become even more evident.

This research also gives a clear vision of the potential that now exists for



Exhibit 5

DESCRIPTION OF INDUSTRY DATA USED FOR STANDARDIZATION

COMPUSTAT Industry	Industry	Number of Firms in Industry	Number of Firms in Sample
1000	Metal mining	20	2
2200	Textile mill products	44	1
2600	Paper and allied products	27	2
1750	Commercial printing	9	1
2800	Chemicals and allied products	19	2
2830	Drugs	26	1
1841	Soap and other detergents	10	1
2844	Perfumes, cosmetics, toiletries	16	1
2850	Paints, varnishes, lacquers	9	1
2911	Petroleum refining	46	2
3140	Footwear, except rubber	13	1
3221	Glass containers	7	1
3350	Rolling and drawing non-ferrous metals	16	2
3531	Construction machinery and equipment	9	1
3693	X-ray, electromedical apparatus	3	1
3711	Motor vehicles and car bodies	9	2
3714	Motor vehicle parts, accessories	27	2
3720	Aircraft and parts	6	1
3760	Guided missiles and space vehicles	2	1
3940	Toys, amusement, sporting goods	15	1
4210	Trucking—local and long distance	22	1
4811	Telephone communication	14	2
4911	Electric services	64	1
6025	National banks—federal reserve system	90	2
6798	Real estate investment trust	30	1

monitoring and assessing cultural and behavioral aspects of organizations. Organizational diagnoses and cultural audits, for example, can give an accurate picture of an organization's current management system,

and techniques such as human resources accounting or human-asset accounting can show the relationship between these characteristics and the short- and long-term performance of organizations.



SELECTED BIBLIOGRAPHY

Three readings that emphasize the centrality of symbolic meaning to the structure of social organi-

zation are Mircea Eliade's *Cosmos and History: The Myth of the Eternal Return* (Harper & Row,



1959); George Herbert Mead's *Mind, Self and Society* (University of Chicago Press, 1934); and Peter Berger and Thomas Luckman's *The Social Construction of Reality* (Doubleday and Company, 1967). Although these three readings do not specifically address the concept of organizational culture, they give an important background for studying culture and symbolic meaning in organizations.

The importance of values and beliefs in the organizational literature has long had a normative, humanistic flavor that is best represented by the classics: Elton Mayo's *The Human Problems of an Industrial Civilization* (Macmillan, 1933); Douglas McGregor's *The Human Side of Management* (McGraw-Hill, 1960); Rensis Likert's *New Patterns of Management* (McGraw-Hill, 1961); and Chris Argyris's *Integrating the Individual and the Organization* (John Wiley and Sons, 1964). Many of the ideas now being developed in the literature on organizational culture first appeared in these books.

Corporate culture has recently established a place in the popular literature that none of these classics attained. William Ouchi's *Theory Z* (Addison-Wesley, 1981); Thomas J. Peters and Robert H. Waterman's *In Search of Excellence* (Harper & Row, 1982); Richard Pascale and Anthony Athos's *The Art of Japanese Management* (Simon and Schuster, 1981); Terrence Deal and Alan Kennedy's *Corporate Cultures* (Addison-Wesley, 1982); and Rosabeth Kanter's *The Change Masters* (Simon & Schuster, 1983) all brought the topic to public attention and made an important contribution to the academic world as well.

*Organizational Dynamics* (Autumn 1983) and the *Administrative Science Quarterly* (September 1983) have each published special issues on organizational culture. Several other articles, especially Alan Wilkins and William Ouchi's "Efficient Cultures: Exploring the Relationship Between Culture and Organizational Performance" (*Administrative Science Quarterly*, September 1983); Daniel Carroll's review, "A Disappointing Search for Excellence" (*Harvard Business Review*, November 1983); and Wickham Skinner's "Big Hat,

No Cattle: Managing Human Resources" (*Harvard Business Review*, September 1981) also help to set a context in which this article may be viewed.

The Survey of Organizations was first developed in the middle-to-late 1960s. Since that time it has been revised and updated by David Bowers and his associates. The best description of the survey can be found in James Taylor and David Bowers' *The Survey of Organizations* (Institute for Social Research, 1972).

The conceptualization of organizational effectiveness used in this article drew on Stanley Seashore's article titled, "A Framework for an Integrated Model of Organizational Effectiveness," which appears in Kim Cameron and David Whetten's *Organizational Effectiveness: A Comparison of Multiple Models* (Academic Press, 1983); Stanley Seashore and Ephraim Yuchtman's "Factorial Analysis of Organizational Performance" (*Administrative Science Quarterly*, December 1967); Daniel Katz and Robert Kahn's *The Social Psychology of Organizations* (John Wiley and Sons, 1978); and Gerald H. B. Ross's unpublished manuscript "Constituents, Environments and Organizational Effectiveness" (Institute for Social Research, 1980).

Finally, the research presented in this article was drawn from Daniel Denison's dissertation, *The Climate, Culture and Effectiveness of Work Organizations: A Study of Organizational Behavior and Financial Performance* (University of Michigan, 1982).

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