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**Top Management Team Tenure and
Organizational Outcomes: The
Moderating Role of Managerial
Discretion**

**CEO Publication
T 89-9 (152)**

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Abstract

Drawing on an upper echelons framework, and modeling managerial discretion as a moderating variable, this study examined the relationship between managerial tenure and such organizational outcomes as strategic persistence, strategic conformity and performance conformity. In a sample of 100 organizations in three industries, executive team tenure was found to have a significant affect on strategy and performance. Consistent with the theory, results differed depending on the level of managerial discretion, with the strongest results occurring in high discretion contexts. The implications of these findings for other researchers in this area was discussed.

Recently, scholars in strategic management have emphasized the role of executive leadership in strategy formation and organization performance. While a concern for the role of top management is not new (Barnard, 1938), the recent perspective goes beyond earlier prescriptions for effective management. In particular, this new approach emphasizes the importance of understanding the background, experiences, and values of top managers in explaining the choices they make.

While a number of researchers may be identified with this stream (Kotter, 1982; Szilagyi and Schweiger, 1984; Gupta and Govindarajan, 1984; Kets de Vries and Miller, 1986), the work of Hambrick and Mason (1984) is particularly germane to this study. They argued that both strategic choices and organization performance are associated with the characteristics of the top managers in a firm. This "upper echelons theory" is based on the premise that top managers structure decision situations to fit their view of the world. As a result, a central requirement for understanding organizational behavior is to identify those factors that direct or orient executive attention.

As intuitively appealing as the upper echelons perspective might be, it does not receive consistently strong support when tested. Moreover, it is at odds with another conclusion espoused by some theorists: that top managers have relatively little influence on organizational outcomes because of environmental and inertial forces (Lieberson and O'Connor, 1972; Salancik and Pfeffer, 1977; Hannan and Freeman, 1977).

In an attempt to reconcile these competing views, recent

theory has taken a contingency approach. In some cases, environments determine organizational forms and fates; in other cases, managers, through their choices, have a great role in affecting outcomes (Hrebiniak and Joyce, 1985). As a theoretical bridge between these extremes, Hambrick and Finkelstein (1987) developed the concept of managerial discretion to refer to latitude of action available to top executives. Discretion is a means of accounting for differing levels of constraint facing different top management groups. Where discretion is low, the role of the top management team is limited, and upper echelons theory will have weak explanatory power. Where discretion is high, managers can significantly shape the organization, and managerial characteristics will be reflected in organizational outcomes.

In this study, we conduct two major tests. The first is an examination of the relationship between managerial tenure and such organizational characteristics as strategic persistence and conformity to industry norms, a straightforward upper echelons test. Although several studies have investigated tenure (cf. Pfeffer, 1983), none have fully developed and explored the proposition that long tenures are associated with strategic inertia and close adherence to industry norms.

The second inquiry asks whether the strength of the association between managerial tenure and organizational persistence/conformity depends on the degree of managerial discretion present. To conduct this test, we sample high, medium, and low discretion industries; and we distinguish between

high- and low-discretion organizations within each industry.

Theory and Hypotheses

The Upper Echelons Argument

The upper echelons perspective, as set forth by Hambrick and Mason (1984), attributes major influence to a firm's leaders. Organizational outcomes, such as strategies and performance, are expected to reflect the characteristics of these leaders. The logic of this view relies on early work by theorists of the Carnegie School who argued that complex decisions are largely the result of behavioral factors rather than techno-economic optimization (Cyert and March, 1963; March and Simon, 1958). In their view, bounded rationality, multiple and conflicting goals, ill-defined options, and varying aspiration levels -- and in turn actions or inactions -- are all derived from beliefs, knowledge, assumptions, and values that decision makers bring to the administrative setting.

This behavioral view of decision making is especially relevant for top managers, who face great complexity and ambiguity in their tasks. Managers are typically confronted with numerous bits of information that demand attention (Mintzberg, 1973). They must decide on appropriate responses to "important" stimuli and discard information that is less important (Weick, 1979). What and how they respond, and how they define what is "important", depends on their interpretation of the situation. And this interpretation process is simplified by applying general rules that a manager can rely on (Ranson, Hinings, and Greenwood,

1980). Hence, cognitively-limited managers view a complex world and formulate understandings that simplify potential response sets (March and Simon, 1958). As a result "choice is always exercised with respect to a limited, approximate, simplified 'model' of the real situation" (March and Simon, 1958:139).

Some support for the upper echelons perspective is available in research using psychometric indicators of executive predispositions. For example, Hage and Dewar (1972) found that executives' values toward innovation were associated with subsequent levels of organizational innovation. Gupta and Govindarajan (1984) found that general managers' tolerance for ambiguity was more positively related to organizational effectiveness of business units under conditions of growth than under conditions of decline. Miller and Droge (1986) found that chief executives' need for achievement was strongly associated with organizational structure.

In a related but distinct vein, some researchers have demonstrated associations between demographic characteristics of managers and their behaviors or organizational outcomes. Dearborn and Simon (1958) established this stream by finding that managers' functional backgrounds were related to their interpretation of critical problems in a complex business case. Gupta and Govindarajan (1984) found that marketing and sales experience of division managers were more strongly associated with effectiveness of units pursuing growth strategies than those pursuing harvest strategies. Kimberly and Evanisko (1981) (studying hospitals) and Bantel and Jackson (in press) (studying

banks) both found that executive educational levels were associated with organizational innovation.

An important feature of Hambrick and Mason's upper echelons perspective, which we adopt, is a primary focus on the top management team (TMT) rather than strictly on the chief executive. Except in the most extreme cases, management is a shared effort in which a dominant coalition (Cyert and March, 1963) collectively shapes organizational outcomes. The limited empirical evidence on whether the top person or the broader team is a better predictor of organizational outcomes consistently supports the conclusion that the full team has greater effect (Hage and Dewar, 1972; Tushman, Virany, and Romanelli, 1985; Finkelstein, 1988; Bantel and Jackson, in press).

Effects of Top Management Team Tenure

There is no single characteristic of top teams that has been studied sufficiently to understand its complete effects on organizational outcomes. However, the organizational tenure of team members may qualify as having the most significant theoretical footing of all demographic variables (Pfeffer, 1983). We will draw from available literature to argue that a top team's tenure in the organization affects (and serves as an approximation for) the team's commitment to the status quo, its informational diversity, and its attitudes toward risk. In turn, team tenure is expected to affect organizational outcomes. Specifically, firms led by long-tenured executives will tend to have 1) persistent, unchanging strategies, 2) strategies that

conform closely to industry norms, and 3) performance that conforms to industry norms.

As individuals spend time in an organization, and particularly as they succeed and climb the organization's hierarchy, they become convinced of the wisdom of the organization's ways (Wanous, 1980). They become committed to their own prior actions especially when those actions were taken publicly and were explicit, as typically characterizes strategic choices (Salancik, 1977). Staw and his associates (1976; Staw and Fox, 1977; Fox and Staw, 1979; Staw and Ross, 1987) have found experimentally that once people are committed to a course of action, they resist changing their behavior, even when the chosen course is not a successful one. Katz (1982) also argued that tenure is associated with increased rigidity and commitment to established policies and practices.

Related to the effects tenure has on commitment to the status quo are those it has on risk-taking. At one level, commitment derives from certain "psychological risks" of change (Salancik, 1977). However, more tangible risks are also associated with tenure, particularly for senior executives. Such individuals may have struggled for years to achieve their top spots; their competencies have been deemed important for the firm's current configuration; as long-term employees, they have more firm-specific than general human capital; and they typically are well established in their communities, social circles, and family life-cycles (Vancil, 1987). Essentially, they have far more to lose than to gain by taking "unnecessary risks" (Coffee,

1988).

Finally, tenure tends to restrict information processing. Long-term acculturation of team members creates a common perspective or organizational paradigm, making it difficult to break out of that paradigm to initiate novel action (Pfeffer, 1983). Over time, organization members develop habits, establish "customary" information sources, and rely more and more on past experience instead of on new stimuli (Katz, 1982). With organizational tenure, managers tend to develop a particular repertoire of responses to environmental and organizational stimuli that acts against any change in policy (Miller, 1988).

These social and psychological effects of tenure suggest certain organizational outcomes. The most obvious, but so far relatively unstudied, implication is that organizational persistence to a strategic course of action increases with team tenures. Several scholars have made related arguments, typically in the context of executive succession (Chandler, 1962; Miller and Friesen, 1980; Pfeffer, 1983; Tushman and Romanelli, 1985). For example, Miller and Friesen (1980) have argued that long-serving CEOs often show politically and emotionally motivated resistance to change. However, aside from the well-documented tendency for CEOs or teams freshly arrived from the outside to make major strategic changes (e.g. Helmich and Brown, 1972; Tushman, Virany, and Romanelli, 1975), we know of only limited evidence that strategic persistence is related to managerial tenures (Grimm and Smith, 1986).

A second effect of long tenures is to reduce the adoption of

novel or unique strategies (Katz, 1982), thus bringing the organization into general conformity with industry norms. Teams with short tenures have fresh, diverse information and are willing to take risks, often departing widely from industry conventions. As tenure mounts, perceptions become very restricted and risk-taking is avoided. The lowest risk thing to do is to follow the general tendency of mainstream competitors.¹ Thus, even though we expect change to diminish as tenures increase, we expect whatever strategic change does occur to bring the firm into closer conformity with industry norms. Long-tenured teams make few strategic changes, and those few are merely imitative, reflecting impoverished information processing and risk aversion.

The final effect of top team tenures is an extension of the the second. Namely, just as tenure brings conformity to industry strategic norms, so does it also bring conformity to industry performance norms. Short-tenured managers who undertake deviant strategies may experience very high or very low performance within the industry. Longer tenured teams who pursue mainline strategies will experience performance close to industry averages.

In sum, we have three hypotheses about the effects of top managerial tenure on organizational characteristics:

- Hypothesis 1a:** Top management team tenure is positively associated with strategic persistence.
- Hypothesis 1b:** Top management team tenure is positively associated with conformity to industry strategic norms.
- Hypothesis 1c:** Top management team tenure is positively associated with conformity to industry performance norms.

Moderating Role of Managerial Discretion

Upper echelons theory emphasizes the role of top managers in affecting organizational outcomes. However, it is well known that executives do not always have complete latitude of action (Lieberson and O'Connor, 1972; Hannan and Freeman, 1977). Under conditions of restricted discretion, managerial predispositions become less important, and environmental and organizational factors become more significant, in influencing strategy and performance (Hambrick and Finkelstein, 1987). Because top managers of some organizations have more discretion than their counterparts in other organizations, managerial characteristics will not always be predictive of organizational outcomes. Hence, in this study, we would expect managerial tenure to affect strategic persistence, strategic conformity, and performance conformity more in high discretion than in low discretion situations.

Hambrick and Finkelstein (1987) argued that discretion is determined by three sets of forces: (1) the degree to which the environment allows variety and change; (2) the degree to which the organization is amenable to an array of possible actions and empowers the executive to formulate and execute those actions; and (3) the degree to which the executive personally is able to envision or create multiple courses of action. This study limits its focus to environmental and organizational sources of discretion.

Environmental influences on organizations and managers have

been well documented in the industrial organization (Scherer, 1970) and organization theory (Thompson, 1967) literatures. Organizations function within domains defined by their products or services, and the markets they serve (Levine and White, 1961). The characteristics of these domains, particularly the industry the firm competes in, greatly affect the level of managerial discretion. For example, Lieberman and O'Connor (1972) found that more variance in profitability could be attributed to CEOs in industries with high advertising intensity and high growth rates -- both of which signal discretion (Hambrick and Finkelstein, 1987) -- than in more commodity-like or low-growth industries.

Industries may differ along several important dimensions that affect the level of managerial discretion. One such dimension is product differentiability. Industries characterized by product differentiability offer managers discretionary domains that are not available in commodity goods industries. For example, manufacturers of apparel, computers, and toys have latitude about price, product form, styling, packaging, distribution, and promotion (to name but a few), which would not exist in such commodity industries as natural gas distribution and coal mining. It is in these high discretion industries that top managers can have their greatest impact on organizational outcomes.

Other sources of environmental discretion are demand instability, low capital intensity, competitive market structures, market growth, and freedom from government

regulation. Industries that are characterized by these factors offer greater discretion to top managers than do other more constrained industries.

The organization itself may also have characteristics that inhibit or enhance top managerial discretion. Two of the most important are inertial forces and resource availability (Hambrick and Finkelstein, 1987).

Organizational inertia occupies an important place in theories of organizational adaptation (Hannan and Freeman, 1977; Aldrich, 1979; Miller and Friesen, 1980; Tushman and Romanelli, 1985). Inertia tends to reduce managerial flexibility in managing critical domains. Large organizations, in particular, have great difficulty changing (Aldrich, 1979), inhibiting managerial discretion. For example, Miller and Toulouse (1986) found that CEO personality was more strongly related to structure in small firms than in large firms.

Resource availability is a second important influence on managerial discretion. Since virtually all strategic initiatives require adequate resources for implementation, deficiencies may reduce managers' range of options. This important role for slack has been emphasized by numerous researchers (Cyert and March, 1963; Pfeffer and Salancik, 1978; Miles and Cameron, 1982; Bourgeois, 1981; Singh, 1986). Managerial discretion is enhanced by the availability of slack resources.

To summarize, hypotheses based on an upper echelons theory of organizations need to consider limits to strategic choice. The concept of managerial discretion, by identifying the

conditions that enhance and inhibit managerial action, presents a framework for doing so. We have identified sources of discretion at both the industry and firm level that will affect the relationship between team tenures and organizational outcomes:

Hypothesis 2a: Top management team tenure is more strongly related to strategies and performance (as discussed above) in high-discretion industries than in low-discretion industries.

Hypothesis 2b: Top management team tenure is more strongly related to strategies and performance (as discussed above) in high-discretion organizations (within an industry) than in low-discretion organizations.

Methods

Sample

Industries were selected to represent low, moderate, and high discretion environments. Following Hambrick and Finkelstein (1987), the following characteristics were used as the primary indicators of environmental discretion: product differentiability, growth, demand instability, low capital intensity, and low degree of regulation. Applying these criteria to each of 16 industries listed in the annual Forbes and Business Week surveys, we selected the computer, chemical, and natural gas distribution industries as the high, medium, and low discretion environments to be examined, respectively.

The computer industry, characterized by continuous product innovation, product differentiation, and high growth rates, was selected as the high discretion industry. The chemical industry exhibited moderate discretion, constrained by its dependence on energy as feedstocks and its cyclical nature. Sources of discretion

included international competition, significant product development, and the need to manage demand instability. The natural gas distribution industry was selected as the low discretion industry. Supply and demand were greatly constrained by factors such as the economic climate, international oil prices, and government regulation, which controlled decisions from pricing to capital acquisition.

A sample of 100 firms, including 35 computer, 35 chemical, and 30 natural gas distribution companies, was drawn from a population of the largest firms in each industry for which data were available on strategies and top managers for all fiscal years between 1978 and 1982. With pooling (to be discussed below), there are 500 observations (100 firms for 5 years).

All corporate officers who were also board members were included in our definition of the top management team. The resulting managerial set is representative of the dominant coalition (Cyert and March, 1963) at the apex of an organization. Board membership is an objective, and formal, indicator of membership in the inner circle of managers (Thompson, 1967; Mace, 1971). The average size of the top management team, as defined, was 3.5, with a standard deviation of 2.

Data on strategic attributes, organizational performance, and managerial discretion were obtained from Compustat, Moody's Industrial Manual, and Moody's Utilities Manual. Data on top managerial tenure were obtained from Dun & Bradstreet Reference Book of Corporate Management.

Measures

Strategic persistence. This variable measures the extent to which a firm's strategy remains uniform over time. Six strategic indicators were used to create composite measures of persistence:

- a. advertising intensity (advertising/sales)
- b. R & D intensity (R & D/ sales)
- c. plant and equipment newness (net P & E/gross P & E)
- d. non-production overhead (SGA expenses/sales)
- e. inventory levels (inventories/sales)
- f. financial leverage (debt/equity)

These dimensions were chosen because (a) they are potentially controllable by top managers, (b) they may have an important effect on firm performance, and (c) they are amenable to data collection and have relatively reliable comparability across firms within an industry.

The composite persistence measures were calculated as follows: Treating t as the focal year, the firm's five-year (for $t-4$ through t) variance ($\sum t_i - \bar{T})^2/n-1$) for each strategic dimension was computed. Next, variance scores for each dimension were standardized by industry (mean = 0, standard deviation = 1) and multiplied by minus one in order to bring the measures into line with the concept of persistence (i.e., absence of strategic variance over time).

Finally, the six standardized indicators were summed to yield an overall measure, Strategic Persistence 1 (SP1). Because two of the indicators -- advertising and R & D intensity -- had considerable missing data, particularly for the natural gas

distribution industry, an alternative measure, Strategic Persistence 2 (SP2), was also developed based only upon the other four indicators (items c through f above).

The rationale for creating these composite measures (and those that follow for strategic and performance conformity) rests on two premises. First, the summary measures can be considered strategic decision patterns. In keeping with the logic of the constructs, strategic persistence (and conformity) represent patterns in an array of actions (Mintzberg, 1978). The most appropriate way to assess such strategic decision patterns is to examine actions on multiple fronts. As a result, the summary measures of persistence and conformity more closely reflect the dependent variables of our theoretical model than do the individual indicators of strategy. The second reason for adopting this perspective is that it allows more parsimonious analysis than examination of various items singly would afford. Strategic conformity. This variable measures the degree to which a firm's strategy matches the prevailing strategic profile of its competitors in the same industry. The strategic dimensions making up the composite measures are the same as those used in the strategic persistence measure. The major difference in the two operationalizations is that, while strategic persistence examines variability over time, strategic conformity assesses strategy at one point in time (year t). The approach was as follows: For year t, each strategic dimension was standardized by industry (mean = 0, standard deviation = 1). Next, the absolute difference between a firm's score on a strategic dimension and

the average score for all firms in that industry was calculated. These absolute differences were then multiplied by minus one in order to convert their meaning to "conformity" (i.e., absence of differences from competitors). Strategic Conformity 1 (SC1) was created by summing all six indicators, and Strategic Conformity 2 (SC2) by summing items c through f (listed earlier).

Performance conformity. This variable is analogous to strategic conformity, but assesses the extent to which a firm's performance aligns with the average of its competitors in the same industry. Because of the weaknesses inherent in any one measure of performance (Venkatraman and Ramanujam, 1986), three indicators were used: return on equity, return on assets, and market value/book value of owner's equity. Once again, items were standardized by industry, and absolute differences were calculated, multiplied by minus one, and summed to yield an overall measure of Performance Conformity (PC).

Because each of the individual components of the persistence and conformity measures represents only one part of a wider construct (and are supplementary not alternative measures for each other), and because these indicators are not distributed normally, inter-correlations among variables are not meaningful as reliability indicators. Nevertheless, Cronbach alphas for the five summary measures ranged from .41 to .69, reasonable given these caveats.

Tenure. This was the mean number of years of employment in the firm of top management team members.²

Size. One of the indicators of organization discretion was size,

calculated as number of employees. Firms with many employees face bureaucratic momentum (Mintzberg, 1978) and often have severe difficulties effecting change (Aldrich, 1979).

Immediate slack. Our second indicator of organizational discretion attempted to capture the degree of immediate resource availability. The working capital ratio (working capital/sales), adopted here, assesses the cushion a firm has to meet needs and opportunities on a short-term basis (Bourgeois, 1981; Singh, 1986). The conventional measure of longer term slack, equity/debt, was not used because it was included in the computation of the dependent variable indices.

Past performance. A potential confounding determinant of strategic persistence is past performance. Therefore, the five-year average return on equity was included as a control variable in analyses of strategic persistence.

Data Analysis

The data include both cross-sectional and time series components. Such data can be exploited by pooling the cross sections together for available years, producing statistics that indicate the average effect of the independent variables over the full period. Because larger samples are possible, more precise estimates can be obtained. However, pooling cross-sectional data presents two problems. First, slope coefficients may vary over time, rendering pooled techniques inappropriate (Maddala, 1977). And second, ordinary least squares (OLS) estimates may be biased because of enduring individual firm characteristics that are not

considered in the model, violating assumptions on independence of observations (Hannan and Young, 1977).

The problem of model instability over time was assessed using a procedure suggested by Maddala (1977:322-326). F values ranged from .33 to 1.08, all of which were insignificant, indicating that slope coefficients did not vary over time. Hence, pooling was performed.

Because of potential bias in OLS coefficients, we primarily used modified generalized least squares (GLS) models to explicitly control for non-independence of observations (Hannan and Young, 1977). By specifically controlling for firm-specific variability in cross-sectional time series data, GLS models do not produce the biased estimates that OLS models might. This allows the time series component of the data to be exploited, maximizing degrees of freedom. Examples of this approach can be found in recent work by Brown (1982), Masters and Delaney (1985), and Stearns, Hoffman, and Heide (1987).

Three sets of GLS regressions were conducted. First, we regressed outcomes on tenure (along with the control variables) for the full sample to test for main effects. Second, we did similar regressions for each industry, to test the moderating role of environmental discretion. Third, to test the moderating role of organizational discretion, median splits of Size and Slack created subsamples on which the same regressions were conducted.

To assess more rigorously the incremental effect of adding managerial discretion as a moderator, we also report R^2 and R^2

increments in OLS regressions. In particular, three sets of OLS regressions were performed. The first reported R^2 for the main effect. The second and third tested for the incremental effect of managerial discretion by adding interactions for tenure and industry (two dummy variables) and tenure and size and slack, consecutively. By limiting our use of OLS strictly to an examination of R^2 increments, we avoid the problematic biases of specific coefficients.

Results

Table 1 presents means, standard deviations, and correlations among the variables. Although significance levels are noted, they should be interpreted with caution given the pooled nature of the data. There are several patterns worth noting. First, with an average team tenure of about 22 years, our sample seems to be weighted toward long-tenured top teams. However, the standard deviation of tenure was about 12 years, providing significant variability for statistical tests.

Second, team tenure was positively correlated with both strategic persistence measures and all three conformity measures, often with substantial magnitude. This preliminary result is consistent with our hypotheses linking tenure to organizational outcomes.

Third, both Size and Slack were correlated with strategic persistence, positively for Size and negatively for Slack. This suggests that firms with persistent strategies were larger and had less slack than other firms. And Size and SC1 were

positively associated as well. Given these correlations, both Size and Slack were included as controls in regressions on tenure.

Table 2 presents regression results for the full sample. Using generalized least squares, we regressed each of the five dependent variables on Tenure, Size and Slack. As noted above, the five-year average return on equity (Past Perf.) was also included as a control variable for strategic persistence.

Strong support was found for a relationship between team tenure and measures of persistence and conformity. Four of five regression coefficients were significant and in the hypothesized direction. The association between team tenure and strategic persistence was especially strong. Firms led by long tenured top management teams were significantly more likely to follow persistent strategies. One of two regression coefficients for strategic conformity was significant at $p < .01$ as well. Finally, tenure and performance conformity were marginally related ($p < .10$) in the hypothesized positive direction.

The control variables, Size, Slack, and Past Perf., yielded mixed results. Of note, however, is the positive and significant coefficient for Past Perf. in the SP2 model. As expected, firms that perform well tend to make few strategic changes. In addition, Slack was marginally significant, suggesting that firms with immediate resource availability may be less strategically persistent.

Table 3 reports regression results for each of the three industries. The computer industry represents the high discretion environment, where we expected the strongest associations between

tenure and organizational outcomes. Conversely, managerial discretion is much more constrained in the natural gas distribution industry, and we expected team tenure to have a weak association with the outcome measures. Finally, the moderate levels of discretion prevalent in the chemical industry should result in tenure effects somewhere between those in the other two industries.

Results generally support these predictions. Tenure coefficients in the computer industry were significant in the hypothesized direction in four of five cases. Tenure coefficients in the chemical industry were significant only once, as was the case in the natural gas distribution industry. Hence, the relationship between top team tenure and firm persistence and conformity was much stronger in the high discretion computer industry. In fact, the full sample results in Table 2 seem to be driven by results in the computer industry. For example, results for SP1 were not significant in either the chemical or natural gas distribution industries, even though the tenure coefficient was highly significant for the overall sample. These results point out the importance of including managerial discretion when investigating the link between top managers and organizational outcomes. Without considering industry as an environmental source of discretion, investigators may reach incorrect conclusions on the role of top management teams in firm outcomes.

Estimates for the control variables indicate some interesting patterns. In both the chemical and natural gas industries, Slack was typically negative and in three of 8 cases

significant. In contrast, Slack was positive and significant (in 2 of 5 cases) in the high discretion computer industry. This suggests a possible complementary effect where organizational sources of discretion, such as slack, become important when environments confer limited latitude and may actually constrain choice in higher discretion contexts. Although Size exhibited a similar pattern, additional work is needed to clarify this finding.

The moderating effects of organizational sources of discretion are examined in Table 4. Median splits of both Size and Slack created two sets of subsamples representing high and low groups. Organizational discretion is thought to be greater in the low Size and high Slack groups because of lesser inertial constraints and greater resource availability, respectively. Therefore, we would expect the strongest associations between tenure and organizational outcomes in these groups.

Regression results strongly supported this expectation. Tenure coefficients were significant in the hypothesized direction in four out of five cases for both low Size and high Slack groups, while significant results were found in only one of five regressions in the high Size and low Slack subsamples. Team tenure was positively associated with strategic persistence and strategic conformity in high organizational discretion groups. Only regressions of performance conformity failed to provide support for Hypothesis 2b.

An effective way to summarize the role of managerial discretion is to examine its incremental effect in consecutive

regressions on tenure. Table 5 reports R^2 of three regressions for each dependent variable: 1) on tenure (and the control variables), 2) on tenure (and the control variables) and the interaction of tenure and two industry dummy variables, and 3) on tenure, (and the controls), industry X tenure interactions, and the interactions of tenure with both Size and Slack.

These results confirm those reported above for GLS models. Environmental sources of discretion improved explained variance significantly in three of five cases. Organizational discretion had a similarly informative effect in three of five cases. The increase in explained variance of SP2, from .30 to .39, as a result of incorporating discretion, was particularly substantial. Only SC2 was unaffected by discretion.

In sum, the results indicate considerable support for the hypotheses. In general, the longer a top team's tenure, a) the more persistent, or unchanging, the firm's strategy, b) the more the firm's strategy resembled central tendencies of the industry, and c) the more the firm's performance aligned with industry averages. However, the strength of these patterns differed depending on how much discretion the setting conferred on top managers. For example, the association between team tenure and organizational outcomes was substantially stronger in the high-discretion computer industry than in the lower-discretion chemical and natural gas distribution industries. Similarly, team tenure and organizational outcomes bore a stronger correspondence in small and high-slack firms -- those with substantial managerial discretion -- than in large and low-slack firms.

Discussion

Effects of Team Tenure

As a straightforward upper echelons test, this paper sheds new light on the possible effects that top team tenures may have on the strategies and performance of organizations. Specifically, longer tenures appear to go hand in hand with strategic persistence, strategic conformity, and performance conformity. While our data do not allow assurances of causality, prior theory about the social and psychological effects of tenure make very plausible the conclusion that managerial tenures affect organizational characteristics. Specifically, as a top team's tenure increases, it becomes more committed to the status quo, more risk averse, and more restricted in its informational diversity and novelty.

Our results reveal the organizational consequences of these human tendencies. Long-tenure teams resist strategic experimentation and change, whereas short-tenure teams engage in considerable change. Long-tenure teams tend to pursue imitative strategies directly in line with industry norms and conventions, whereas short-tenure teams tend to pursue novel strategies which deviate widely from industry patterns. Correspondingly, long-tenure teams tend to deliver organizational performance which closely adheres to industry averages, while short-tenure teams are associated with performance levels afield -- either much higher or lower -- from industry tendencies.

These findings, particularly regarding persistence, are

consistent with prior findings that outside successors tend to undertake substantial strategic change (e.g., Helmich and Brown, 1972). In fact, one could ask whether our results are due strictly to extreme behaviors by brand-new, short-tenure teams. We explored this possibility by examining the data by grouped gradations of team tenures. As Figure 1 (a,b,c) illustrates, the results strikingly indicate that the organizational attributes vary systematically across the full spectrum of tenure lengths.

As such, a new interpretation can be placed on the conclusions of prior researchers regarding outsiders. Namely, what is most important theoretically about "outsiders" is not that they are outsiders but that they have very short tenures. Outsiders are simply at an extreme on a continuum; they are not qualitatively special cases. As their tenures mount, almost with each passing year, they gradually tend to make fewer strategic changes, to imitate or match strategic tendencies of the industry, and accordingly to deliver performance that rises and falls in line with industry fortunes. Top team tenure appears to be a construct of fundamental and widespread importance to organizations.

Discretion as a Moderator

We went beyond the basic upper echelons model (Hambrick and Mason, 1984) by examining managerial discretion as a potentially important moderator of the association between executive characteristics and organizational outcomes. Such an extension allows for a much more subtle explanation of managerial effects and is consistent with recent calls for integrating environmental determinism

and strategic choice perspectives on organizational action (e.g., Hrebiniak, Joyce, and Snow, 1988; Hambrick and Finkelstein, 1987).

Our results were strongly supportive of this approach. As already discussed, managerial tenure was generally related to strategic persistence, strategic conformity, and performance conformity. However, results were strengthened, at times substantially, when managerial discretion was accounted for. Explained variance was significantly increased in six of 10 regressions by adding either industry or organizational indicators of discretion.

Major differences were found across different levels of both environmental and organizational discretion. Results generally were strongest in the high discretion computer industry and weakest in the low discretion natural gas distribution industry. That is, the characteristics of top management teams were most strongly reflected in organizational outcomes when the industry provided significant latitude of action. Conversely, when the industry was restrictive -- a commodity-like product, capital intensive, mature, highly regulated -- executive team tenure was typically unrelated to strategic persistence and conformity. In the latter cases, the environment, not top managers, determines the fundamental contours of the firm.

This finding suggests that choice of industry in tests of upper echelons theory is a critical decision that requires careful consideration. Moreover, it implies that top managerial staffing decisions may have very different consequences depending on industry. In high discretion contexts, as in the computer

industry, managers seem to matter greatly. In contrast, top teams in low discretion contexts, such as in the natural gas distribution industry, may have much less bearing on organizational outcomes.

Managerial discretion was also assessed at the organizational level of analysis. And again, results were supportive. When the organization conferred significant latitude to top managers, as evidenced by abundant slack or small size, the firm's degree of strategic persistence and conformity typically reflected the tenure of the top team. Conversely, in more restrictive organizations -- those that are large or with little slack -- managerial profiles show little association with organizational outcomes.

The importance of organizational discretion in explaining strategic decision patterns suggests that it does have a role to play in upper echelons theory. Some organizations afford their top managers more opportunity for impact than others. As found here, and as argued by Hambrick and Finkelstein (1987), organization size and slack seem to be among the critical determinants of discretion.

Limitations

Several important limitations of the study warrant discussion. First, although we have studied top managers rather than only CEOs, there may be other influential individuals who affect organizational strategy. Lower-level employees may be especially influential in professional firms or in those with

emergent strategies. However, the highest managers and the CEO retain considerable symbolic influence that can convey their preferences for lower level initiatives (Hage and Dewar, 1973; Pfeffer, 1980). Additionally, agenda-setting at the top serves as an important guide for lower-level managers to follow (Kotter, 1982). While influence may emanate from numerous parts of the organization, in this study we have at least expanded our scope beyond the predominant focus on the CEO alone.

A second limitation concerns our measures of managerial discretion. While we used industry to represent environmental sources of discretion, the construct may require more subtle operationalization. For example, industries may not be consistently high or low on every dimension that makes up environmental discretion (Hambrick and Finkelstein, 1987). Moreover, different segments or strategic groups within an industry may have quite different levels of discretion. Nevertheless, industry has been considered an adequate measure of environment by many other researchers (e.g. Lawrence and Lorsch, 1967; Hrebiniak and Snow, 1980; Porter, 1980) and the industries studied in this paper do differ substantially across several key indicators of environmental discretion.

Finally, to study environmental sources of discretion more effectively, a greater number of industries will be needed. While important patterns emerged in our examination of three widely disparate industries, in a sense our sample size (of industries, at least) was only three, leaving considerable opportunity for other researchers.

Conclusion

Our results allow conclusions at two levels. First, it appears that managerial team tenure has a profound influence on organizational outcomes, such as strategic persistence, strategic conformity, and performance conformity. The apparent effect of tenure occurs over its full range of values, and is not just an artifact of the radical changes brought on by top managers newly arrived from the outside. With almost each passing year of tenure in the firm, top teams make fewer strategic changes and become more imitative of other firms in the industry. This suggests a role for managerial tenure in processes of institutionalization. As Pfeffer (1983) argued, managerial tenure seems to be a potent thing to study.

At a second level, our results indicate that upper echelons theory should be extended to include a moderating role for managerial discretion. Several theorists have pointed out the need to incorporate the notion of limits to strategic choice in models of managerial action. For example, Pfeffer and Salancik (1978:245) have argued that "it is necessary to develop a model that suggests how much constraint an administrator faces in formulating action." This paper illustrates that such a position has strong empirical support, at least in the context of managerial tenure. Consideration of discretion in studies of top managerial effect represents a significant contribution to this research stream. Investigators interested in managerial impact on organizations should attempt to incorporate the construct in

their work.

There is clearly opportunity for further research to investigate both managerial discretion and upper echelons theory. The results reported here addressed managerial tenure; other important demographic characteristics such as age, functional background, industry experience, and education may yield significant findings as well. All such studies of demographic characteristics should clearly develop the theoretical rationale for hypothesized relationships (Pfeffer, 1983) and empirically incorporate the concept of discretion. This paper suggest that a more careful examination of the strategic choice paradigm is required. Doing so will greatly improve our understanding of the role of executive leadership in organizations.

Footnotes

1. Our early formulation of this idea was that long-tenure teams would avoid "risky" strategies as typically defined: high R&D spending, high capital intensity, and high debt levels. On reflection, we concluded that risk is defined by industry conditions. For instance, to spend very little on R&D in the supercomputer industry is risky.

2. Several alternative measures of managerial tenure were considered, including tenure in position, tenure in the top management team, and tenure in the industry. Tenure in the firm was adopted here because it was the tenure variable most highly correlated with other tenure measures, hence serving as a central parsimonious indicator of the broad concept of tenure. Further, the other tenure measures yielded patterns that were generally very similar to those reported for tenure in the company.

In addition, age was examined as an alternative explanatory variable to tenure. Although both were highly correlated ($r=.56$), tenure was much more predictive than age in several regressions, suggesting that the association between tenure and the dependent variables was not due to an age effect.

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Table 1

Pearson Correlation Coefficients of All Variables in Study*

	MEAN	ST.DEV.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) SP1	0	3.0									
(2) SP2	0	2.2	.91								
(3) SC1	4.6	1.6	.36	.19							
(4) SC2	3.1	1.3	.29	.14	.85						
(5) PC	1.7	1.5	.09	.09	.19	.29					
(6) TENURE	21.6	11.7	.50	.40	.23	.26	.19				
(7) PAST PERF	26.0	12.0	-.18	-.08	-.13	-.06	.05	-.07			
(8) SIZE	19.1	40.3	.32	.12	.30	.06	.11	.16	.03		
(9) SLACK	22.0	18.7	-.16	-.23	.01	-.09	-.09	-.19	.15	.00	

* n=500, except for SP1 and SC1 where n=155. Correlations greater than .09 and .12 are significant at 5% and 1% respectively. Correlations of SP1 or SC1 greater than .16 and .20 are significant at 5% and 1% respectively.

Table 2

Results of GLS Regressions on Team Tenure in Company
(unstandardized regression coefficients reported)

	SP1 n=500	SP2 n=500	SC1 n=500	SC2 n=155	PC n=155
Tenure	.05 ^{***}	.07 ^{***}	.00	.03 ^{***}	.02 [*]
Size	.00	.00	-.00	.00	.00
Slack	-.01	-.01 [*]	-.01	.00	-.00
Past Perf	1.06	3.55 ^{***}			

* p < .10

** p < .05

*** p < .01

Table 3

Results of GLS Regressions on Team Tenure by Industry
(unstandardized regression coefficients reported)

<u>Computer Industry</u>					
	SP1 n=95	SP2 n=175	SC1 n=95	SC2 n=175	PC n=175
Tenure	.08 ^{***}	.14 ^{***}	.02	.03 [*]	.06 ^{***}
Size	.00	.01	.00	.00	.01
Slack	.02	.04	.01	.02 ^{**}	.02 [*]
Past Perf	1.59	4.29 ^{***}	-	-	-
<u>Chemical Industry</u>					
	SP1 n=60	SP2 n=175	SC1 n=60	SC2 n=175	PC n=175
Tenure	.02	.02 ^{**}	-.01	.01	-.03
Size	.02 ^{**}	.01	.00	.02 ^{**}	.02
Slack	-.01	.00	-.02 [*]	-.02	-.02
Past Perf	-.61	-.04	-	-	-
<u>Natural Gas Distribution Industry</u>					
	SP1	SP2 n=150	SC1	SC2 n=150	PC n=150
Tenure	-	.02	-	.04 ^{**}	.03
Size	-	.00	-	.01	-.03
Slack	-	-.03 ^{**}	-	-.02	-.05 [*]
Past Perf	-	.11	-	-	-

* p < .10

** p < .05

*** p < .01

Table 4

GLS Coefficients for Team Tenure:
 Subgroups of Large and Small Size and High and Low Slack
 (unstandardized regression coefficients reported)

<u>Dependent Variables</u>	<u>Size</u>		<u>Slack</u>	
	<u>High</u>	<u>Low</u>	<u>High</u>	<u>Low</u>
	n=250 (85 ^a)	n=245 (70)	n=240 (80)	n=245 (60)
SP1	-.01**	.05***	.02**	.01
SP2	.02***	.07***	.04***	.04**
SC1	-.00	.02*	.01*	.00
SC2	-.00	.02**	.02*	.00
PD	-.01	-.02	-.02	-.01

Note a: The numbers in parentheses refer to the sample sizes for regressions of SP1 and SD1.

* p < .10
 ** p < .05
 *** p < .01

Table 5

Results of OLS Regressions on Team Tenure in Company

	SP1	SP2	SC1	SC2	PC
Main Effect R^2	.36	.30	.14	.10	.03
Add: Industry X Tenure R^2	.37	.35	.19	.11	.05
F for change in R^2 d.f.	0.35 (1,149)	20.80*** (2,492)	9.46*** (1,149)	2.23 (2,492)	4.85*** (2,492)
Add: Size/Slack X Tenure R^2	.40	.39	.19	.12	.06
F for change in R^2 d.f.	3.81** (2,147)	15.01*** (2,490)	.02 (2,147)	.52 (2,490)	2.98* (2,490)

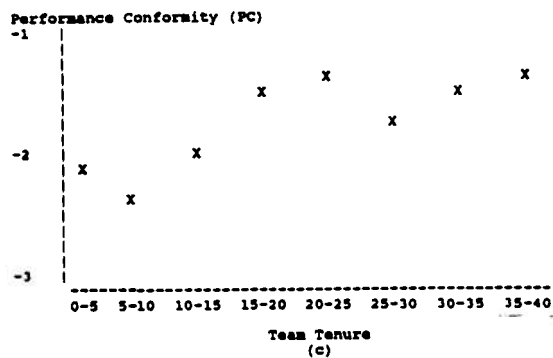
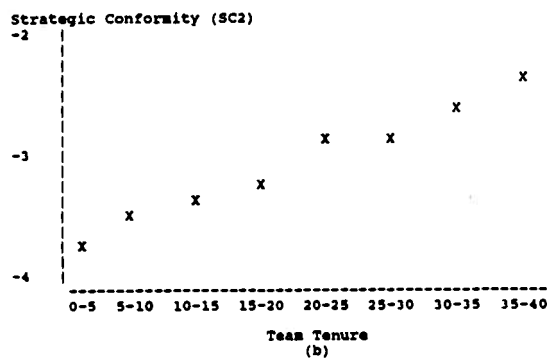
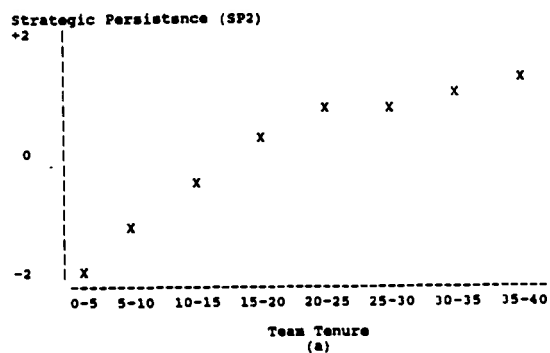
* $p < .10$

** $p < .05$

*** $p < .01$

Figure 1

Graphs of Organizational Outcomes
at Different Gradations of Team Tenure



 Note a: For Strategic Conformity and Performance Conformity,
 larger negative scores indicate less conformity.