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RESEARCH NOTES AND COMMUNICATIONS

TOP MANAGEMENT TEAM AGREEMENT ABOUT THE STRATEGIC DECISION PROCESS: A TEST OF SOME OF ITS DETERMINANTS AND CONSEQUENCES

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The level of agreement among a firm's top executives about how things are done in that firm has a variety of important implications. For example, agreement about a firm's decision-making norms may allow members of the top management team (TMT) to focus on the substance of their most critical decisions and not get bogged down in debates about the process. In the present study, data from 65 firms in two industries were used to identify determinants and consequences of TMT agreement about the comprehensiveness of the strategic decision process. Results for consequences indicate that the level of TMT agreement was positively related to organizational performance. As for the determinants of agreement, organizational size was negatively related to agreement but past performance exhibited no association. Therefore, the results suggest that it is TMT agreement that influences performance, not the reverse. In addition, a surprising result was that firms in an industry with an unstable environment exhibited significantly more agreement about the process than did their counterparts in an industry whose environment was stable.

The level of agreement among members of a top management team (TMT) about characteristics of their organization and its environment is a topic frequently discussed by management scholars. For example, it has long been argued that TMT agreement on goals is critical to organizational success (Drucker, 1954). It has also been suggested that TMT agreement about other characteristics of the organization—its boundaries, its means of competing, its values, or its strategic decision process—may be important was well (Dess, 1987; Enz and Schwenk, 1993; Falcione and Wilson, 1988). However, with the exception of several studies of agreement on goals and competitive strategy (Bourgeois, 1980; Dess, 1987), few researchers have examined empirically the performance implications of TMT agreement about key characteristics of the firm. And as noted by Priem, 'the results of this research are equivocal' (1990: 469). Moreover, since it has emphasized the potential impact that agreement may have on firm performance (i.e., its consequences), prior empirical work has typically ignored factors that may shape agreement (i.e., its determinants).

The study reported here attempts to extend prior work on TMT agreement by focusing on the determinants and consequences of agreement about the comprehensiveness of the strategic decision process. As discussed later, comprehen-

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siveness has frequently been identified as a critical characteristic of the strategic decision-making process, and the level of agreement is likely to influence the effectiveness of that process. This is because agreement reflects a shared understanding of the decision-making process, which, in turn, reduces uncertainty and allows participants to focus on the substance of their decisions. Therefore, this paper's purposes are two-fold: (1) to determine the importance of TMT agreement about the strategic decision process by testing its relationship with organizational performance; and (2) to test relationships between such agreement and characteristics of the industry, the organization, and the management team that are likely to affect it.

The underlying assumptions of several recent studies are that individual firms develop a particular way of making strategic decisions, and that their top executives are well aware of it (Eisenhardt, 1989; Fredrickson and Iaquinto, 1989; Judge and Miller, 1991; Wally and Baum, 1994). Therefore, in focusing on TMT agreement about a critical feature of that proces, we are investigating the extent to which executives agree in describing *how their firm typically makes such decisions*. We argue that a lack of agreement is most likely due to inconsistent perceptions among TMT members, but acknowledge that an inconsistent decision process might have the same effect.

It is important to note that our focus on agreement *about the process* is markedly different from empirical or theoretical work that has considered agreement on goals or competitive strategy (Bourgeois, 1985; Dess, 1987; Priem, 1990). Goals and strategy are desired states or outcomes of the strategic decision process, and our focus is on that process itself. In addition, this work also differs from the well-established stream of research that has examined the effects of alternative methods (e.g., devil's advocacy, dialectical inquiry) of consciously introducing conflict into the strategic decision process (cf. Schweiger and Sandberg, 1989). The goal of that work was to examine the effect of disagreement (i.e., conflict) *in* the strategic decision process. Therefore, the present study extends earlier work on agreement by directing attention to the *process* that typically produces the strategies, goals, and so on, that have previously been studied.

In the next section we briefly discuss the comprehensiveness construct. We then develop hypotheses on determinants and consequences of TMT agreement about the strategic decision process. All hypotheses are in terms of agreement about the comprehensiveness of that process.

THEORY DEVELOPMENT

Comprehensiveness

The unique content, timing, and quality of a firm's strategy are often attributed to its strategic decision process (Narayanan and Fahey, 1982). Comprehensiveness has been defined as the 'extent to which an organization is exhaustive or inclusive in making and integrating strategic decisions' (Fredrickson, 1984: 447), and it is regularly cited as a critical characteristic of strategic decision processes (Eisenhardt, 1989; Langley, 1989; Judge and Miller, 1991). Moreover, several studies have established a link between this construct and organizational performance (Eisenhardt, 1989; Fredrickson and Iaquinto, 1989), as well as with the speed of strategic decisions (Judge and Miller, 1991; Wally and Baum, 1994). Some of those same studies have also generated empirically validated measures of comprehensiveness.

In the pages that follow we will examine both some determinants and consequences of TMT agreement about the comprehensiveness of the strategic decision process. However, in an attempt to establish the importance of agreement we will first offer arguments about the relationship between agreement and subsequent organizational performance. We will then review relevant theory, and offer hypotheses, regarding several factors that may shape TMT agreement about the strategic decision process.

TMT agreement and performance

Uncertainty reduction theory (Berger, 1979) provides a valuable theoretical basis for explaining the likely relationship between TMT agreement about the strategic decision process and organizational performance. According to this view, as individuals are trained and indoctrinated they gain knowledge about their organization, their job, expected behaviors, norms, and so on. In terms of the strategic decision process, they may come to understand organizational norms on issues such

as the length of meetings, the kind of data that is valued, the degree of formality, and most importantly, the general pattern of decision making (Goldhaber, 1986). This knowledge allows members to reduce their own uncertainty and to make predictions about the behaviors of others (Falcione and Wilson, 1988), and it typically becomes reflected in their own decision-making behavior (Jablin, 1982). Moreover, the theory asserts that organization members are motivated to reach some common level of understanding (i.e., agreement) to insure that their behaviors, and those of others in the organization, are understood (Berger and Luckmann, 1966).

The above argument suggests that the higher the level of agreement among organizational members regarding organizational roles, processes, and so on, the greater the predictability of behaviors, and the less ambiguity they will face. Moreover, 'the reduction of uncertainty . . . eliminates some of the potential stress associated with ambiguity, which may *increase the effectiveness* of managers charged with the execution of important decisions' (Hrebiniak and Snow, 1982: 1140, emphasis added). Because executives who make strategic decisions often face uncertainty from a variety of sources, they need sources of certainty to balance it (Pelz, 1967). One such source is an understanding of their organization's decision-making norms, without which both individuals and teams may experience a state of confusion and disconnectedness (Katz, 1980). Naturally, being in such a state makes it difficult for executives to make good decisions, and to do so efficiently.

In an additional perspective on the relationship between TMT agreement and performance, Katz (1980) has argued that organization members initially expend the bulk of their energy learning the previously unfamiliar norms of the group or organization. However, as they develop a shared understanding of those norms, members shift their attention more fully to their specific task assignments. Therefore, groups (e.g., TMTs) whose members share a common perception of how decisions are typically made in their firm can concentrate on the substance of their decisions. Pascale notes that 'this tends to free up time and energy; more time goes toward getting the job done and focusing on external things like the competition and the consumer' (1985: 34). In contrast, groups whose members do not agree about behaviors such as the type of analysis that must be done, the breadth of involvement by various functions, and so on, must expend members' time and energy resolving these issues. Therefore, Katz (1980) goes on to suggest that a group that is in agreement as to how to make such decisions will be more effective and efficient at making them. This naturally assumes that members will use any freed-up time constructively, as opposed to engaging in internal politicking or other self-serving behavior.

The above arguments suggest that high levels of agreement among TMT members regarding characteristics of their firm's strategic decision-making process reflect a common understanding of its decision-making norms. Therefore, high levels of agreement are also expected to exhibit a positive relationship with an organization's subsequent performance. Since we are focusing on the comprehensiveness of the strategic process, the resulting hypothesis is:

> *Hypothesis 1: There will be a positive relationship between TMT agreement about the comprehensiveness of the strategic decision process and organizational performance.*

Determinants of TMT agreement

Priem (1990) reviewed a variety of arguments before concluding that TMT homogeneity and structure are likely to affect agreement. However, there have been few direct tests of these or any other such determinants, and their findings conflict with one another. An example is Bourgeois and Singh's (1983) field study of the effects of past performance on TMT agreement regarding goals and strategy, where they found that the presence of slack resources appeared to foster agreement on both. In a related work, Low (1991) surveyed a group of steel service companies but found a negative association beween past performance and goal agreement. Such a finding is consistent with both 'threat-rigidity' (Staw, Sandelands, and Dutton, 1981) and resource dependence (Pfeffer and Salancik, 1978) perspectives, where an abundance of resources allows heterogeneity among TMT members.

Although both of the above studies examined the effects of performance, they had few similarities. Thus, there is little systematic empirical

evidence about the determinants of TMT agreement. As a result, we felt that it was important for the present study to include several factors that may shape agreement about the comprehensiveness of the strategic process. Specifically, we attempted to determine the extent to which (a) the stability of a firm's industry/environment, (b) its past performance, (c) organizational size, (d) TMT size, and (e) TMT tenure, are related to the level of TMT agreement about the comprehensiveness of the firm's strategic decision process. We recognize that other potential determinants, such as team members' functional backgrounds, might have been included. However, many of the firms in the sample are quite small (fewer than 100 employees) and privately held; therefore, reliable data on several potentially important variables (e.g., executives' backgrounds) were not readily available. And as discussed below, there is ample evidence to suggest that the five variables considered here are among the most potent determinants of TMT agreement regarding the strategic decision process.

Environmental stability

Numerous authors (Starbuck, 1976; Staw, Sandelands, and Dutton, 1981; Weick, 1969) have argued that characteristics of a firm's environment can have an impact on managerial perceptions. Aiken and Bacharach (1985: 354) went so far as to suggest that 'environmental conditions are paralleled by the internal dynamics of organizations.' In a test of this assertion, they found a negative relationship between the level of environmental fragmentation and the level of agreement among managers about the locus of authority of their organization's decision-making process. In a similar study, Hrebiniak and Snow (1980) found that managers' perceptions and subsequent agreement about features of their organization were positively related to the level of certainty in their industry and environment.

Based on the arguments cited above, we believe that organizations in industries with stable environments will exhibit greater TMT agreement about the nature of their strategic decision-making process than will those whose environments are unstable. This is due to the fact that stability in the environment should ultimately be reflected in relatively stable decision processes for firms in that environment (Aiken and Bacharach, 1985). And the more stable such processes, the easier it should be for TMT members to understand and agree about how decisions are typically made. So, continuing our focus on the comprehensiveness of the strategic decision process:

> *Hypothesis 2: Firms in an industry with a stable environment will exhibit a higher level of TMT agreement about the comprehensiveness of the strategic decision process than will firms in an industry with an unstable environment.*

Past performance

We are aware of no empirical work that has directly addressed the issue of how a firm's past performance affects TMT agreement about the strategic decision process. But consistent with the arguments of Staw *et al.* (1981), previous research on goal agreement provides evidence as to the likely relationship between these two variables. Specifically, both Bourgeois (1980) and Dess (1987) found a positive relationship between agreement on goals and performance. Although those authors initially conceptualized causality as proceeding from agreement to performance, they both acknowledged that it may be flowing from performance.

Other work also provides insight on how a firm's past performance may affect agreement about its strategic decision process. For example, it has been argued that one effect of an organization's decision process is to instill feelings of confidence in members about the way things are done (Falcione and Wilson, 1988). Therefore, Feldman and March suggest that 'decisions are orchestrated so as to ensure that decision makers and observers come to believe that the decisions are reasonable or even intelligent . . . that the process is legitimate, that we are good decision makers and that our organizations are well managed' (1981: 178). So, if an organization's recent performance has been good, it appears likely that the strategic decision process it typically uses will be seen as legitimate by organizational members. And decision processes that are viewed as legitimate will more readily be adopted by those members via the socialization process. Such adoption, in turn, should be reflected in high levels

of agreement among TMT members regarding the strategic decision process. This suggests the third hypothesis:

> *Hypothesis 3: There will be a positive relationship between a firm's past performance and TMT agreement about the comprehensiveness of the strategic decision process.*

Organizational size

It has long been argued that organizational size affects the nature of a firm's strategic decision-making process (Mintzberg, 1973). In addition, evidence suggests that size also has an impact, albeit indirect, on the level of TMT agreement about the nature of that process. For example, as organizations grow they tend to create increasingly differentiated and specialized subunits (Tushman and Romanelli, 1985). And as members participate in those subunits, they often acquire differing perceptions of organizational attributes (Weick, 1979), such as the comprehensiveness of their firm's strategic decision process (Schwenk, 1984). Therefore, increased organizational size decreases the likelihood that members of the TMT will share common perceptions of important characteristics of their firm's strategic decision process. Hence the fourth hypothesis:

> *Hypothesis 4: There will be a negative relationship between a firm's size and TMT agreement about the comprehensiveness of the strategic decision process.*

TMT size

In addition to organizational size, the size of the top management team also appears likely to be a factor in determining the level of the agreement among TMT members. The effects of size are perhaps the most widely studied and best understood of all the structural properties of groups, and most literature on this topic argues for a simple, negative relationship between size and agreement. As a group grows larger it increases the likelihood that a dissenting opinion will find a sympathetic ear (Nemeth, 1986). When that happens, the group may break into politicized subgroups, and the resulting behavior of self-interested subgroups can be dysfunctional for the overall group (Guzzo, 1986). In addition, as the size of a group increases, communication among group members typically declines. This, in turn, reduces the level of agreement (Thomas and Fink, 1963). Hence, the fifth hypothesis:

> *Hypothesis 5: There will be a negative relationship between TMT size and TMT agreement about the comprehensiveness of the strategic decision process.*

TMT tenure

As individuals are socialized, they learn what is important in their organization. This transforms outsiders into participating and effective organizational members by allowing them, through observation and modeling, to understand and assimilate the policies and processes of their organization (Feldman, 1981). Several contributors have explicitly extended this line of reasoning to organizational decision processes (Falcione and Wilson, 1988; Jablin, 1982), arguing that long-tenured individuals are more likely to have assimilated the organization's strategic decision-making norms. Therefore, as the average organizational tenure of TMT members increases, we would expect them to increasingly share a common perception of their firm's strategic decision process. This suggests the last hypothesis:

> *Hypothesis 6: There will be a positive relationship between the average organizational tenure of TMT members and agreement about the comprehensiveness of the strategic decision process.*

RESEARCH METHOD

Overview

Data for the present research came from three earlier studies (Fredrickson and Mitchell, 1984; Fredrickson, 1984; Fredrickson and Iaquinto, 1989) that used a scenario-questionnaire instrument to obtain a highly valid measure of the comprehensiveness of firms' strategic decision processes. The first two studies included 27 firms in the forest products industry, where data were

obtained in 1980 (Fredrickson and Mitchell, 1984), and 38 firms in the paint and coatings industry, where the data were obtained in 1982 (Fredrickson, 1984). A follow-up study (Fredrickson and Iaquinto, 1989) was conducted in 1986, and included 45 of the 65 firms that participated in the first two studies. These industries were chosen by Fredrickson and his colleagues because Dess and Beard (1984) had previously used multiple measures to determine that their environments were highly unstable (forest products) and stable (paints and coatings), respectively.

Sample

The firms in the earlier studies were identified through a review of *Dun and Bradstreet's Million Dollar Directory* (1979a, 1981), and *Middle Market Directory* (1979b). Those in the paint and coatings industry were headquartered in Illinois, Indiana, Maryland, Ohio, Pennsylvania, northern Kentucky, and western New York. The firms in the forest products industry were headquartered in Oregon, Washington, and northern California. In both industries, organizations ranged in size from 20 to approximately 35,000 employees.

Of the firms that participated in the original two studies and the follow-up, only those that had at least three respondents were selected for the present research. This was done to ensure a reliable measure of TMT agreement. As a result, our sample consists of 57 of the 65 firms (87 percent) that participated in the original studies (Fredrickson, 1984; Fredrickson and Mitchell, 1984), and 38 of the 45 firms (84 percent) from the follow-up (Fredrickson and Iaquinto, 1989). It is important to note that the 57 firms that are used here appear to be representative of the original 65. Specifically, there are no significant differences in the number of employees or performance, as measured by return on assets. As for the 38 firms from the follow-up study, again, there are no significant differences in the number of employees or performance between our firms and the 45 studied earlier.

In the present research, data from all three studies (the two original studies and the follow-up) were used to investigate the relationship between TMT agreement on comprehensiveness and organization performance. Agreement was computed using the questionnaire data from the first two studies (Fredrickson, 1984; Fredrickson and Mitchell, 1984), while subsequent performance for those firms was gathered during the follow-up study (Fredrickson and Iaquinto, 1989). Although agreement could also be computed using the questionnaire data from the follow-up study and was highly stable across the two studies, measures of subsequent performance for the firms in the follow-up study were not available. Of the 57 firms selected from the original studies, subsequent performance measures were available for 48 of them. These firms did not differ significantly from the 57 in terms of size, comprehensiveness, agreement, or past performance. Therefore, data from these 48 firms are used in testing Hypothesis 1.

In testing the potential determinants of agreement, data from both the 57 firms selected from the original studies and the 38 firms selected from the follow-up could be used. Therefore, a sample of 95 firms was available to test Hypotheses 2 through 6. Since 38 of the firms are represented twice in this pooled sample, there is a question about the effect of nonindependent observations. However, it should be noted that 4–6 years transpired between the original and follow-up studies, and that 76 percent of the TMTs in the firms that were included in both experienced some change in composition from the original to the follow-up study. In addition, the analyses used to test Hypotheses 2 through 6 where also conducted on the original and follow-up samples separately, and yielded the same pattern of results in each case. Therefore, in the analyses reported in the present paper, we will use the pooled sample of all 95 firms to test Hypotheses 2 through 6.

Defining the TMT

In the studies that the present work draws its data from, the TMT was defined through discussions with the CEO. Specifically, the CEO was presented with a list of important decisions and asked to identify those managers who would normally be involved in making them (Fredrickson, 1984). We believe that this approach produced a TMT that accurately reflects Thompson's (1967) 'dominant coalition,' which is in essence its key decision-making group. It

should be noted that the percentage of the executives that were identified to participate and who ultimately read and completed the scenario-questionnaire was extremely high (i.e., more than 90 percent) in all three studies.

Measures

Comprehensiveness of the decision process

The instrumentation used by Fredrickson and his colleagues has been discussed at length elsewhere (Fredrickson, 1984; Fredrickson and Mitchell, 1984; Fredrickson, 1986), so we will give only a brief overview here. Executives in each firm read a decision scenario that described a firm in their industry faced with a major problem, and they then responded to a series of 43 questionnaire items (24 single-response and 19 multi-item) designed to describe the process their firm would use if it faced the scenario situation. The questions were designed to measure comprehensiveness in each of four hypothetical steps of the strategic decision process: situation diagnosis, alternative generation, alternative evaluation, and decision integration. While not wanting to go into detail on the prior studies, it is useful to describe how a firm-level score of the comprehensiveness construct was developed.

An overall score of comprehensiveness was developed for each firm by proceeding through the following steps: (a) for the 43 questions in the scenario questionnaire (24 single-response and 19 multi-item), a mean score was calculated across the individual respondents in each firm; (b) the mean response for the 10 or 11 questions that pertained to each of the four hypothetical phases of the decision process was calculated to determine a firm-level score for each of the four steps; and (c) for each firm, an overall measure of comprehensiveness was calculated by taking the mean of the four decision process steps. Results from the prior studies established the validity of using the scenario-questionnaire to measure the comprehensiveness of an organization's strategic decision process (Fredrickson, 1984; Fredrickson and Mitchell, 1984; Fredrickson and Iaquinto, 1989). In addition, data reported there indicate that although there was some agreement among TMT members in the participating firms, it is not 100 percent, and it also varied across firms.

Agreement on comprehensiveness

The measure of TMT agreement that we developed for each firm was calculated using a procedure similar to that used to calculate comprehensiveness. First, for each of the 43 questions in the scenario questionnaire (24 single-item and 19 multi-item), the standard deviation was calculated across the individual respondents of each firm. Then the mean of these 43 standard deviations was calculated to determine a firm-level score. Finally, for presentational clarity, each of the above scores was subtracted from a constant (i.e., two). As a result of this final step, higher scores, formerly lower standard deviations, represent more agreement; lower scores, formerly higher standard deviations, indicate less agreement. It should be noted that four separate methods of calculating agreement were tested: one using standard deviations, a second using the coefficient of variation, a third using Euclidean distances instead of standard deviations, and a fourth using interrater reliability scores (James, Demaree and Wolf, 1984). Scores generated by all four methods exhibited high correlations, ranging from 0.86 to 0.97. In addition, all analyses were conducted using each of the four measures of agreement, and produced the same pattern of results. Therefore, we chose the standard deviation measure because it is the most easily understood and most often used in prior work on TMT agreement (Bourgeois, 1980; Dess, 1987).[1]

Organizational performance

Return on assets (ROA), defined as net income before extraordinary items divided by total assets, was used as the measure of firm performance. ROA is a common measure used in numerous studies of strategic decision processes and TMT characteristics (e.g., Kim, Hwang and Burgers,

[1] We also conducted analyses to determine if firms with moderate comprehensiveness scores had higher disagreement than did firms with extreme scores. Specifically, we calculated the absolute value of the difference beween each firm's comprehensiveness score and the mean score of the sample. We then checked the correlation between this measure (which should show previously moderate comprehensiveness scores as being near zero and previously extreme scores as greater than zero) and agreement. The correlation between these two measures did not approach significance ($r = 0.09$, $p < 0.79$), and indicates that there is no relationship between the level of agreement and extreme comprehensiveness scores.

1989), and it has been shown to be highly correlated with other performance measures (e.g., ROE, ROI). The measure was calculated as a 5-year average, and includes the five consecutive years after and including the year that the first scenario-questionnaire instrument was administered (1979–83, in the case of the forest products industry; 1981–85 in the case of the paint and coatings industry). A 5-year average of ROA was used because the impact of agreement should be more evident over the long term (Pascale, 1985). Please note that a market-based measure was not used because approximately 40 percent of the firms in the sample were privately held.

Past performance

We were also interested in a firm's *past* performance, as a potential determinant of agreement. For firms from the original two studies, past performance was calculated as a 5-year average ROA and includes the five consecutive years prior to and including the year the first scenario-questionnaire instrument was administered (1975–79, in the case of the forest products industry; 1977–81 in the case of the paints and coatings industry). For firms from the follow-up study, past performance is also calculated as a 5-year average ROA, and it includes the five consecutive years 1981–85 (for both industries) prior to and including the year the second scenario-questionnaire instrument was administered.

Industry/environment

Each firm's industry and its attendant environment was represented by a dichotomous variable (0 = forest products firms, 1 = paint and coatings firms). As noted earlier, a variety of measures (Dess and Beard, 1984) established that the environments of these industries were highly stable (paints and coatings) or highly unstable (forest products) during the study period.

Organizational size

The log of the total number of employees was used as the measure of organizational size. This measure was used because most size measures (e.g., employees and assets) tend to be highly correlated.

TMT size

The size of the team was the total number of executives, including the CEO, that had been identified to participate during discussions with the CEO.

Firm tenure

Length of service, defined as the number of years an individual has worked for an organization, is the common definition of organizational tenure. Therefore, the questionnaire asked each executive to specify the number of years that he or she had worked for the firm. These data were used to compute three measures for each firm: the mean number of years service of TMT members, variance, and coefficient of variation in TMT tenure. However, because average tenure, variance and the coefficient of variation produced the same pattern of results in all analyses, only average tenure is reported.

Table 1 provides descriptive statistics and a correlation matrix for all variables.

RESULTS

As indicated in the first row of Table 1, the correlational analysis reveals several relationships that are consistent with the hypotheses. Most importantly, there is a significant positive relationship between TMT agreement and organizational performance. In addition, the measures of organizational size and TMT size are inversely related to TMT agreement about comprehensiveness. However, explicit tests of the six hypotheses, Hypothesis 1 concerning the relationship between TMT agreement (about comprehensiveness) and performance, and Hypotheses 2 through 6 concerning the determinants of such agreement—industry/environment, past performance, organizational size, TMT size, and TMT tenure—used multiple regression.

Tests of agreement and performance

In testing the relationship between TMT agreement and performance, we introduced several control variables. First, to control for any industry/environment effect or systematic differences due to organizational size, the industry

Table 1. Means, standard deviations, and correlations among all variables[a,b]

	Mean	2	3	4	5	6	7
1. Agreement	1.15 (0.24)	0.37***	–0.11	–0.10	–0.23**	–0.20*	–0.13
2. Performance	0.055 (0.04)		0.39***	0.68***	0.12	0.22*	–0.09
3. Industry/environment[c]	0.64 (0.48)			0.20*	–0.28**	–0.05	0.21**
4. Past performance	0.06 (0.05)				–0.22*	0.20*	0.06
5. Firm size	6.02 (2.23)					0.45**	0.04
6. TMT size	4.29 (1.40)						–0.18*
7. TMT tenure	18.17 (6.98)						

[a]$N = 95$ for all relationships except those with performance, where $N = 48$.
[b]Standard deviations in parentheses.
[c]0 = forest products industry, 1 = paints and coatings industry.
***$p < 0.01$; **$p < 0.05$; *$p < 0.10$

dummy and the measure of firm size were included in the analysis. In addition, because characteristics of an organization's top team have often been linked to performance (Pfeffer, 1983), we also included our measures of TMT size and tenure as control variables in testing the association with performance. Table 2 presents results of the multiple regression analyses using firm average ROA as the dependent variable, and incorporating these control variables.

The first column of Table 2 provides the results for the control variables, while the second adds the measure of TMT agreement about the comprehensiveness of the strategic decision process.

Table 2. Performance: Multiple regression analysis ROA as dependent variable[a,b]

	I	II	III
Industry/environment	0.0413*** (0.0096)	0.0430*** (0.0085)	0.0404*** (0.0231)
Past performance	0.7049*** (0.1191)	0.6493*** (0.1064)	0.6532*** (0.1127)
Firm size	0.0019 (0.0023)	0.0029 (0.0021)	0.0029 (0.0021)
TMT size	–0.0001 (0.0036)	–0.0002 (0.0032)	–0.0002 (0.0032)
TMT tenure	–0.0005 (0.0006)	–0.0005 (0.0006)	–0.0005 (0.0006)
TMT agreement		0.0526*** (0.0158)	0.0564*** (0.0348)
Agreement × industry/environment			0.0050 (0.0407)
Constant	–0.0899	–0.0486	−0.0463
R^2	0.64	0.73	0.73
F-value	10.551***	13.192***	11.211***
ΔR^2		0.09	0.00

[a]$N = 48$
[b]Standard errors in parentheses.
***$p < 0.01$; **$p < 0.05$; *$p < 0.10$

The most important result is the positive relationship between TMT agreement and firm performance, which provides strong support for Hypothesis 1. The two significant coefficients for the industry/environment dummy and past performance indicate that: (1) there is a main effect of industry on firm performance—specifically, firms in the stable industry (paints and coatings) were typically better performers than firms in the unstable industry (forest products); and (2) those firms that previously performed well continued to do so.

Because it has been argued that the relationship between agreement and performance might be contingent on characteristics of a firms' industry/environment (Dess, 1987; Wooldridge and Floyd, 1989), we also examined the potentially moderating effect of this variable. The third column of Table 2 reveals the results of analyses after including an interaction term (agreement × industry/environment dummy). As indicated there, we found no relationship between the interaction term and ROA. Therefore, our results (with the control variables) indicate that although industry/environment is strongly related to performance, it does not appear to moderate the relationship between agreement and performance.

Tests of the determinants of agreement

In an attempt to capture the combined effects of all of the hypothesized determinants of TMT agreement, Table 3 presents the results of a multiple regression analysis that used the measure of agreement as the dependent variable. (Note that the table displays the results of the full model using the combined data from both of the original studies and the follow-up). The table reveals two significant coefficients. First, a firm's industry/environment is significantly and *negatively* associated with TMT agreement. Although this dichotomous (0, 1) variable likely captures a variety of industry features, the predominant difference in the present industries is the stability of their environments. So, contrary to the prediction of Hypothesis 3, firms in the industry with a stable environment exhibited less agreement than did firms whose environment was unstable. And as was predicted in Hypothesis 4, organizational size was also negatively related to TMT agreement. In contrast, neither past performance, TMT size (which was significantly correlated with firm size), nor TMT tenure, made a significant difference in the level of agreement exhibited by members of the top team.[2]

Table 3. Determinants of agreement, multiple regression analysis[a,b]

Industry/environment	–0.0912**
	(0.0446)
Prior performance	0.6080
	(0.4431)
Organizational size	–0.0330***
	(0.0023)
TMT size	–0.0240
	(0.0167)
TMT tenure	0.0028
	(0.0030)
Constant	1.233
R^2	0.20
F-value	3.966***

[a] $N = 95$
[b] Standard errors in parentheses.
***$p < 0.01$; **$p < 0.05$; *$p < 0.10$

DISCUSSION

Conclusions on agreement and performance

It has been suggested that as individuals come to understand and assimilate the norms of their organization's strategic decision-making process (Falcione and Wilson, 1988), they experience reduced uncertainty (Shaw, 1981). The reduction of uncertainty, in turn, eliminates potentially dysfunctional distractions and increases their effectiveness in making decisions. The wisdom of this reasoning is supported by our finding that TMT agreement about the comprehensiveness of the strategic decision process was positively related to organizational performance. Moreover, if such agreement is indeed a partial reflection of executive socialization, the reported relationship sup-

[2] All regression analyses (i.e., using performance and agreement as dependent variables) were also conducted using the firm's level of comprehensiveness as a control; none of the reported results changed with the addition of this variable. We also reran the equation without TMT size, and both the company size and industry coefficients remained significant, and everything else in the equation was the same. Similarly, when we ran the equation without company size, both the industry and TMT size coefficients remained significant, and the others were basically the same.

ports the arguments of authors (e.g., Falcione and Wilson, 1988), who contend that firms with highly socialized employees will outperform those whose employees are less so.

In addition, the positive relationship between agreement about comprehensiveness and firm performance was not moderated by the industry/environment interaction, as some suggest it might be (Dess, 1987; Wooldridge and Floyd, 1989). Therefore, it appears that in these two contexts the benefits that accrue to top executives from understanding how their firm typically makes strategic decisions (e.g., of knowing the type of formal analysis that will likely be used) outweigh some of the potential shortcomings (e.g., not challenging an established process that might be suboptimal).

Another observation regarding performance pertains to the issue of causality. While most literature on the topic of TMT agreement has assumed that agreement leads to superior performance (Bourgeois, 1980; Dess, 1987), an alternative explanation is that good performance results in high levels of agreement. Our results indicate that *past* performance was unrelated to TMT agreement about comprehensiveness, but that the association between agreement and subsequent performance was indeed significant. Although they are not a definitive test of causality, these combined findings clearly suggest that it is agreement that affects organizational performance, and not the reverse.

Determinants of TMT agreement

The present study also considered five variables that could potentially influence TMT agreement about the comprehensiveness of a firm's strategic decision process. Regarding potential industry/environment effects, we found no support for Hypothesis 2, that firms in unstable environments would exhibit less TMT agreement about this feature of the strategic decision process than would firms in stable industries. In fact, the results suggest the *opposite*. Our hypothesized expectations were based on the view that the stability of the environment would be reflected in equally stable and easily recognized decision processes that would be more amenable to shared perceptions (Aiken and Bacharach, 1985; Hrebiniak and Snow, 1980). But in light of the unexpected result, we have searched for an alternative explanation. A particularly appealing one is that TMT members in organizations that face rapidly changing environments may be uniquely sensitive to how their firm makes strategic decisions (e.g., how fast? who is involved? how comprehensive?). Such firms have a relatively modest margin for error, so the consequences of making good strategic decisions in a timely fashion can be profound. Therefore, we suspect that TMT members in such firms may be particularly aware of not only the strategic decisions that are made, but also the process that produces them.

We argued earlier that the better a firm's recent performance, the greater the legitimacy accorded the strategic decision process, and the more likely that organization members (e.g., the TMT) would assimilate that process (Feldman and March, 1981; Falcione and Wilson, 1988). This legitimacy was, in turn, expected to be reflected in a higher level of agreement among top executives about that process. However, our results on past performance did not support this argument. This leads us to suggest that the extent to which TMT members agree about their firm's strategic decision process may be independent of past performance for at least two reasons: (1) if socialization does indeed affect agreement, that effect takes place regardless of how well the firm is performing; and (2) agreement may be due to other factors, such as individuals' background similarity, which are also independent of performance.

As organizations grow, they tend to create increasingly specialized subunits (Tushman and Romanelli, 1985). And as individuals participate in those subunits they often acquire differing perceptions of organizational attributes (Weick, 1979), such as the strategic decision process (Schwenk, 1984). The negative relationship between organization size and TMT agreement supports these arguments, and also suggests that TMT socialization may be more difficult to achieve in large firms. At a minimum, it seems to suggest that increased firm size and its concomitant divisionalization make it more difficult to develop and maintain a consistent set of decision-making norms among organizational members, even those who rise to the highest executive levels. Because strategic decision processes often span numerous organizational levels (Fredrickson and Iaquinto, 1989), it may be that

the dynamics of the broader organization, not just the top management team, have the dominant influence in shaping perceptions of that process.

The failure to find any relationship between members' organizational tenure (mean or variation) and agreement on comprehensiveness questions the assertion that as members' tenures increase or are more similar, their understanding their firm's strategic decision process also becomes more similar (Keisler and Sproull, 1982). More importantly, it does not support the contention that the longer individuals have been in an organization, regardless of their position, the more likely it is that they will have been thoroughly socialized to the norms of its decision-making process. Although this result does not support our hypothesis, it does support the position of authors who have suggsted that the socialization process is not time dependent (Falcione and Wilson, 1988). Moreover, combined with the result reported in the prior paragraph, it suggests that organizational size plays a more important role than does time in the socialization process. This is noteworthy because executives can influence firm size, but time defies such influence.

Concluding comments

The positive relationship reported between agreement on comprehensiveness and organizational performance suggests that a common understanding of a firm's strategic decision-making process is indeed critical for TMT members. Moreover, it emphasizes the value of socializing such members to the organization's decision-making norms. In addition, the negative relationships of organizational size and environmental stability with TMT agreement suggest that that process may be particularly difficult in some contexts. However, it also suggests that by controlling growth and attempting to consciously communicate a firm's strategic decision-making norms, executives may help ensure that their firms realize the benefits of a well-understood strategy-making process. Given these conclusions, it appears that the present study extends some of the prior research on the performance consequences of TMT agreement, and may also encourage investigators to turn their attention to those factors that shape agreement. In addition, these results reinforce the value of studying strategic decision processes and the dynamics that surround them.

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