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THE AFTERMATH OF DECLINE

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Abstract

Although many authors generally agree on a number of dysfunctional organizational attributes that are likely to occur under conditions of decline, research has not investigated whether many of those attributes characterize a large number of organizations in decline. This study uses three measures of decline and two measures of turbulence to compare subsets of colleges within a sample of 334, in order to determine whether they differ significantly on twelve attributes of decline. Results suggested that nongrowth, not decline or turbulence, is systematically associated with dysfunctional organizational attributes.

The Aftermath of Decline

In the last decade, literature on the subject of decline has grown exponentially. Beginning with projections of impending shortages and reductions in the early 1970s (Chelt, 1973; Ackoff, 1974; Aiken, Ferman, & Sheppard, 1968; Bogue, 1972; Boulding 1975), decline has become an important focus of writing in organizational theory and in higher education management (Whetten, 1980, 1981; Mingle, 1981; Mayhew, 1979; Carnegie Council, 1981).

However, very little empirical research has been conducted on decline in organizations. Authors have proposed numerous suggestions for how to cope with and manage decline, but few suggestions have been grounded in empirical investigations. The large majority of published documents are theoretical treatises, proposed frameworks, descriptions of the experiences of a single organization or a single individual, or demographic trend analyses. Very few writers have reported empirical analyses of a sample of organizations that have experienced decline.

Writers generally agree that conditions of decline produce dysfunctional consequences. Increases in conflict, secrecy, ambiguity, self-protective behaviors, and turnover, for example, along with decreases in morale, innovativeness, participation, and long-term planning are among the common problems that arise as the aftermath of decline. Authors have suggested that these consequences occur in individuals and groups as well as in organizations.

These conclusions about the aftermath of decline serve as the groundwork for this investigation. Because decline is a condition that requires deliberate management by organizations in order to mitigate its negative consequences, and because little empirical research has investigated the

aftermath of decline or how best to cope with it, there is a need for research that increases our understanding of organizations in decline. This study focuses on the differences between conditions of decline and nondecline, and it explores the extent to which organizations experience many of the consequences that are predicted to be the aftermath of decline.

Dysfunctional Consequences of Decline

At least twelve negative attributes have been identified as resulting from conditions of decline. Those attributes and the logic associated with them are discussed in this section. In the section following, the manner in which those attributes were investigated is explained, followed by a report of the results of the research.

Conditions of decline invariably bring with them restricted resources and pressures to cut back. Levine (1978, 1979), Whetten (1980), Hermann (1963), Hirschman (1970), and others have noted the intensification of conflict under such circumstances. The presence of a smaller resource pie causes organization members not only to be protective of their own resources, but to clash with others in their attempts to obtain additional resources. In times of abundance, most legitimate demands for resources can be met, but when scarcity exists, conflict arising from mutually exclusive resource requirements increases. This conflict often takes the form of increased pluralism, or the emergence of many organized and vocal interest groups (Pfeffer, 1981; Pfeffer & Salancik, 1978). Morale worsens inside the organization as the conflict becomes widespread (Bozeman & Slusher, 1978; Hermann, 1963; Whetten, 1981). In an attempt to ameliorate conflict and meet as many needs as possible, slack resources (such as, contingency accounts, uncommitted reserves, savings, and new project funds) are often used as operating funds. That is, slack resources

are expended to placate vocal special interest groups, and all organizational redundancies are eliminated.

A number of authors have identified the short-term orientation that conditions of decline perpetuate in organizations (Cameron, 1983a; Whetten, 1981; Rubin, 1979; Bozeman & Slusher, 1979). That is, long-term planning is supplanted by short-term responses to immediate crises, conflicts, and constituencies' demands.

A corollary of this short-term orientation is conservatism, the abrogation of innovation and riskiness (Whetten, 1981; Cameron, 1983a; Boyd, 1979). Conservatism permeates declining organizations, and innovation is as likely to be blamed for decline as it is to be seen as a viable response alternative. Resistance to change is magnified in conditions of decline because mistakes are both more visible and more costly than in growth conditions. When no slack resources are available to cover for errors, organizations tend to remain conservative and risk-averse. When there is a need to retrench or cut back, across-the-board cuts rather than selective or prioritized reductions are used to reduce conflict and ameliorate competing demands for resources (Whetten, 1980; Cameron, 1983a; Levine, 1978, 1979; Cyert, 1978; Boulding, 1975).

Hall and Mansfield (1971), Bozeman & Slusher (1979), and Whetten (1981) are among those who have pointed out that decline in organizations is especially stressful for managers and administrators. A "threat-rigidity response" (Staw, Sandelands, & Dutton, 1981) is common under such conditions. Threat-rigidity often manifests itself as increased centralization and decreased participation (Billings, Milburn, & Schaalman, 1980; Khandwalla, 1978; Rubin, 1977). Organizational leaders often serve as scapegoats for the frustrations felt by organization members because decision making is centralized at the top and information is less available. This, in turn, leads

to a loss of leader credibility, made worse by an implied failure of leaders to produce growth in a culture that defines growth as good, and bigger as better. If leaders were competent, it is believed, organizational decline would not be occurring or would at least be of short duration (Whetten, 1980; Hermann, 1963).

All of these uncomfortable conditions lead to voluntary turnover among managers and administrators. Hirschman (1970), Whetten (1981), and Levine (1979) point out that many organizations encounter leadership anemia since the best, most creative, and, therefore, the most marketable personnel are the first to leave. Leaving the organization is often the most reasonable alternative for competent leaders.

In summary, a large number of writers have identified particular organizational characteristics that result from decline. Those discussed above do not represent a comprehensive list, but they do represent a core set of consequences around which there is marked agreement. Table 1 summarizes the twelve characteristics considered to be the aftermath of decline.

TABLE 1 ABOUT HERE

Unfortunately, very few empirical studies have investigated the extent to which these characteristics really are present in declining organizations. Those studies that have been conducted have produced largely supportive evidence for the aftermath of decline. For example, two studies of resource allocation decisions in universities found political behavior increasing when resources were relatively scarce, implying greater conflict and more pluralism (Hills & Mahoney, 1978; Pfeffer & Moore, 1980). Krakower and Zammuto (1983) found that declining institutions had lower leader credibility and fewer slack

resources, but they found no differences between declining and nondeclining schools on centralization, innovation, or turnover. Salancik and Pfeffer (1974) found greater use of power in the allocation of the most scarce resource than in the allocation of other resources in a university. These few studies of colleges and universities have included at most only a few of the characteristics attributed to the aftermath of decline. The intent of this paper is to examine all twelve of the attributes in a broader sample of organizations than has ever been used in order to determine if institutions really do suffer these negative consequences.

METHODOLOGY

The organizations selected for inclusion in the study were growing and declining colleges and universities in the United States. These organizations were selected both because many of them have encountered severe decline over the past several years and because they differ from the private and public sector organizations that authors on decline typically consider.

The study is exploratory. The variables chosen for study are well-grounded in the literature, as we have shown. However, they have not been examined collectively, nor have they been applied to colleges and universities. The results reported here were so surprising--even contrary--that the literature provides no explanation. Therefore, we have included in the following sections the results of several additional analyses that were made to search for reasonable explanations of the findings.

Sample

Presidents in a sample of four-year institutions of higher education were contacted by mail and invited to participate in the investigation. Institutions were selected on the basis of four control variables: enrollment

size (between 200 FTE and 20,000 FTE), institutional control (public, private), enrollment and revenue change (declining, stable, and growing), and the presence of graduate programs (bachelors, masters, and doctorates). Three hundred thirty four schools agreed to participate. They are representative of the entire population of four-year schools in the United States relative to the four control variables. Public institutions constituted 38 percent of the sample (N=127), private schools were 62 percent (N=207). Twenty percent of the schools had experienced declining enrollments during the last five years (N=66), 42 percent had a greater than 5 percent growth rate (N=140), and 38 percent were stable between +5 and -5 percent (N=128). One hundred eighty schools (54 percent) were classified as small (200 - 2,500 FTE), 120 (36 percent) were medium in size (2,500 - 10,000 FTE), and 34 (10 percent) were large (10,000 - 20,000 FTE).

At each of the 334 schools, questionnaires were sent to 12 to 20 of the internal dominant coalition, approximately equally divided among top executives, faculty department heads, and members of the board of trustees. The 3,406 respondents constituted 55 percent of the total contacted. Thirty-nine percent were administrators, 34 percent were faculty department heads, and 27 percent were trustees.

Concepts

Questions assessing the twelve dysfunctional attributes discussed earlier are listed in Table 2. All questions focused at the institutional level of analysis, asking respondents to rate the extent to which certain characteristics were present at their school. The questionnaire was designed to assess other variables not included in this investigation, and because of questionnaire length, only one-item scales were used to assess the attributes.

TABLE 2 ABOUT HERE

Because there is no one best way to measure decline, and because the meaning of decline may vary dramatically depending on how it is measured, three different methods were used to operationalize the concept of decline. First, respondents were asked on the questionnaire whether or not their institution had experienced a decline in revenues in one or more of the last four years. Schools where 100 percent of the respondents agreed that the school had experienced decline were categorized as declining (N=27). Second, revenue data from the Higher Education General Information Survey (HEGIS) were used to identify institutions that had actually declined in revenues more than 5 percent (after adjusting for inflation) between 1977 and 1981 (N=34). Third, schools were identified that had experienced any decline in revenues between 1977 and 1981. Schools were categorized as declining if there were more years of decline than of growth during that period, and if the overall change was negative (N=80). In addition, the first two methods were applied to enrollment data. Since the results were substantially the same as those for revenue decline, they are omitted from this discussion.

Analyses

Comparisons were made between declining institutions and all others using the three different definitions of decline. Multivariate analyses of covariance (MANCOVA) were used to make comparisons and test for significant differences. Previous research on colleges and universities suggested that public-private differences may be significant among institutions and that institutional size may be an important qualifier of these research results

(Zammuto, 1983; Zammuto, Whetten, & Cameron, 1983; Cameron, 1983b), so these two variables served as covariates in the analyses.

RESULTS

Table 3 reports the MANCOVA results when decline is defined as 100 percent agreement by respondents that revenue decline was experienced by their institution. No significant MANCOVA results appear and only two of the twelve attributes (scapegoating and turnover) reach the $p < .05$ level of significance when comparing declining with nondeclining schools. One attribute (turnover) has a significant interaction effect with institutional control, and one attribute (no planning) has a significant interaction effect with institutional size. Examination of group means shows that declining public institutions have more turnover and less planning.

TABLE 3 ABOUT HERE

Table 4 compares declining and nondeclining institutions when the definition of decline depends on actual decline (more than 5 percent) in revenues from 1977 through 1981 from the HEGIS data. The analysis shows no significant MANCOVA results. Only one attribute (no slack) is significant when comparing declining and nondeclining schools, and one other (no planning) significantly interacted with size. These results, coupled with those reported in Table 3, strongly suggest that the aftermath of decline does not occur in colleges and universities to the extent to which it was expected.

TABLE 4 ABOUT HERE

One potential reason for these insignificant differences between declining institutions and others is that a relatively small decline may be experienced differently than a large decline. Institutions may not develop dysfunctional attributes unless decline is relatively severe. To investigate that possibility, a MANOVA was conducted for institutions categorized as declining using the third method (more years of decline than growth between 1977 and 1981, and an overall decline in revenues during that time). One analysis simply compared declining schools with all others. The other analysis compared the ten most severely declining schools (decline averaged -31 percent between 1977 and 1981, with a range of -19 to -57 percent) with the ten schools with the least severe decline (decline averaged -2 percent, with a range of -1 to -5 percent). Table 5 reports the results.

TABLE 5 ABOUT HERE

As in the previous analyses, declining schools are not significantly different from other institutions, nor do severe decliners show significant differences from small decliners. Institutions experiencing severe decline appear not to be characterized by dysfunctional attributes any more than other institutions.

Turbulence as a Potential Explanation

Another possible explanation for the insignificant results in Tables 3 through 5 is that decline itself may not cause these attributes to occur--rather, turbulence or dramatic change may be the precursor. The dysfunctional consequences attributed to decline may instead be experienced by institutions that are undergoing a great deal of change (dramatic growth, dramatic decline, or a large variance in both growth and decline over time).

This possibility arises from the literature on crisis, in arguments made by authors such as Staw, Sandelands, and Dutton (1981), Hermann (1963), Turner (1976), Billings, Millburn, and Schaalman (1980), Rubin (1977), and others. They have suggested that turbulence and its resulting uncertainty produce a variety of dysfunctional consequences in organizations, many of which are represented in the attributes measured in this study. Bourgeois, McAllister, and Mitchell (1978) concluded, for example, that "most managers would respond to turbulent environments in a manner opposite to that which is predicted to lead to greater effectiveness" (p. 508).

To test that explanation, institutions were categorized as turbulent or stable based on their amount of revenue change between 1977 and 1981. Two separate procedures were used. One procedure summed the absolute value of percentage change scores for each year between 1977 and 1981 to obtain a proxy for turbulence. (For example, if an institution grew 6 percent in one year and declined 5 percent the next year, the absolute change score would be $|6| + |5| = |11|$) A cut-off value of $|15|$ was used to separate turbulent from stable schools. The other procedure compared schools that had an overall percent change in revenues of between +5 and -5 percent between 1977 and 1981 (stable schools) with institutions that grew 6 percent or more and institutions that declined 6 percent or more (turbulent schools). MANCOVAs were conducted to determine significant differences between the turbulent schools and the stable schools using each of the two operationalizations of turbulence. Institutional control and size once again served as covariates. Tables 6 and 7 report the results.

TABLES 6 and 7 ABOUT HERE

Significant MANCOVA results were produced in each of these analyses. That is, when a linear combination of attributes is formed, significant differences exist between turbulent and stable schools. More importantly, significant differences were found on eight of the individual attributes in Table 6 and on nine attributes in Table 7. This suggests that revenue turbulence is experienced or interpreted differently than stability in institutions.

At first blush, these results seemed to provide an alternative explanation for the nonsignificance of the twelve attributes in the decline analyses. That is, it appeared that turbulence rather than decline produced these negative organizational attributes. Literature exists to support that result. However, an examination of the mean scores on each of the twelve negative attributes revealed that the stable schools had more of each negative attribute than the turbulent schools! Stable schools had significantly less planning, less innovation, more scapegoating of leaders, more resistance to change, lower morale, more fragmented pluralism, less leadership credibility, more nonselective cuts, and more conflict than turbulent schools!

These findings were so surprising, and so contradictory to previous literature, that an additional analysis was conducted in order to try to find an explanation for these results. An examination of the composition of the turbulent group revealed that 45 of those schools were declining and 158 were growing. This imbalance in the number of declining versus growing schools raised the possibility that growing schools simply overpowered the declining schools in the analysis. Growing schools may have much more positive attributes than stable or declining schools, and, therefore, turbulent schools may seem to be better off than stable schools.

Table 8 reports the results of MANCOVAs comparing growing institutions with all others. Growing institutions were defined as those with a 6 percent

or more growth rate between 1977 and 1981. The purpose of this analysis was to determine whether conditions of growth are significantly more positive for institutions than stability and conditions of decline.

TABLE 8 ABOUT HERE

The MANCOVA results revealed significant differences between growing schools and stable or declining schools ($p < .000$). Significant interaction effects also emerged with institutional control ($p < .04$) and size ($p < .05$). These interactions suggest that significant differences on a linear combination of the attributes were present especially when comparing small private institutions with others. An examination of the individual ANOVAs revealed that seven of the nine attributes that showed significant differences in Tables 6 and 7 also were significant in Table 8. That is, the significant results in Table 7 appear to be accounted for by the differences between growing schools and all others. Three attributes (no planning, no innovation, nonselective cuts) had significant interactions with institutional control and two (no innovation, nonselective cuts) with size. A comparison of mean scores on these attributes showed that growing schools are characterized by the positive attributes and stable or declining schools are characterized by the negative attributes. That is, the aftermath of decline appears to be typical of declining and stable institutions, so that nongrowth more than turbulence or decline is associated with the presence of negative attributes.

SUMMARY AND CONCLUSIONS

This study was an exploratory investigation of the extent to which declining organizations exhibited a predicted set of attributes. Using three measures of revenue decline in MANCOVA analysis revealed no significant differences between declining and nondeclining schools on linear combinations of the attributes. Very few single attributes reached significance. Given results so contrary to previous work, analyses to examine alternative explanations were conducted.

Comparisons between schools defined as stable and those defined as turbulent did reveal significant differences on most of the attributes, but contrary to expectations, stable schools rather than turbulent schools possessed the negative characteristics. This surprising finding led to a comparison between growing institutions and all others to determine whether growth, not turbulence, accounted for the significant differences. This final analysis led to the major conclusion of this investigation: Negative attributes associated with the aftermath of decline are characteristic of both stable and declining institutions. Schools with growing revenues have the most positive organizational attributes.

It is not difficult to generate a post hoc explanation for this major conclusion given what is known about colleges and universities as organizations. Because of certain rapidly rising costs, and perhaps because of a cultural bias in which "good" is equivalent to "growth," stable revenues (adjusted for inflation) can often be interpreted as decline. For some institutions, revenues are declining; for others, stable revenues may mean what Whetten (1980) calls "decline as stagnation." Unfulfilled expectations are as likely to occur in conditions of stagnation as in conditions of decline, and conflict, scapegoating, low morale, and other dysfunctional consequences are

understandable results. Because resources are abundant in conditions of growth, however, the aftermath of decline does not occur.

The exploratory nature of this study, and the nonsignificant results that occurred in several of the analyses, demand that certain caveats be mentioned regarding this major conclusion. First, no causality was tested in these analyses even though it has been implied in the discussion of the literature and in this study's results. This is an area of needed investigation in the future. Second, the operationalizations of decline were selected somewhat arbitrarily. Although unreported analyses of enrollment decline yielded similar results, other definitions of decline and different cut-off values could have been used. Third, findings from colleges and universities cannot be generalized to other types of organizations. Revenue and enrollment growth and decline do not have exact parallels in private sector organizations, for example, so the aftermath of decline in those organizations cannot be generalized from these findings. Fourth, the attributes of individual institutions are not investigated. Group comparisons have revealed what appears to be the association of nongrowth with certain negative attributes, but more in-depth analyses are needed of single institutions in order for confidence to be placed in this conclusion. Finally, significant differences do not appear for all twelve of the negative attributes. Only seven of the attributes (no innovation, scapegoating, resistance to change, low morale, no credibility, nonselective cuts, and conflict) show significant differences at the .05 level. Therefore, more investigations are needed to determine to what extent the attributes that were not significant in this study, although they were predicted in the literature, are really a part of the aftermath of decline.

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Table 1 Dysfunctional Consequences of Organizational Decline

ATTRIBUTE	EXPLANATION
Centralization	Managers make more and more of the decisions, and participation decreases among organization members. Communication suffers.
No Long-term Planning	Crises and short-term needs drive out long-term planning and forecasting.
Innovation Curtailed	Resources with which to experiment are not available, and actions that do not protect core activities are suspect.
Scapegoating	Organization members blame leaders for the uncomfortable condition of decline.
Resistance to Change	Conservatism and self-protectionism lead to a resistance of risky endeavors or untested responses.
Turnover	The most competent members tend to leave both because it is uncomfortable and because they have other options.
Low Morale	Few needs are met and infighting permeates the organizational climate.
Loss of Slack	Uncommitted resources are reallocated to cover operating expenses.
Fragmented Pluralism	Special interest groups organize and become more vocal in seeking resources.
Loss of Credibility	Leaders lose the confidence of subordinates because of the cultural value that growth is effective; decline is ineffective.
Non-prioritized Cuts	Attempts to ameliorate conflict and preserve the status quo lead to across-the-board cuts.
Conflict	Fewer resources create conditions where all needs cannot be met requiring competition for a smaller pie.

Table 2 Questions Assessing the Attributes of the Aftermath of Decline (1=Strongly disagree, to 5=Strongly agree)

ATTRIBUTE	QUESTION
Centralization	Major decisions are very centralized.
No Long-term Planning	Long-term planning is neglected.
Innovation Curtailed	Innovative activity is increasing. (reverse)
Scapegoating	Top administrators are often scapegoats.
Resistance to Change	There is a lot of resistance to change in this school.
Turnover	There is a great deal of turnover in administrative positions.
Low Morale	Morale is increasing among members of this institution. (reverse)
Loss of Slack	We have no place that we could cut expenditures without severely damaging the school.
Fragmented Pluralism	Special interest groups within the school are becoming more vocal.
Loss of Credibility	Top administrators have high credibility. (reverse)
Non-prioritized Cuts	When cutbacks occur, they are done on a prioritized basis. (reverse)
Conflict	Conflict is increasing within this institution.

Table 3 Comparisons Between Declining Institutions and All Others on REVENUES When Decline is Defined as 100 Percent Agreement Among Respondents

Attributes	MANCOVA		Attributes X Control		Attributes X Size	
	F	P	F	P	F	P
Centralized	1.30	.22	1.57	.10	1.18	.29

MANCOVA
df = 12, 319

Attributes	MANCOVA		Attributes X Control		Attributes X Size	
	F	P	F	P	F	P
Centralized	.33	.57	.23	.63	3.17	.08
No Planning	1.50	.22	1.09	.30	4.12	.04
No Innovation	1.77	.18	3.69	.06	.25	.62
Scapagoating	5.44	.02	1.45	.23	.97	.32
Resistance	.13	.72	2.38	.12	.41	.52
Turnover	4.67	.03	5.16	.02	1.24	.27
Low Morale	.23	.63	.86	.36	.06	.81
No Slack	.00	.96	.11	.74	.45	.51
Pluralism	.74	.39	.13	.72	.40	.53
No Credibility	3.08	.08	.07	.79	.80	.37
Nonselective Cuts	.43	.51	.00	.96	.42	.52
Conflict	.67	.41	1.32	.25	.03	.86

MANCOVA
df = 1, 330

Table 4 Comparisons Between Declining Institutions and All Others on REVENUES When Decline is Defined as at Least 6 Percent Decline Between 1977 and 1981

Attributes	MANCOVA		Attributes X Control		Attributes X Size	
	F	P	F	P	F	P
Centralized	1.14	.33	.84	.61	1.66	.08

MANCOVA
df = 12, 319

Attributes	MANCOVA		Attributes X Control		Attributes X Size	
	F	P	F	P	F	P
Centralized	.03	.86	1.30	.26	.13	.71
No Planning	.30	.58	3.38	.07	6.89	.01
No Innovation	3.46	.06	.66	.42	.72	.40
Scapagoating	.14	.71	.94	.33	.11	.75
Resistance	1.66	.20	.02	.87	.14	.70
Turnover	.00	.97	.42	.52	.13	.71
Low Morale	.03	.87	.27	.60	.48	.49
No Slack	6.52	.01	1.85	.17	.55	.46
Pluralism	2.36	.13	.04	.83	1.11	.29
No Credibility	1.63	.20	.08	.78	.10	.75
Nonselective Cuts	.59	.44	.00	.94	.52	.47
Conflict	1.05	.31	.06	.80	.06	.81

MANCOVA
df = 1, 330

Table 5
 Comparisons Between Declining Institutions and All Others on REVENUES When Decline is Defined as Decline in A Majority of Years Between 1977 and 1981, and Comparisons Between Institutions Experiencing Severe Decline and Institutions Experiencing Small Decline

ANOVA	Decliners		Severe Decliners		Significance
	F	D	F	D	
Centralized	2.22	.11	2.22	.11	
No Planning	.43	.51	.01	.93	
No Innovation	1.21	.27	1.41	.25	
Scapagoating	.78	.38	.49	.49	
Resistance	.75	.39	.82	.38	
Turnover	2.85	.10	.03	.86	
Low Morale	.46	.50	1.90	.18	
No Slack	.76	.38	1.55	.23	
Pluralism	3.42	.07	1.71	.21	
No Credibility	.63	.43	2.52	.13	
Nonselective Cuts	.45	.50	.40	.53	
Conflict	.30	.59	.63	.44	

Table 6
 Comparisons Between Turbulent and Stable Institutions on REVENUES When Turbulence is Defined as an Absolute Change Score of 15 or More Between 1977 and 1981

ANOVA	Attributes		Attributes X Control		Attributes X Size	
	F	D	F	D	F	D
Centralized	.01	.94	1.43	.23	1.74	.19
No Planning	4.92	.03	.73	.39	4.74	.03
No Innovation	10.51	.001	5.01	.03	4.55	.03
Scapagoating	12.01	.001	.02	.89	.86	.36
Resistance	26.48	.000	.43	.51	.54	.46
Turnover	1.20	.27	.08	.78	.12	.73
Low Morale	18.94	.000	.00	.97	.34	.56
No Slack	.42	.52	3.64	.06	1.56	.21
Pluralism	11.06	.001	.28	.60	.02	.89
No Credibility	12.94	.000	.63	.43	.11	.73
Nonselective Cuts	1.35	.25	6.98	.009	4.06	.04
Conflict	14.70	.000	.37	.54	.00	.96

MANCOVA
 df = 12, 315

Attributes F D Attributes X Control F D Attributes X Size F D
 3.61 .000 1.54 .11 1.48 .13

ANCOVA
 df = 1, 326

Table 7 Comparisons Between Turbulent and Stable Institutions on REVENUES When Turbulence is Defined as ± 6 Percent or More Change Between 1977 and 1981

Attributes	MANCOVA df = 12, 315	
	F	P
Attributes	2.43	.005
Attributes X Control	2.00	.02
Attributes X Size	2.03	.02

ANCOVAS
df = 1, 326

	Attributes		Attributes X Control		Attributes X Size	
	F	P	F	P	F	P
Centralized	.76	.38	.07	.79	.01	.92
No Planning	6.12	.01	3.60	.06	1.40	.24
No Innovation	4.98	.03	6.13	.01	12.71	.000
Scapagoating	12.70	.000	.13	.72	3.91	.05
Resistance	18.06	.000	3.13	.08	1.95	.16
Turnover	.69	.41	1.82	.18	.04	.85
Low Morale	7.28	.007	.36	.55	2.19	.14
No Slack	.06	.80	.01	.92	.45	.51
Pluralism	5.28	.02	.43	.51	.00	.97
No Credibility	11.73	.001	.52	.47	.89	.35
Nonselective Cuts	8.11	.005	6.48	.01	4.13	.04
Conflict	5.03	.03	2.88	.09	2.25	.13

Table 8 Comparisons Between Growing Institutions and All Others on REVENUES When Growth is Defined as At Least 6 Percent Growth Between 1977 and 1981

Attributes	MANCOVA df = 12, 315	
	F	P
Attributes	3.81	.000
Attributes X Control	1.83	.04
Attributes X Size	1.77	.05

ANCOVAS
df = 1, 326

	Attributes		Attributes X Control		Attributes X Size	
	F	P	F	P	F	P
Centralized	.03	.87	.07	.79	.08	.78
No Planning	.99	.32	7.68	.006	.13	.72
No Innovation	8.56	.004	5.59	.02	10.79	.001
Scapagoating	5.59	.02	.03	.87	1.97	.16
Resistance	9.51	.002	3.37	.07	3.55	.06
Turnover	.41	.52	.53	.47	.01	.91
Low Morale	3.67	.05	.59	.44	.91	.34
No Slack	1.81	.18	.06	.81	.97	.33
Pluralism	.33	.56	.42	.52	.00	.96
No Credibility	3.68	.05	.47	.50	.67	.41
Nonselective Cuts	4.12	.04	7.83	.005	5.60	.02
Conflict	3.85	.05	1.76	.19	1.71	.19