Strategy, autonomy, planning mode and effectiveness: a contingency study of business schools

David M. Brock
Department of International Business, University of Auckland, Auckland, New Zealand

The aim of this project was to investigate whether combinations of strategies, planning modes and levels of autonomy are associated with superior college effectiveness relative to other combinations of these variables. It was hypothesized that a college pursuing a prospector strategy - with an emphasis on continuously seeking new client segments and/or developing new offerings - would be more effective with longer-term and more externally oriented planning, and with more autonomy for its dean. Conversely, a college pursuing a defender strategy - relying on traditional client segments and offerings - would be more effective with shorter-term and more internally oriented planning, and with less autonomy for its dean. Generally, the hypotheses pertaining to the prospector-type strategy were supported, while those involving the defender strategy were not supported. Discusses implications for practitioners and researchers.

According to Robert Burton, “him that makes shoes go barefoot himself (sic)” (Oxford University Press, 1992). Applying this maxim to business schools one may wonder how well managed they may be....

Universities currently face immeasurable complexities and turbulence in their external environments (Cameron and Tschirhart, 1992; Gumpert, 1993; Heydinger, 1994). Their internal organizations are consequently under pressure to adapt in an effective way (Bensimon, 1993; Brown, 1995; Slaughter, 1993). Academic administrators face perplexing problems; and the accompanying challenges for those doing research in higher education management are thus especially vexing.

In evaluating the administrative theorists who dominated organizational theory during the first half of this century, Scott (1981, p. 67) concludes that the major fault was “their failure to develop conditional generalizations - statements that specify the limits of ... applicability to particular situations or types of organizations”. A contingency approach to organization and strategy research has become popular partly as a consequence of these sentiments. In fact, questions of contingency and “fit” abounded as empirical research developed in the organizational strategy literature from the late 1970s and through the 1980s. For example, organizational strategy researchers showed that strategy should fit the structure (Thorelli, 1977); the managers (Gupta and Govindarajan, 1984); should fit the extent of resource sharing (Gupta and Govindarajan, 1986); and strategy should fit with the stage of the product life cycle (Anderson and Zeithaml, 1984). This project investigated contingency relationships among college strategy and two internal variables - namely autonomy and planning.

Autonomy has been chosen as the structural variable in this study because it significantly influences work-related behaviour and has significant bearing on strategy implementation and planning effectiveness (Brock and Zeithaml, 1988; White, 1986). A review of literature on the topic of autonomy follows in the next two sections. Further, planning has been a controversial issue among management scholars for some time now (Barry and Elmes, 1997; Fayol, 1949; Mintzberg, 1994; Wildavsky, 1973). Some of this controversy will be outlined and a solution suggested and tested.

Autonomy

Autonomy is the amount of day-to-day freedom that an organizational member has to make decisions on the job and is an analogue of authority (Inkson et al., 1970). In the Aston studies, centralization and low autonomy were found to be strongly related to concentration of authority, standardization of personnel procedures, low functional specialization, percentage of superordinates and percentage of non-workflow personnel (Holdaway et al., 1975).

Hackman and Oldham (1976) show that autonomy (along with other core job dimensions like task significance and feedback) promote positive motivation, performance, satisfaction, absence and turnover outcomes. White (1986) found that certain strategies which require high levels of control produce better results with low rather than high autonomy. In a similar vein, Gupta (1987) also showed that these strategies are better with centralization (low autonomy), while strategies which need innovation and customer orientation are more effective in decentralized (highly autonomous) contexts.

Planning

Planning seems like such a good idea. It should have many beneficial effects to organizations (Ansoff, 1977; Bryson, 1988). As Fayol (1949) has said, “The preparation of the plan of action is one of the most difficult and most important matters of every business...” (p. 86). Yet many research studies have failed to show these benefits (Fulmer and Rue, 1974; Grienery and Norburn, 1975; Pearce et al., 1987; Robinson and Pearce, 1983). Part of the problem is certainly methodological: Pearce et al. (1987) discuss the lack of attention to contextual influences; inconsistencies in operationalization of planning; measurement validity; ignoring implementation factors, time frames and size effects as the methodological problems manifested in this area of research. However, another problem with
most of the research in the area of the planning-performance linkage is that it has not discriminated among modes or approaches to planning. The assumption seems to have been that "more planning is better", or that longer-term, strategic planning should work in all contexts. We question this view and ask whether simple, shorter-term, internally oriented planning may be better suited to some contexts than more elaborate approaches to planning.

**Strategy, autonomy and effectiveness**

Autonomy is an especially important issue in today's culture of empowerment, individual rights and increased levels of education. For example, in the academy we cherish the right to determine our own curricula, research agenda, hiring decisions and evaluation standards. However, as a structural variable it is possible that an individual's level of autonomy in an organization may be inappropriate. It is common to hear someone complain that they could have managed a situation more effectively if they had not been bound by so much red tape – an example of too little autonomy. Conversely, one can envisage a situation where a manager has the authority, but makes a series of ill-advised decisions resulting in squandered resources – an example of too much autonomy.

For effectiveness of an organization, it helps if the structure supports the strategy. For instance, a strategy that emphasizes innovation – like the Miles and Snow (1978) "prospector" strategy – is best implemented in a structure that gives organizational members the freedom and authority to try different approaches. Conversely, a strategy that involves competing on the basis of efficiency – like the Miles and Snow (1978) "defender" strategy – will be best implemented if the structure reinforces strict controls and accountability over work standards, production, inventories and customer service.

These relationships may be reinforced by the possibility of sharing resources. A defender strategy, for example, may benefit from the economies of scale to be gained on support, technical and administrative functions (like data processing and purchasing) of the organization, thus cutting costs and increasing efficiency. An emphasis on shared services and resources, however, may intensify the need to ensure consistency among units. These pressures would require that units be co-ordinated and controlled to ensure these services and resources are shared and used efficiently by all. Conversely, because of the need for flexibility and autonomy, an emphasis on shared resources may be neither necessary nor desirable for implementing a prospector strategy.

Research findings have found that low-cost strategies produce better results with low rather than high autonomy. Gupta (1987) showed that differentiation strategies are associated with more effective implementation in decentralized contexts, while low-cost strategies are better with centralization. The following pair of hypotheses summarize these relationships:

H1. For organizations implementing prospector strategies, high autonomy will be associated with greater effectiveness than low autonomy.

H2. For organizations implementing defender strategies, low autonomy will be associated with greater effectiveness than high autonomy.

**Strategy, planning and effectiveness**

Planning is that part of the management process that attempts to find the best course of action for an institution (Adams, 1977). Planning may be short-, medium-, or long-term. Daft (1988) defines the short term as periods of one year or less; the intermediate (or medium) term is two years; and the long term is three years or more. Another distinction in planning mode that is useful is internal versus external orientation (Peterson, 1980). Traditional year-to-year budgeting is a basic form of internally oriented planning that is common to many institutions. More contemporary strategic planning modes take external factors (like demographic trends, industry developments, competitors and political trends) into account.

The theory in this project is based on the internal versus external orientation, but is also appropriate for a short- versus long-term classification. The contingencies and correlates in this project are the same for internal and for short-term planning, as well as for external and for long-term planning. Generally, externally oriented planning modes – like strategic planning – tend to be longer term (Bryson, 1988). Conversely, internally oriented systems – like traditional budgeting and project planning systems – are usually confined to the shorter term. For convenience we use the terms "internal" to refer to internally oriented and short-range planning.
modes and “external” to refer to externally oriented and longer-range planning.

Planning has a number of advantages to the organization. For instance, planning helps the strategy-making processes by providing a source of information concerning the external environment. Plans also serve as standards against which to measure and thus control, performance. These plans are thus internal and are generally short-term.

An organization’s need for information and control depends upon its strategy. For instance, a “prospector” organization – being constantly on the lookout for new customers and products – has a high need for external information but a lesser need for control. Further, long-term planning is needed to organize the offerings of an organization to meet the ever changing needs of these changing markets.

On the other hand a “defender” strategy – preoccupied with serving the same target population better and more efficiently – has a high need for control over its internal processes. Year-to-year budgeting processes – typical internal plans – meet these needs.

These ideas are germane to Miles and Snows’ (1978, pp. 43, 61) explication of their strategic typology. One would thus predict that a prospector strategy is better implemented with an externally oriented planning system and a defender strategy better with an internal orientation...

The development of organizational typologies (Miles and Snow, 1978), archetypes (Miller and Friesen, 1977), Gestalts and configurations (Miller and Friesen, 1984) have been major building blocks in the understanding of organizational strategy. This stream of research has shown that certain combinations of strategies, context and organizational structures are more viable than others. The linkages described above can be combined and extended by deductive logic to form a more comprehensive model. Thus, building on the theory developed in the earlier hypotheses one would expect to find a prospector strategy implemented more effectively than externally oriented planning; and a defender strategy would be better with less autonomy and internal planning. These relationships are summarized in H5 and H6.

H5. For organizations implementing prospector strategies, high autonomy and externally oriented planning will be associated with greater effectiveness than internally oriented planning.

H6. For organizations implementing defender strategies, low autonomy and internally oriented planning will be associated with better performance than other configurations.

Method

Business schools were chosen as sampling units because they are readily accessible, sufficiently plentiful and have clearly defined formal leaders – deans. Survey instruments were sent to 260 business school deans, representing all MBA programmes accredited by the AACSB in 1991. Ninety-five usable responses were received (36.5 per cent); while this response rate is low, thus impeding the generalizability of the findings, there was no evidence of the sample being biased with respect to size, type of programme, or geographic regional coverage within North America. The dependent variable (effectiveness) and three independent variables (strategy, autonomy and planning mode) were measured and the hypotheses were tested using one-tailed tests of group means. Notes on operationalization of the variables appear in Appendix 1 and relevant items from the survey instrument in Appendix 2. The three independent variables – strategy, autonomy and planning – were used to classify the organizations into groups. Figure 1 illustrates how the sample was separated into the two strategies and then into the two other variables.

The general tests

All the hypotheses called for directional comparisons of group means of the dependent variable: effectiveness. The initial round of analyses consisted of one-tailed z-tests to compare these group means. The relevant groups are illustrated in Figure 1.

The analyses were aimed at testing for the hypothesized differences in the dependent variable between groups within the sample. For example, in H1, the null hypothesis is that...
the mean effectiveness of groups T+U is no different from that of groups V+W. The alternative hypothesis is that mean effectiveness of groups T+U is greater than that of groups V+W. In hypothesis 6, the null hypothesis will be that the mean effectiveness of group R is no different from that of groups P+Q+S. The alter native hypothesis is that the mean effectiveness of group R is greater than that of groups P+Q+S. The actual tests details, statistics and results are summarized in Table I.

Generally the hypotheses for the prospector strategy (H1, H3 and H5) were all supported and those for the defenders were not. All three hypotheses involving the defender strategy met with negative results using the above basic methodology. The following section describes some more sensitive tests of the hypotheses.

Figure 1
The groups into which the sample was classified

<table>
<thead>
<tr>
<th>Planning type</th>
<th>Planning type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>Internal</td>
</tr>
<tr>
<td>High</td>
<td>P</td>
</tr>
<tr>
<td>Autonomy</td>
<td>Q</td>
</tr>
<tr>
<td>Low</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>S</td>
</tr>
</tbody>
</table>

Defender strategies

Prospector strategies

Table I
Summary of hypotheses and test statistic

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Hypothesized effective group</th>
<th>Hypothesized less effective group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Description of group</td>
<td>x</td>
</tr>
<tr>
<td>1</td>
<td>Prospector and high autonomy</td>
<td>5.38</td>
</tr>
<tr>
<td>2</td>
<td>Defender and low autonomy</td>
<td>5.29</td>
</tr>
<tr>
<td>3</td>
<td>Prospector and external planning</td>
<td>5.37</td>
</tr>
<tr>
<td>4</td>
<td>Defender and internal planning</td>
<td>5.30</td>
</tr>
<tr>
<td>5</td>
<td>Prospector, high autonomy and external planning</td>
<td>5.41</td>
</tr>
<tr>
<td>6</td>
<td>Defender, low autonomy and internal planning</td>
<td>5.00</td>
</tr>
</tbody>
</table>
Hypothesis 1. On the other hand schools in cell E4 have lesser mean effectiveness scores than those in cell E2: this is contrary to Hypothesis 2.

For simplicity, the pair of cells compared in Hypothesis 1 (E1 and E3) will be called the “prospector” group and the pair in H2 (E4 and E2) the “defender” group. The difference between the “prospector” group comparison (E1 – E3) is greater than the “defender” comparison (E2 – E4). To express this analysis algebraically:

\[(E1 – E3) > (E2 – E4)\]

or \[5.38 - 4.72 > 5.59 - 5.29\]

or \[0.66 > 0.30\]

which is true. The difference (between 0.66 and 0.30) of 0.36 was tested by calculating a standard deviation of 0.453 and generating a test statistic of 0.80 which is not statistically significant. These incremental analyses show some weak support for the underlying theory because they show that the hypothesized differences for prospector strategies (which are in the predicted direction) are greater than the differences for defender strategies (in the opposite direction).

Discussion

Determining whether one strategy is absolutely more effective than another is beyond the scope of this study. Rather, as a contingency study, the analyses in this study were geared to test contingencies that “fit” with a given strategy. Most of this section discusses the findings relative to these contingency relationships. The premise of these studies is that the strategy of the school or subunit is formulated at a higher level (university or corporate level). Contingency relationships are sought – through theory building and empirical analysis – that best support the chosen strategy for effective implementation by the subunit.

The prospector strategy H1, H3 and H5 dealing with the prospector strategy were supported by the data and analyses in this study. The basic conclusions to be drawn from these analyses and discussions of these findings are presented below. Implications of the findings for practitioners and researchers are discussed later in the final section of the paper.

H1. Prospector strategies are associated with superior performance when accompanied by high autonomy of the dean.

These findings support the general descriptions of the prospector strategy first detailed by Miles and Snow (1978). For example, Miles and Snow state that the prospector develops “a low degree of structural formalization”, its “control system should be decentralized”, and “permits individuals to exercise a considerable amount of self-control” (1978, p. 62-3). These conditions are important because prospectors need to concentrate on external clients, potential markets and emerging trends; they need to be free to innovate and take calculated risks. For these reasons prospectors should be as free as possible from bureaucratic controls – they should have...
autonomy to implement prospecting activities. These ideas are similar to Peters and Waterman’s (1980) “excellence characteristics” of “closeness to the customer” and “autonomy and entrepreneurship”.

These findings also agree with research findings in the business strategy literature. Gupta (1987) showed that differentiation strategies are associated with more effective implementation in decentralized contexts, whereas low-cost strategies are better with centralization. Differentiation strategies (Porter, 1980) are similar to prospectors in that both strategies require an outward, customer orientation. Brock and Zeithaml (1998) also found similar results in a study of 50 supermarkets and their managers. They found that differentiation strategies were more effective with high autonomy than with low autonomy.

H3. Prospector strategies are associated with superior performance when accompanied by externally oriented longer-term planning.

As argued above, an school’s needs for information and control depend on its strategy. The prospector – being constantly on the lookout for new customers and products – has a higher need for external information and a lower need for control than the more internally oriented defender.

“...differentiation strategies are associated with more effective implementation in decentralized contexts, whereas low-cost strategies are better with centralization...”

Once again these findings support Miles and Snow’s (1978, p. 61) prescriptions concerning planning for the prospector strategy: “continuously monitors an eclectic array of external organizations and events”; “necessitates a comprehensive planning approach”; and, “feedback from the market and other relevant environmental elements”.

H5. Prospector strategies are associated with superior effectiveness when accompanied by high autonomy and externally oriented, longer-term planning.

In addition to the strategy-autonomy and strategy-planning fits addressed above, hypothesis 5 confirms that autonomy and external planning also fit with each other in supporting the prospector strategy. This allows one to identify this configuration of prospecting + high autonomy + internal planning as being superior to other combinations of the prospector strategy, autonomy and planning operationalized in this study.

The defender strategy

The three hypotheses dealing with the defender strategy were not supported. In fact, each test of these hypotheses produced negative test scores: the group effectiveness means were opposite to the hypothesized effects. Possible reasons for these results are discussed in the following two paragraphs, as well under “Recommendations for future research”.

H2. The defender strategy and autonomy

As suggested earlier, there is some theoretical and empirical support for a defender strategy being more effective if accompanied by low autonomy (Miles and Snow, 1978; White, 1986). However, the data and analyses in this study did not confirm this relationship. One reason for this may be the higher education context of this study, which is substantially different from the commercial settings of prior studies. A major distinguishing feature of higher education is the emphasis on autonomy, based on the value of academic freedom. The autonomy of the professorate, academic departments and other organizations, is a fundamental tenet of higher education. So higher education contexts in which low autonomy are associated with effectiveness may be rare. For this reason, hypotheses such as this which investigate a low autonomy situation may not be expected to meet with effectiveness in schools.

H4: The defender strategy and planning

Peterson (1980) distinguishes between internal and external orientations in planning. He states that for “most institutions, planning needs to be sensitive to both internal and external factors” (p. 119). There is, however, a fundamental disadvantage associated with internal planning, namely that it lacks attention to external factors. Few organizations are unaffected by external factors. For these reasons, internal planning generally may be less helpful to strategy implementation – even of defender strategies – than external planning. This tendency would contribute to an explanation of why Hypothesis 4 was rejected. Implications of this finding are pursued in the “Recommendations for future research” section.

Other conclusions

Strategy

For this sample, schools classified as defenders had a higher mean effectiveness score than prospectors. A similar tendency was found by Hambrick (1983); namely that the high costs involved with prospecting activities made them less profitable and the secure niches occupied by defenders resulted in generally higher market shares, economies of scale and superior efficiency. In fact he concludes that the prospector strategy is not maintainable in
the long term for these reasons and that prospectors must eventually shift towards some degree of defending to survive.

**Autonomy**

As reported earlier, the mean effectiveness of all high autonomy units is significantly greater than that of all low autonomy units. This suggests that, other things equal, high autonomy is generally associated with superior effectiveness relative to low autonomy in the sample used in this study. Recommendations for administrators and researchers based on these conclusions are presented in the final sections of this chapter.

**Planning modes**

Further, the mean effectiveness of all external planners is significantly greater than all units using internal planning modes. This suggests that, other things equal, external planning is generally associated with superior effectiveness relative to internal planning in the sample used in this study. Recommendations for administrators and researchers based on these conclusions are presented below.

**Recommendations**

For managers implementing prospector-type strategies, the findings of this study provide two major implications. First, the study suggests that with respect to school-level decision makers should be allowed as much autonomy as possible. This decision autonomy helps to save time at the school level. Also, it permits managers the flexibility to concentrate on evaluating the myriad possibilities with respect to developing potential client target markets and product/service offerings available to the school. These activities are fundamental to the implementation of a prospector strategy. The possible disadvantage of the concomitant loss of control by upper-level managers can perhaps be justified by the above advantages. In addition, it has been argued that the innovation necessary to implement a prospector strategy successfully is stifled by bureaucratic controls (Miles and Snow, 1978).

"...This decision autonomy helps to save time at the school level it permits managers the flexibility to concentrate on evaluating the myriad possibilities with respect to developing potential client target markets and product/service offerings available to the school..."

The second recommendation involves the choice of planning and control systems. Schools implementing externally oriented prospector strategies have a relatively high need for external information—information concerning competing schools, demographic trends, economic forecasts and other market information (Kotler and Murphey, 1981). Further, these types of information are best gathered with a future orientation (Morrison et al., 1984). This study's empirical analyses support the theory that longer-term and external planning modes are beneficial to the implementation of prospector-type strategies. Although there are substantial costs associated with these planning systems, the gains in effectiveness findings suggest that the benefits outweigh the costs.

The suffix "-type" was purposely added to "prospector" in this section to broaden the strategic concept at this stage. There is support in the organizational strategy literature that a few strategic types behave in a similar way with respect to their contingency relationships. Gupta (1987) links the "differentiation" strategy and the "build" strategy. He then shows that both these strategies have similar contingency relationships with three structural variables (openness, subjectivity and decentralization) and with business effectiveness as the dependent variable. These two strategic types have much in common with each other and the "prospector" type; importantly, the emphasis is on finding new (added) bases for competition. Also, all three strategies are associated with a customer orientation. Thus there is some reason to expect that differentiation and build strategies may be implemented better with high autonomy and with external planning systems.

For managers implementing defender strategies, the implications are less obvious. The empirical findings in this study contradict the hypothesized relationships. In fact, the data suggest that the opposite may be true; wit, defender strategies may be implemented better with longer-term and externally oriented planning and with high autonomy. These findings seem to confirm what some authors have maintained about planning, namely that longer-term strategic planning is recommended for all situations (Bryson, 1988; Morrison et al., 1984; Shirley, 1983).

Concerning autonomy, the finding that higher levels of autonomy are associated with superior levels of effectiveness fits with what some writers in the higher education arena have maintained; namely that higher education is an area in which autonomy is important for execution of the academic mission (Bess, 1988; Chaffee and Tierney, 1988).

Recommendations for future research

**Validity of the theory**

Is there a contingency relationship between strategy, autonomy and effectiveness? The theory seems compelling, but the data and analyses in this study lend support only in
Is there a contingency relationship between strategy, planning and effectiveness? Once again, the theory seems compelling, but this study was able to support it for some strategies only. One reason may be that external planning is such an essential managerial process that it is necessary in the vast majority of contexts. Or, once again, it may be that this particular set of business school contexts in the current competitive environment generally require an external orientation.

Planning taking both internal and external factors into account is most comprehensive and is likely to be most effective in most contexts (Morrison et al., 1984; Peterson, 1980). To find the relatively rare contexts in which internal types of planning may be preferable would require a more complex theory, a larger sample and probably a wider range of measures and analyses. For instance, accepting that all prospectors need external planning, one may distinguish between the planning contingencies of various defenders on the basis of other variables. Only the most well-established schools may be able to effectively implement a defender strategy without an external planning orientation; external planning of various forms may be needed for the majority of institutions. It is likely that mean GMAT scores could help distinguish among those schools that require external planning more than others. Generally, schools with the highest GMAT scores are better established and can more safely concentrate on internal client bases. Other schools probably still require external, longer-range planning, even when implementing a defender strategy. Thus the decision between planning modes should probably be one of relative emphasis, not an "either-or" choice: some internally oriented planning and some externally oriented planning is probably needed in most contexts. Further study is needed to explore these relative emphases in various contexts.

Incremental analyses (removing main effects of group membership) suggest that there may be some validity to these theories that the current operationalizations, sample and statistical techniques have failed to uncover. These analyses are not conclusive but do show a tendency (albeit statistically insignificant) supporting the theorized relationships, namely:

- high autonomy has a relatively stronger positive influence on the effectiveness of prospectors than it has on defenders; and
- external planning has a relatively stronger positive influence on the effectiveness of prospectors than it has on defenders.

These tests suggest that there may be cases in which H2, H4 and H6 would be supported. The challenge for researchers is to find a suitable sample and to employ finer measures and analyses than were used in this study.

Other methodological issues

This research design obviously excluded many variables that could have had a bearing on the findings. Among these, there may well be some "meta-contingency variables" that play a determining role. For instance, taking the economic cycle as such a meta-contingency variable, in times of recession and consequent reductions of funding to higher education, aggressive externally oriented planning may...
be needed for all strategies. Similarly, schools with established resource pools—typically defenders—are harmed less by these contexts and would thus be more effective. There could also be a case of reverse causality among some of the variables. For example, a school that—for any reason—performs effectively may be allowed the leeway to prospect and may be granted higher autonomy. This would account for the relatively large numbers of effective schools clustered in the prospector and high autonomy cells.

The ability to distinguish prospectors—or degree of prospecting—could be enhanced by recording the rate of innovations by the school. Examples of such innovations would be new programmes and different student (or other client) markets targeted.

The low response rate prompts questions about the generalizability of the findings. For example, the sample consists of a significant number of private colleges: 31 of 95, or 32.6 per cent (similar to the 29.9 per cent in the population). However, it is possible that the internal structural relationships—like autonomy—of private colleges differ from those of public colleges. So, for example, a “private” prospector with low autonomy may be more effective than another; and to enquire what the correlates of these differences are.

Finally, it is unknown whether business schools are typical of other colleges within universities. Thus the generalizability of these findings to organizations within the higher education sector needs to be questioned.

References


Appendix 1. Operationalized and measurement of the variables

"Strategy"

This variable was intended to distinguish between (a) units that were primarily concerned with serving a relatively stable client base with a relatively stable product offering – a defender strategy – and (b) those more concerned with developing new customer groups and offerings – a prospector strategy (Miles and Snow, 1978). The measures used in this study are similar to those used to measure strategy by (often cited) Gupta and Govindarajan (1984) and by Hambrick (1983).

Each variable collected and created was given an abbreviated name:

STR01: The "either-or" response in question 5, coded 0 for the first response, or 1 for the second. 0 indicated a defender, 1 indicated a prospector.

STR07: The 0–7 scale at the start of item 4; a low score indicated a defender, a high score indicated a prospector.

STRX: STRX = 1.75 + (3.5 * STR01) + STR07

The intention of this combination was that STRX be composed of roughly equal weights of STR01 and STR07. This combination was chosen to add 1.75 (for STR01 = 0) or 5.25 (for STR01 = 1) to the STR07 score. 1.75 is the mid-
David M. Brock
Strategy, autonomy, planning mode and effectiveness: a contingency study of business schools

point of the “defender range” and 5.25 the midpoint of the “prospector range” of the 0-7 measure of strategy. These ranges and midpoints are shown in Figure A1.

Ninety-four responses for STR01 were received and 85 for STR07, leaving a maximum of 84 schools to be classified by the STRX variable in this way. The mean STRX score for all 84 units was 6.4. This score was arbitrarily chosen as the point at which the defenders would be separated from the prospectors. Those scoring above 6.4 were classified as prospectors and the rest as defenders. The remaining 11 schools were classified based on their response to either STR01 or STR07. These procedures resulted in 52 schools being classified as prospectors and 43 as defenders.

“Autonomy”
Autonomy is operationalized as the number of decisions from a given set that a manager (in this case the dean) is empowered to make. A set of 18 possible decisions is in item 10. The autonomy variable - called AU - is the number of decisions checked by the respondent. The mean AU score was 7.5 for the 95 respondents. Once again, the choice of the mean to bifurcate the sample was arbitrary. Those scoring higher than 7.5 were classified as having “high” autonomy (n = 48), the rest “low” autonomy (n = 47).

This operationalization and instrument are based on the measurement of autonomy by Inkson et al. (1970).

“Planning mode”
This variable was designed to measure the extent to which the organizations employed long-term, externally oriented planning systems, as opposed to more traditional planning based on the annual budgeting cycle.

The following code names were used:

PLTH: Item 7 captured the time horizon of the planning system. On occasions where the response to this item was a range (for example, “3 to 5 years”) the upper extremity (5 years) was used as this is closer to the meaning of the term “time horizon”.

PLPL: Item 8 the degree of external orientation, based on the relative amount of external factors taken into account in the planning process. Organizations scoring high on item 8 were deemed to have a relatively “externally oriented” planning system.

PLX: This composite variable was the sum of an organization’s PLTH and PLPL scores. This simple approach to aggregation was possible because the means for PLTH (4.60) and PLPL (4.47) were very similar, so weighing would have had little effect.

In this sample the PLPL and PLTH variables were correlated: the correlation coefficient was 0.37 which is significant at the 0.02 level (t = 2.46).

The 88 organizations who responded to both PLTH and PLPL were classified into external/long-range planners if their PLX score was higher than the mean of all PLX scores; and internal/short-range planners for lower scores. For the seven organizations who responded to only one of the two PL items, the classification was done based on the score of that one item relative to the mean of that item. So a organization who responded low to PLTH and not at all to PLPL was classified as if it had responded low to both PLTH and PLPL: internal. Finally, 39 organizations were classified external and 56 internal.

The approach used here is similar to that used in Dutton and Duncan (1987) and by Ramanunjam and Venkatraman (1987).

“Effectiveness”
Effectiveness was defined as “the degree of success in achieving the major objectives of the organization”. A major problem in measuring effectiveness was that many organizations differ with respect to their major objectives. Some aim for higher enrolment, others for better test scores for entering MBA students, still others to successfully implement a new programme. The instrument was therefore designed to allow the respondents to indicate effectiveness irrespective of what their objectives were.

The following measures of effectiveness were used.

EFF07: Item 6 in the instrument asked for a rating of effectiveness on a seven point scale (0-7). This is a similar approach to those used by Boal and Bryson (1987) and by Gupta and Govindarajan (1984). All 95 organizations in the sample responded to this item.
Appendix 2. Items from research instrument

4) To what extent is your school currently targeting applicants from segments (such as age groups or qualifications) that are different from the traditional student base described in the previous items?

0 – – – 1 – – – 2 – – – 3 – – – 4 – – – 5 – – – 6 – – – 7
not at all somewhat to a major extent

Please indicate by briefly describing (if applicable) the most important new student groups that your school has targeted in the last 1 to 2 years:

Geographic areas:__________________ Gender:______________
GMAT range:______________ Functional/major area________
Age group:______________ Career aspirations:__________
Years’ work experience:__________ Other:________________

5) Which of the following is more true with respect to the major objectives of your school over the last 3 years?

[ ] our emphasis is on doing a better job of satisfying the needs of our traditional student groups or
[ ] in addition to dealing with our traditional student groups, we stress implementing new programmes and finding new clientele

6) How has your school fared in attracting students, relative to its major objectives?

0 – – – 1 – – – 2 – – – 3 – – – 4 – – – 5 – – – 6 – – – 7
unsuccessful somewhat successful

To what extent that you were successful, what were the major achievements?

______________________________ ________________________________

7) What time horizon is used in the school’s planning process? _____ years

8) When planning (or budgeting) for the upcoming year, which of the following factors are seriously taken into account?

[ ] the school’s enrolment trends
[ ] the school’s tuition and fees
[ ] the economy
[ ] demographic trends
[ ] changes taking place at rival schools
[ ] potential new markets
[ ] political environment
[ ] quality of internal services
[ ] regulatory changes

10) Which of the following decisions can be made at school level (or below), without permission from other university administrators or offices? (If your university automatically rubber-stamps a certain decision, consider this a decision at school level.)

[ ] hiring a junior faculty member
[ ] hiring support staff
[ ] granting tenure to a faulty member
[ ] hiring a faculty member with tenure
[ ] promoting to associate professor
[ ] promoting to (full) professor
[ ] charging a fee for a course or lab
[ ] setting tuition for Master’s programme
[ ] starting a new concentration or minor in graduate curriculum
[ ] changing the thesis/research paper requirement for Master’s degree
[ ] reducing amount of credit hours needed for Master’s degree by 3 hours
[ ] changing transfer requirements from other schools
[ ] cancelling all classes one day for school-wide activities
[ ] granting a professor a sabbatical or a semester leave
[ ] placing an advertisement for a faculty member
[ ] placing a promotional or public relations advertisement
[ ] hiring a private printer to make new letterhead (cost $200)
[ ] hiring a private organizational development consultant (cost $2,000)