

2

Strategy-Comprehensiveness Fit and Performance

by

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Abstract:

This paper attempts to establish the applicability of the Miles and Snow typology of strategic orientation to small, entrepreneurial organisations. It posits that congruence between strategic orientation and decision making comprehensiveness of the strategic planning process is a superior determinant of firm performance to planning alone. An empirical study in the Regional Airline industry was conducted to investigate this proposition. Results support the importance of the congruence construct in determining performance in small, entrepreneurial ventures.

Keywords:

FIT; CONGRUENCE; SMALL BUSINESS.

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I am grateful to Dr. Dick Montanani and other reviewers who provided valuable suggestions on the earlier draft of this paper.

Australian Journal of Management, 17, 2, December 1992, © The University of New South Wales

1. Introduction

The rôle of small entrepreneurial business in a healthy economy in terms of new job creation and innovation is well recognised by both government and academia (Birch and McCracken 1982; Bracker, Keats and Pearson 1988; Robinson and Pearce 1984; Small Business Administration 1986). Managing these firms, however, is a risky business and, according to government statistics, about 400,000 small businesses fail each year (SBA 1986). Understanding what makes small entrepreneurial businesses succeed or fail, therefore, has become a focus of many research efforts. The recent focus has been on the nature of strategic planning in small firms and its impact on performance. Several studies that examine the value of strategic planning in small entrepreneurial firms provide some evidence that a well-developed and executed plan contributes to firm success (Bracker, Keats and Pearson 1988; Bracker and Pearson 1986; Potts 1977; Robinson 1980; Vozikis and Glueck 1980). But none have investigated the strategic decision making process that underlies the plan and its relation to the direction or orientation of the new venture.

Based on the studies which examined the planning practices in small business, Robinson and Pearce's (1984) comprehensive review of the literature suggested that, to be effective, planning must be incremental and decision making uncomprehensive in small entrepreneurial firms. This paper presents evidence that small entrepreneurial firms may actually engage in more comprehensive and structured planning processes. Results presented here also suggest that planning processes should not be treated as the singular dominant antecedent of firm performance, but should be analysed in relation to other variables using a congruence framework. Thus, this study investigates the nature of the strategic planning process in small, entrepreneurial firms from the congruence perspective. In particular, the congruencies between strategic planning and decision making and the firm's strategic orientation are examined as co-determinants of firm performance.

2. Overview of Related Literature

One popular stream of research in the strategic management literature on organisational performance relates to the concept of congruence, or fit (Chandler 1962; Lawrence and Lorsch 1967; Van de Ven 1979; Venkatraman and Camillus 1984; Venkatraman 1986). The theoretical framework underlying this concept is that congruence (or fit) among various organisational factors has a significant positive impact on firm performance. Jauch and Osborn (1981) contend that "the probability of organisational survival increases as the congruence of environmental, contextual, and structural complexity increases" (1981, p.492).

Research in this area, however, has been confined primarily to large firms (Chandler 1962; Miles and Snow 1978; Vancil 1979). Small firms have been largely excluded from congruence research. Apparently, small firms are considered sufficiently different from their larger counterparts as to discourage the application of similar concepts which emerge as salient in research on larger firms.

This research does not question the basic differences which exist between large and small firms. Nor does it suggest that small firms could unequivocally deploy the same theoretical constructs as larger firms. We contend, however, that certain theoretical constructs are generic in nature and fundamental to all organisations, small or large, private or public, profit or non-profit. Congruence theory is such a construct and, thus, is basic to effective operation of any firm regardless of contextual characteristics. In this paper, we investigate the congruence between a firm's strategic orientation and one aspect of the strategic planning process: strategic decision making comprehensiveness.

Managers of small, entrepreneurial firms (owners as well as hired managers) are influential in projecting and developing a certain strategic orientation for their firms. This may not involve a conscious decision by managers to pursue a particular strategic orientation. Nevertheless, the choices they make and the courses of action they pursue over time give shape and clarity to their subconsciously envisioned strategic orientation. For superior performance, therefore, the planning process should be congruent with the direction established by this orientation.

2.1 Strategic Orientation

Strategic orientation refers to a firm's particular patterns of behaviour—the tendency of an organisation to discover, develop and maintain a set of consistent responses to various environmental events (Hofer and Schendel 1978; Miles and Snow 1978). Several studies have found that it is possible to aggregate firms within a particular industry based on their strategic orientations (Dess and Davis 1982; Davig 1986; Miles and Snow 1978; Porter 1980). According to Dess and Davis (1982), studying the orientations of strategic subgroups within an industry may be more useful due to the strategic similarities, including orientation, evident in such strategically homogeneous subgroups.

Among the various typologies of strategic orientation, Miles and Snow's (1978) typology has received the most attention (Connant 1986; Davig 1986; Hambrick 1983; Miles 1982; Smith, Guthrie and Chen 1986; Venkatraman 1986). In their study of textbook publishing, electronics, hospital, and food processing industries, Miles and Snow (1978) identified four strategic orientations: defender, prospector, analyser and reactor. According to Miles and Snow, organisations in each category exhibit a consistent pattern of behaviour in their decisions while dealing with various environmental forces. A full description of these orientations appears in Table 1.

Only one study (Davig 1986) examined the existence of Miles and Snow's four strategic orientations within the context of small firms. Davig investigated Miles and Snow's typology in a sample of small manufacturing firms in apparel, foundry and fabricated metal products industries. Davig identified the four orientations in his sample of small firms. These results are encouraging and contribute to our understanding of the strategic management of small firms. Like many exploratory studies, however, this preliminary research may raise more questions than it answers. What contextual factors influence small firms to behave

Table 1

Miles and Snow Typology

Orientation	Description
Defender	Organisations with this orientation tend to have a narrow product/market domain. The firm will try to create and maintain a niche with a limited range of products or services. It also has a narrow technological base (because of its narrow domain). It does not attempt to search outside its domain for new opportunities. Hence, it becomes highly dependent on its narrow product/market area. As a result, it tries to protect its domain through lower prices, higher quality, superior delivery, and so forth. The structure of a defender firm is characterised by an elaborate formal hierarchy and high degree of centralisation.
Prospector	A prospector firm continually searches for new opportunities. It has a broad and flexible product/market domain and, hence, a broad technological base. The firm usually creates change and uncertainty in the environment. Its structure is characterised by a low degree of formalisation and routinisation, decentralisation, and lateral as well as vertical communication. Such a firm responds quickly to early signals of opportunities and is usually the first to enter a new product/market area. It is not necessarily successful in all of its endeavours, nor is it very efficient since product/market innovation is a major concern of such a firm.
Analyser	A firm with this orientation has characteristics of both the defender and prospector orientations. It tends to maintain a stable and limited domain, while at the same time cautiously moving into a new domain only after its viability has been proven by prospectors. Analysers are imitators in such a way that they take the promising ideas of prospectors and successfully market them. They seek flexibility as well as stability. They adopt structures that can accommodate both stable and changing domains.
Reactor	This firm does not have long term goals or articulated strategies, and, hence, no consistent pattern of behaviour. The organisation is passive in dealing with various issues. It does not attempt to maintain a defined product/market domain, nor does it try to capitalise on viable environmental opportunities.

Source: Adopted from Miles and Snow (1978)

like their larger counterparts? Are some industries more favourable than others for small firms to use concepts traditionally thought to be only applicable to large firms? The research reported here responds to the calls by Dess and Davis (1982) and Davig (1986) for additional research in this area. Furthermore, it builds on the Bracker, Keats and Pearson (1988) study which found that small, entrepreneurial firms using sophisticated strategic planning practices outperformed firms with less sophisticated strategic planning.

2.2 Strategic Planning Process

Past research on the strategic planning process has fostered two opposing views. The first view, referred to as synoptic, treats strategic planning as a highly rational and proactive behaviour. This stream of research emphasises comprehensiveness of decision making in planning activities such as goal establishment, assessment of environmental opportunities and threats, analysis of internal organisational competencies, identification and evaluation of alternatives, and selection of a best course of action (Andrews 1971; Ansoff 1965; Grant and King 1982). The opposing view considers the decision making associated with the strategic planning process as noncomprehensive and more incremental than synoptic (Lindblom 1959, 1979; Fredrickson 1983; Quinn 1980). According to Braybrooke and Lindblom (1970, p.21), even with significant resources, an organisation attempting to be synoptic will achieve “tomorrow’s solution for yesterday’s problem”.

Most management scholars would agree that the strategic-planning process as it is actually practiced is neither totally rational and synoptic nor exclusively incremental. A synoptic planning process may not be feasible, partly due to what Cyert and March (1963) referred to as the decision makers cognitive limitations, and partly due to an organisation’s resource limitations (Bourgeois 1981; Braybrooke and Lindbolm 1970). On the other hand, a totally incremental approach fails to recognise the establishment of the firm’s long term direction and future competitive position that is typically acknowledged as the initial stage of any strategic planning process (Quinn 1980). Some authors agree that many firms use aspects of both the synoptic and incremental approaches simultaneously. More important, according to Lorange and Vancil (1977) and Nutt (1976), the selection of either approach depends on a variety of contextual factors. Here we propose that the strategic orientation of the organisation as established and maintained by the senior executive(s) operates as a primary codeterminant of firm performance.

Prior studies on the strategic planning-performance relationship in large and small firms have been inconclusive. A number of research efforts (Bracker and Pearson 1986; Herold 1972; Karger and Malik 1975; Rhyne 1983; Robinson 1980; Robinson, Vozikis and Pearce 1981; Unni 1981) have reported significant positive relationships between planning and financial performance. Other studies (Fredrickson and Mitchell 1982; Kudla 1980; Leontiades and Tezel 1980; Robinson and Pearce 1983) produced contradictory results. An examination of these empirical studies reveals several factors which may explain these apparent

inconsistencies. As Bracker and Pearson (1986) suggest, the factors may include small sample size, short time frame, failure to measure the degree of congruence of the planning process with other contextual factors, non-homogeneity of data, and inappropriate performance measures. A more fundamental weakness of past research may be the limited scope of the empirical question investigated. The question “Does strategic planning improve a firm’s performance?” has directed researchers to look exclusively at financial performance differences between planners and nonplanners, or formal and informal planners (Ramanujam, Venkatraman and Camillus 1986). This focus appears to consider planning as an isolated set of activities without regard to other contextual variables. Taking the advice of scholars such as Lorange and Vancil (1977), Nutt (1976) and Bracker and Pearson (1986), we posit that strategic planning activities and their impact on performance should be viewed in relation to other contextual factors.

To investigate the above theoretical formulation, this paper examines the impact on performance of the congruence between one aspect of the strategic planning process and the strategic orientation of the firm. We have operationalised the strategic planning process via the decision making comprehensiveness dimension because it is a major dimension that separates synoptic and incremental models of the planning process.

Three congruence levels resulted from combining the decision making comprehensiveness and strategic orientation constructs. These levels are depicted in Table 2.

Table 2

Levels of Congruence Between the
Strategic Orientation and Planning Process

Strategic Orientation	Planning Process Comprehensiveness	
	High (Synoptic)	Low (Incremental)
Defender	High congruence	Low congruence
Prospector	Low congruence	High congruence
Analyser	Med. congruence	Med. congruence
Reactor	Low congruence	Low congruence

It is proposed that the higher the congruence between the two variables, the better the performance of the firm. The following section provides rationale for various congruence levels.

2.3 High Congruence

High congruence exists when: (a) defender organisations utilise a comprehensiveness planning process (synoptic approach); and, (b) prospector organisations adopt a noncomprehensive planning process (incremental approach).

According to Miles and Snow (1978), organisations with the defender orientation have a narrow and stable domain. These firms allocate almost all of their resources to controlling and protecting their narrow product-markets. Their domain is their lifeblood and they will do anything to protect it. These firms analyse all aspects of a strategic decision carefully to try to ensure that the right decision is being made. Because of their narrow and stable domains, defenders do not need to respond to dynamically changing environments. They can, therefore, afford the time and resources to adopt a comprehensive (or synoptic) decision making approach.

The opposite is true for prospector organisations. They operate in a broad, continually changing and developing domain. This condition requires the company to be very flexible and quick to respond to environmental events. A low comprehensive decision making process (an incremental approach) would be more congruent in this case because of time constraints and the need to avoid long term commitments which could restrain the firm's flexibility.

2.4 Medium Congruence

Medium congruence exists in analyser organisations regardless of the level of comprehensiveness in their planning process. Analyser firms have a bifurcated domain requiring different types of planning processes. A part of the analyser's domain is narrow and stable (resembles a defender orientation) which requires a comprehensive process (synoptic approach). Another part is broad and changing (resembles a prospector orientation) which requires a low comprehensive process (an incremental approach). As Weick and Gilfillan (1971) and Steinbruner (1974) indicate, the process of making strategic decisions tends to be consistent within a given decision making situation. Thus, a firm with an analyser orientation cannot be both comprehensive and uncomprehensive at the same time. Nor can it change its planning process frequently enough to perfectly accommodate both domains. The firms in this situation adopt a moderate level of decision making comprehensiveness to equally satisfy the requirements of the firms' two domains. Hence, the planning process does not provide a perfect fit with the strategic orientation of the firm at any given time. This results in a medium level of congruence between the two variables in analyser firms.

2.5 Low Congruence

Low congruence exists when: (a) defender organisations utilise a noncomprehensive planning process (incremental approach); (b) prospector organisations use a comprehensive planning process (synoptic approach); and (c) firms have reactor type orientations, regardless of their planning process.

The opposite arguments which were presented for high congruence apply here for situations (a) and (b). That is, under these conditions, a lack of fit or congruence exists between the firm's strategic orientation and its planning process. A low congruence also exists in reactor organisations but for a different reason. According to Miles and Snow (1978), an important characteristic of reactor firms is inconsistent patterns of behaviour. This inconsistency emerges from a lack of clear goals and direction. Reactors do not have articulated strategies and are passive in dealing with problems until they are forced by external pressures (i.e., government, competition, consumers, etc.) to react in problematic situations. This condition inhibits any type of systematic decision making process, be it incremental or synoptic.

2.6 Congruence Hypotheses

The above theoretical discussion produced the following hypotheses, which are investigated in subsequent sections of this paper:

- Hypothesis 1: Higher relative performance will be associated with defender organisations using a comprehensive strategic decision making process (high congruence condition).
- Hypothesis 2: Higher relative performance will be associated with prospector organisations using a noncomprehensive strategic decision making process (high congruence condition).
- Hypothesis 3: Moderate relative performance will be associated with analyser organisations using both comprehensive and noncomprehensive strategic decision making processes (medium congruence condition).
- Hypothesis 4: Low relative performance will be associated with defender organisations using a noncomprehensive decision making process and prospector organisations using a comprehensive decision making process (both low congruence conditions), and with reactor organisations.

Before testing the above congruence hypotheses, an important condition must be met: the four strategic orientations (defender, prospector, analyser and reactor) proposed by Miles and Snow (1978) should exist in the industry under investigation. Several researchers have reported the existence of these four types in different industries (Connant 1986; Davig 1982, 1986; Miles and Snow 1978; Snow and Hrebiniak 1980). Miles and Snow (1978) originally identified the four orientations in their study of textbook publishing, electronics, hospital, and food processing industries. Snow and Hrebiniak (1980) confirmed the typology in automotive, plastics, air transportation (major airlines), and semiconductor industries. More recently, Connant (1986) investigated this typology in the health care industry [Health Maintenance Organisations (HMOs)] and reaffirmed the previous findings. Only Davig (1986) studied small entrepreneurial firms (in the apparel, foundry, and fabricated metal products industries) and supported the presence of the four strategic orientations. Given the diversity of these studies and

consistency of their findings, it is expected that the industry investigated here would also display these four strategic orientations. The prerequisite nature of this condition, however, prompted the fifth hypothesis below:

Hypothesis 5: Four strategic orientations (defender, prospector, analyser and reactor) will be present in small, entrepreneurial firms.

3. Methodology

The present study is a cross-sectional field study. The major strength of a field study is that the phenomenon under investigation is studied in the context in which it naturally occurs. This proximity of natural context enhances the generalisability of the research findings, thereby providing significant practical applications for organisations. On the other hand, several potential sources of method error are evident in many field studies. Various preventive techniques have been used to minimise such errors.

3.1 Sample

This research focused on the small Regional Airline industry for both conceptual and methodological reasons. Conceptually, regional airlines comprise a fairly homogeneous set of organisations that, as a set, fit the definition of small, entrepreneurial ventures. The Airline Deregulation of 1978 created an almost immediate opportunity for new and existing short-haul carriers to enter a heretofore mature industry suddenly thrust into a dynamic growth condition. The competition among carriers in the regulated era was minimal and centred solely on in-flight service and schedule convenience. In addition, the competition between regional and national airlines was almost nonexistent because regional airlines acted primarily as feeders to the larger national carriers. Deregulation almost eliminated fare control and abolished most entry barriers. It also allowed carriers to select their own route structure in any way they wanted. Many carriers dropped their short-haul, lighter-density and marginally profitable routes. This resulted in a significant growth potential for the regional airlines. Many new, entrepreneurial airlines entered the market to capitalise on these opportunities and existing regional airlines acted entrepreneurially by expanding their route systems and acquiring larger and longer-range aircraft. As a result of deregulation, the regional airline industry evolved into a dynamic and highly competitive industry. It created an environment with vast opportunities for entrepreneurship.

Methodologically, single industry research controls for various confounding variables. Generally, in single industry research, situations faced by firms are more similar than in multi-industry research. Of course, even in a single industry situation, firms may be so positioned to face different industry conditions. Moreover, a small, entrepreneurial firm can be defined more accurately within one industry. A review of small business research indicates great inconsistency in the definition of small, entrepreneurial firms. In the previous paragraph we reviewed the conditions which were responsible for the entrepreneurial context of the

regional airline industry. Conducting research in a single industry setting allows the researcher to adapt an industry-specific definition of small firms which will result in more reliable findings. Thus, the regional airline industry provides an ideal setting for research on small, entrepreneurial firms.

The Regional Airline Association (1985) defines small Regional Airlines (RAs) as those that operate within limited geographical areas, have annual operating revenues of up to \$10 million, and operate small aircraft with sixty seats or less and with about 18,000 pounds of maximum payload. At the time of the study there were 204 regional airlines in the U.S., including Hawaii, Alaska, Virgin Islands and Puerto Rico. The target respondents were the firm's senior executives (CEOs). In a small firm the top management has responsibility for monitoring the environment and formulating appropriate organisational responses. Hence, they have extensive knowledge of the organisation's strategic activities. The names and titles of all respondents were obtained from the Regional Airlines Association's 1985 Annual Report. A mail survey methodology, incorporating several of Dillman's (1978) response facilitation techniques, was utilised for data acquisition. A three wave mailing was adopted, with certified mailings for the first two waves. Each mailing included a personalised cover letter, a questionnaire, and a self-addressed postage-paid return envelope. The cover letter stressed the rationale for the study given the turbulent nature of the industry and the lack of attention to this area. It also emphasised that the respondent's position and knowledge of the industry could significantly enhance the quality of the research.

3.2 Strategic Orientation Scale

The strategic orientation of the firm was measured by both the traditional instrument developed by Miles and Snow (1978) and a more recent instrument developed for this study based on Connant (1986). In their original instrument, Miles and Snow created four descriptive paragraphs corresponding to their four strategic orientations. Subjects selected the paragraph which best characterised their firm. The original instrument has been used in several studies, but has been criticised for a lack of validation support (Connant 1986; Smith et al. 1986).

The instrument used here has been developed by the author and comprises twelve multiple option questions. The questions relate to the most important characteristics of Miles and Snow's (1978) adaptive cycles (entrepreneurial, engineering and administrative) and were carefully worded to reflect the unique characteristics of the RA industry. Each question has four alternative answers corresponding to the four strategic orientations identified by Miles and Snow (1978). For example, in Question 1, alternative A, B, C and D represented defenders, prospectors, analysers and reactors, respectively. The reliability of the new measurement scheme was checked by test-retest procedure. The reliability of each question ranged from 0.58 to 0.75, with a mean reliability of 0.65. These reliability coefficients exceed or approach the acceptable range (0.60 to 0.70) reported by Nunnally (1978) for exploratory research. The strategic orientations of participating firms were identified by the consistency of their responses to various

questions. The instrument and its scoring system are available on request.

3.3 Comprehensiveness

As previously described, the degree of decision making comprehensiveness is an important dimension of strategic planning which separates a synoptic from an incremental process. According to Fredrickson (1983) and Fredrickson and Mitchell (1984), looking at specific distinguishing characteristics that separate a synoptic from an incremental process would provide substantial insight into the strategic planning process. The instrument to measure this variable was developed using Fredrickson and Mitchell's (1984) scale and consists of thirty items with five point Likert-type scales. The questions were designed to measure how comprehensive firms are in performing various activities in their planning process. These activities include: investigation and analysis of strategic issues; evaluation and selection of the best alternative course of action; and implementation of the final decision. Items were included for each of the three activities delineated above. These items covered key indicators specified by Fredrickson and Mitchell (1984) in their conceptualisation of the comprehensiveness construct. Some of the indicators employed to measure comprehensive were:

1. the assignment of primary responsibility (e.g., having no specific individual responsible for the plan versus forming a special committee of several people);
2. a willingness to go outside the firm for help (e.g., use of consultants and other experts);
3. the amount of direct, out-of-pocket expenditures to be spent; and,
4. the breadth of analysis (e.g., different areas of expertise involved).

Higher scores on items reflect a more comprehensive strategic decision making process (synoptic approach) and lower scores indicate low comprehensiveness (incremental approach). A total comprehensiveness measure was obtained by averaging the responses to all questions. A median split was used to identify high versus low levels of comprehensiveness.

3.4 Dependent Measures

Two measures of performance appropriate for the RA industry were used: the load factor (percentage of seats filled per mile per aircraft); and the profit margin. Data on these measures were requested for the five years 1981 to 1985. Performance data was converted to a five point Likert-type scale, ranging from high to low performance. This range was obtained from the Air Carrier Industry Scheduled Traffic Statistics for the period 1981 to 1985.

4. Results and Discussion

Questionnaires were mailed to 204 regional airlines in the United States. Ninety-four airlines responded, of which 82 were usable, constituting a 40% response rate. This response rate compares favourably to similar studies.

Chi-square analysis was performed to check for non-response bias based on two criteria: the geographical location of the airline (based on four regional zones); and the relative size of the firm (firms with more than eight aircraft were coded as large). No significant differences were found (see Tables 3 and 4).

Table 3

Non-response Bias Based on Location

	North East	South East	North West	South West	Total
Respondents	24	16	23	18	82
Non-respondents	35	33	19	35	122
Total	59	49	42	54	204

Notes: $X^2 = 5.85$; $d.f. = 3$; the critical X^2 value at 0.05 is 7.81. Therefore, no significant difference exists between respondents and non-respondents.

Table 4

Non-response Bias Based on Size

	Small ≤ 8	Large > 8	Total
Respondents	52	30	82
Non-respondents	75	47	122
Total	127	77	204

Notes: $X^2 = 0.26$; $d.f. = 1$; the critical X^2 value at 0.05 is 3.84. Therefore, no significant difference exists between respondents and non-respondents.

To investigate the prerequisite hypothesis (Hypothesis 5), the strategic orientations of subject firms were identified. There were nineteen defenders, nine prospectors, 24 analysers and thirty reactors. Thus, Hypothesis 5 was supported using these data. The small number of prospector firms was expected because of the limited resources available to firms in this industry. Miles and Snow (1978) define prospectors as firms which search for new opportunities, create environmental change, and respond quickly to early signals of opportunity (see Table 1 previously). As described earlier, the opportunity afforded by deregulation was suddenly imposed on the regional airlines rather than proactively sought by a large number of firms in the industry. Thus, the entrepreneurial opportunity was made available to all new and established firms in the industry regardless of their pre-existing strategic orientation. Prospector firms were appropriately positioned to take advantage of the dramatically altered environment while all other firms were required to adopt entrepreneurial behaviours or risk acquisition or failure. The highly capital intensive nature of the airline industry, however, limited the maneuverability of many RAs to become true prospectors.

The large number of reactors is also understandable given the amount of change that has occurred in the airline industry since deregulation in 1978. In the early years of deregulation, many RAs were caught by surprise and failed to articulate their long term goals and strategy. These firms (reactors) were preoccupied by short term profitability because of the tremendous opportunities created by deregulation.

The question used here to measure strategic orientation gives the respondents an opportunity to express their behaviours over a range of activities related to a particular strategic orientation, rather than simply selection of a blanket statement regarding their orientation, as is the case with the four-paragraph approach. Although Davig (1986) indicated that the four strategic orientations did, in fact, exist in small firms within the metal and fabrication industry, his research was based on the original four-paragraph instrument. Nevertheless, both Davig's and the present findings clearly indicate the existence of different strategic orientations within the context of small, entrepreneurial firms.

The comprehensiveness scale was subjected to factor analysis and computation of coefficient alpha. This scale, based on the work of Fredrickson and Mitchell (1984), contained thirty items measuring the comprehensiveness level of various phases of the planning process. The initial factor analysis (rotated factor matrix) revealed that some of the items were cross-loaded on more than one factor. Based on a standard convention in the management literature, items which cross-loaded on more than one factor by 0.3 or greater were deleted. The factor analysis and item elimination procedure resulted in a more parsimonious scale of the ten items which loaded on three factors. These factors represent three of the primary indicators espoused by Fredrickson and Mitchell (1989). Coefficient alpha was computed for the resulting scale and found to be 0.78. The final rotated factor matrix is shown in Table 5.

Table 5

Rotated Factor Matrix: Factor
Structure for Revised Comprehensiveness Scale

Items	Factor 1	Factor 2	Factor 3
Problem Responsibility	0.91726	-0.06941	0.14182
Problem Support	0.77955	0.08865	0.08770
Problem Participation	0.77443	0.12618	0.27759
Identification Responsibility	0.19716	0.78243	-0.07861
Identification Support	-0.02434	0.76298	0.01100
Identification Cost	-0.03299	0.75081	0.28060
Elimination Factors	0.16359	0.66418	0.15169
Integration Expertise	0.16315	-0.02745	0.87580
Integration Focus	0.29957	0.07240	0.77660
Breadth Techniques	0.12672	0.20796	0.51700

The three factors which were identified in this analysis represent the comprehensiveness level of the planning process used in subject firms. They were:

1. the assignment of primary responsibility (e.g., having no specific individual response for the plan versus forming a special committee of several people);
2. a willingness to go outside the firm for help (e.g., use of consultants and other experts);
3. the breadth of analysis (e.g., different areas of expertise involved).

The items which loaded on these factors cumulatively explained 64.1% of the total variance.

A MANOVA analysis was used to test our main hypothesis. It was found that there is a significant relationship between the levels of congruence and performance. In other words, different levels of congruence resulted in significantly different performance outcomes (Wilk's $F = 16.64$ at 0.001). Subsequent univariate F -tests indicated that the relationship is significant for both dependent variables ($F = 21.69$ for load factor and $F = 34.30$ for profit margin, both at $P < 0.001$). Table 6 contains the summary results of the univariate analysis.

To find out whether this significant relationship was in a direction that had been predicted, one way ANOVA and Tukey's test of significance were performed. It was found that firms with a high or medium level of congruence significantly outperformed firms with low congruence on both performance measures. Hence,

Table 6

Effect of Congruence on Performance (a)

Sources of Variation	SS	d.f.	MS	F
Load Factor				
Congruence	55.49	2	27.74	21.69*
Error	98.45	77	1.27	
Profit Margin				
Congruence	71.03	2	35.51	34.30*
Error	79.03	77	1.03	

* $p \leq 0.01$.

our hypotheses were supported. Table 7 presents the summary results of one way ANOVA and Tukey's significant test.

Table 7

Effect of Congruence on Performance (b)

Congruency	Cumulative Performance Means	
	for Load Factor	for Profit Margin
High	4.17 ¹	3.78 ¹
Medium	3.51 ¹	3.72 ¹
Low	2.22 ²	2.10 ²

Notes: 1. & 2. Means with the same superscript are not significantly different from each other. Means with different superscripts are significantly different from each other at $p \leq 0.05$ (Tukey test of significance).

With regard to Hypothesis 1 through 4, a significant relationship was found between both high and medium levels of congruence and performance. But no significant difference was found between high and medium congruency levels. At least two explanations can be offered. First, the combination of an analyser orientation and dual levels of comprehensiveness may not result in a medium level of congruence as originally proposed. Rather, it may provide high congruence. Small firms are typically considered more flexible than large firms because of the less rigid and elaborate bureaucratic system of the small firm. There are fewer people involved in decision making and the firm has fewer layers in the management hierarchy. This situation, coupled with the firm's analyser orientation, would enhance its flexibility. This additional flexibility may be instrumental in creating high instead of medium congruence as originally proposed.

The second explanation for the lack of significant difference between high and medium congruence is that, in reality, there might not be a significant increment from medium to high congruence in terms of firm performance. Since it is unrealistic, and perhaps impossible, to expect that complete congruence (100%) can be achieved given the dynamic nature of the industry and the diversity of elements involved, medium congruence may have the same effect as high congruence on firm performance. In other words, a moderate level of congruence is sufficient for good performance.

As shown in Table 2 previously, low congruence stems from more than one source. Some firms have low congruence because they exhibit the reactor orientation independent of the level of comprehensiveness of their planning process. Others show low congruence because of the mismatch between the strategic orientation and the level of decision making comprehensiveness. To find out which of these two sources contributed to the significant findings, new analyses were conducted which excluded firms with a reactor orientation. Multivariate and univariate analyses indicated that, even without reactors, there was a significant difference between various levels of congruence with regard to performance ($F = 3.034$ at 0.05 level). Table 8 shows a summary of the MANOVA procedure. Subsequent one way ANOVA with Tukey's significant test (Table 9) indicated that companies with high or medium congruence significantly outperformed firms with low congruence.

These findings suggest that a mismatch between the strategic orientation of the firm and comprehensiveness of its planning process have implications for its performance. Specifically, a successful firm with a prospector orientation tends to use low comprehensiveness in the decision making associated with its planning process (incremental approach) probably because its domain is changing and, thus, creating an uncertain environment. A comprehensive process in this situation becomes dysfunctional because it may lead to the loss of opportunities stemming from a changing environment. On the other hand, a successful defender firm tends to be more comprehensive in its planning process (synoptic approach), mainly because its domain is limited and relatively stable. These results are consistent

Table 8

Effect of Congruence on Performance, Excluding Reactors (a)

Sources of Variation	SS	d.f.	MS	F
Load Factor				
Congruence	7.42	2	3.71	4.33*
Error	41.96	49	0.85	
Profit Margin				
Congruence	5.18	2	2.59	2.76**
Error	47.53	49	0.97	

Notes: * Significant at $p \leq 0.01$.** Significant at $p \leq 0.05$.**Table 9**

Effect of Congruence on Performance, Excluding Reactors (b)

Congruency	Cumulative Performance Means	
	for Load Factor	for Profit Margin
High	4.13 ¹	3.76 ¹
Medium	3.51 ¹	3.72 ¹
Low	3.20 ²	2.88 ²

Notes: 1. & 2. For each performance measure, means with the same superscript are not significantly different from each other. Means with different superscripts are significantly different from each other at $p \leq 0.05$ (Tukey test of significance).

with Fredrickson and Mitchell (1984), who found that companies which were operating in an uncertain environment utilised a low comprehensive decision

making process, while companies in a stable environment adopted a high comprehensive decision making process.

5. Conclusion and Applications

The intent of this research was not to propose that small, entrepreneurial firms are in every respect similar to large firms and should be similarly managed. Such a notion is indeed an over-simplification. There are, no doubt, differences between large and small firms. But many researchers have unequivocally argued that strategies, processes and, in general, concepts which were found useful in large firms are not applicable to small, entrepreneurial firms. This notion is also premature and has been refuted by recent research (Bracker, Keats and Pearson 1988; Davig 1986). Some strategic management concepts (i.e., congruence) may be so generic and essential in managing businesses that their applicability crosses boundaries of size, technology, and other contextual factors.

At least two implications can be drawn for small business managers and entrepreneurs. First, literature supports the importance of having a long term plan and perspective which is necessary to create a consistent pattern of responses to environmental changes. As our results suggest, reactors may lack consistent behaviours in dealing with changing situations as a result of not having a long term focus and articulated strategy. These conditions may have contributed to the poor performance in their industry. The second implication is showing the importance of creating a fit between strategic orientation and planning comprehensiveness in small, entrepreneurial firms. Fit among these factors creates synergy, promotes efficiency, and strengthens the firm's competitive position in today's turbulent environment.

Noteworthy areas for future research based on the findings presented here include an examination and exploration of other typologies of strategic orientation in the congruence model and investigation of dimensions of the planning process other than decision making comprehensiveness. There is also a need to examine the congruency theory in longitudinal research. In addition, testing of the congruency concept concurrently in both large and small firms in the same industry as well as across industries would enhance our knowledge of differences among different size firms.

The general concept of congruence is in its infancy and needs more attention in future research. The conceptual support for the concept is widespread, yet empirical research investigating the congruence between more than two variables is minimal. The complexity of the congruence thesis and its application should be viewed as a challenge by both students of management and business practitioners.

(Date of receipt of final typescript: December 1992.)

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