

STRATEGY PROCESS-CONTENT INTERACTION: EFFECTS ON GROWTH PERFORMANCE IN SMALL, START-UP FIRMS*

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Chandler (1962) and Ansoff (1965) established strategy as a key influence on business success and performance. These authors also proposed that a distinction be made between the "process" of strategic management and the "content" of strategy. Content is concerned with the type of strategic decision, while process focuses on its formulation and implementation. Schendel and Hofer (1979) further solidified this distinction by maintaining that these subdivisions facilitated research progress. Thus, past studies have typically dealt with either process or content but not both.

Recently, researchers have argued for investigation of the interaction of process and content (Duhaime and Grant 1984, Jemison and Sitkin 1986, Huff and Reger 1987). The rationale for this suggestion is straightforward: strategy process and content are interrelated concepts when linked to performance; that is, the content-performance relationship is influenced by process, while the process-performance relationship is

sensitive to content.

Numerous strategy studies have been conducted since Chandler and Ansoff, most of which have focused on large firms. Information about the strategic behavior of small firms is limited. This constitutes a problem due to the substantial impact of small firms on job creation and economic development. Thus the current study examines the strategy process and content interaction in the context of growth in small, start-up firms.

BACKGROUND

Process Research

Strategy process research can be divided into several major categories (Huff and Reger 1987). One of these categories is planning practices. Most of the research concerning this category has focused on the impact of planning methods (that is, the degree of planning formality) on a firm's performance. Although there are exceptions, strong empirical support exists for the position that formal planning outperforms informal planning in large firms (Ansoff, Aver, Brandenburg, Portner, and Radosvich 1970; Herold 1972; Karger and Malik 1975; Thune and House 1970; Wood and LaForge 1979).

Robinson and Pearce (1983) failed to find empirical support for the same

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proposition regarding small firms. Further, Lyles, Baird, Orris, and Kuratko (1993) found mixed results in their study of small firms, which, when combined with the findings of Robinson and Pearce, seems to indicate that formal planning may have its greatest impact in large firms. This assumption led to Schwenk and Shrader's (1993) meta-analysis. These authors combined 14 previous studies that had examined the effects of formal planning on the performance of small businesses. They found a positive association between formal planning and performance; however, the small number of studies included in their sample does not allow for a conclusive generalization.

Content Research

Similar to strategy process research, content research can be categorized into different classes, one of which involves strategic taxonomies or typologies (Fahay and Christensen 1986). Research on this topic seeks to classify strategies or patterns of strategic behavior and to investigate the performance implications of strategies within each taxonomy.

Currently, strategies are categorized into comprehensive taxonomies using either single or multiple factors (dimensions). The taxonomies of Miles and Snow (1978) as well as Porter (1980) use multiple factors. In contrast, on a single dimension, a firm's strategy can be classified by its product/service innovation pattern. Strategic behavior in this case can vary between the two extremes of being highly innovative to being highly imitative. Research on the performance implication of this taxonomy is limited. Vesper (1990) argues that a new product/service idea (an innovative strategy) can be the most powerful entry wedge or start-up strategy. Sandberg and Hofer (1987) state that a new venture's performance is expected to reflect its distinctive competencies. Thus, an

innovative strategy appears to offer more potential for high performance than a non-innovative one.

Hypothesis

A firm's performance is influenced by the main effects of strategy process and content as well as their interaction effect (Duhaime and Grant 1984, Jemison and Sitkin 1986, Huff and Reger 1987). A description of these proposed effects is presented in figure 1.

The investigated hypothesis concerns the interaction effect:

H₁: The sales growth rate (performance) of small, rapidly growing firms is influenced by the interaction (cross product) of planning formality (process) and product/service innovation (content).

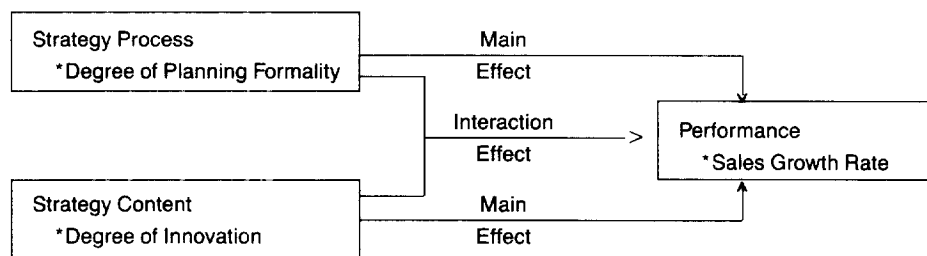
The above proposes that the relationship between product/service innovation and the sales growth rate is influenced by planning formality, or that the relationship between planning formality and sales growth rate is affected by product/service innovation.

METHODOLOGY

Sample

This article is part of a larger study on rapidly growing firms. Data were obtained from a mail survey of the *Inc.* 500 firms published in the December 1987 issue of *Inc.* Every year, *Inc.* prints a list of the 500 fastest growing, privately-held small businesses in the United States based on percentages of sales increases over a five-year period. Using sales growth as a measure of performance, the *Inc.* 500 firms are considered highly effective, as their sales during the period increased between 526 percent and 52,244 percent. Regarding the changes that these businesses have undergone, it would appear that the leaders of these firms had to be actively involved in strategy process and content issues in order to effect the observed growth in

Figure 1
DESCRIPTION OF MAIN AND INTERACTION EFFECTS
OF STRATEGY PROCESS AND CONTENT ON PERFORMANCE



sales.

The five-year period for the December 1987 list of firms extends from 1982 to 1986. Hence, 1982 is the last year that firms could start and still be eligible for inclusion in the list. However, several firms started much earlier. As information about a firm's start-up stage was needed for the study, and since remembering facts about a firm's early years becomes more difficult with time, the 32 firms that started before 1972 were omitted from the survey. Another 26 firms were eliminated because their mailing addresses could not be identified. Thus, only 442 firms were surveyed.

Questionnaires were mailed in November 1988 to the CEOs of these firms. A total of 121 questionnaires were returned, resulting in a response rate of 27 percent. Of these 121 firms, 91 (75 percent) were eight years old or younger. Biggadike (1976), Miller and Camp (1985), and McDougall and Robinson (1990) have all used eight years as the cutoff point for a new venture. Hence, in the interest of consistency among definitions, the sample for the current research was restricted to these 91 firms. The median 1988 age of the 91 firms was 7.0 years, while the mean 1988 age was 6.4 years. Of the 91 responding CEOs, 86 (95 percent) had been the CEO since their business opened.

Two analyses were conducted in order to determine whether characteristics of the 91 responding firms were comparable to the attributes of the total group of *Inc.* 500 firms. These analyses compared the performance and industry classification distributions of the *Inc.* 500 population of firms with those of the sampled firms.

Regarding performance, the *Inc.* 500 firms were divided into five classes based on percentage sales increases, each consisting of 100 firms (20 percent): the top 100, the second 100, the third 100, the fourth 100, and the bottom 100. The following frequencies and percentages were observed for the sample of 91 firms: 14 (15 percent) from the top 100 class; 18 (20 percent) from the second 100 class; 22 (24 percent) from the third 100 class; 25 (23 percent) from the fourth 100 class; and 14 (15 percent) from the bottom 100 class. A chi-square test indicated that the observed percentage levels did not differ significantly from the hypothesized 20 percent levels.

Responding firms were distributed across industry classes as follows: computer-related, 26 percent; business service, 22 percent; medical and pharmaceutical, 2 percent; telecommunications, 2 percent; publication and media, 2 percent; industrial equipment, 7 percent; construction and engineering, 10

percent; consumer goods, 8 percent; and other, 21 percent. Chi-square analyses displayed no significant differences between these observed ratios and the listed percentages for all 500 firms.

The use of multi-industry samples gives rise to the concern whether reported firm performance is a function of strategy and strategic behaviors or alternatively a function of industry performance levels. If firm performances systematically differ by industry, then it may be necessary to control for industry performance levels when determining firm performance. An analysis of variance test was conducted to compare the average sales growth rates of responding firms across the different industries represented in the sample. The test result indicated that the average sales growth rates across industries did not differ.

Measures

Several small business researchers have measured the extent to which the planning process generates written documentation in order to operationalize the "formality" of planning (Buchele 1967, Gilmore 1971, Lyles et al. 1993, Robinson and Pearce 1983, Still 1974). Adhering to this concept, information about strategy process was gathered by asking each CEO a question regarding the preparation of a formal business plan (i.e., a written document summarizing start-up information about a venture idea including an industry analysis, a marketing plan, financial needs, key personnel, etc.) prior to the start-up of the business. The listed replies were: (1) no formal plan was developed; (2) a partial formal plan was created; and (3) a complete formal plan was devised.

Information concerning strategy content was obtained by asking each CEO to state his or her firm's main strategic competitive advantage or "entry wedge" during the first year. The response categories, based on Vesper's

(1990) three main competitive entry wedges, were: (1) a new product or service idea, "new" meaning at least three significant advantages over competitors' offerings in such areas as quality, cost, faster delivery, etc.; (2) competitive duplication or parallel competition, where "competitive" meant that the differences in the firm's idea over competitors' products or services were neither as substantial nor as many in number as those for a new product or service; and (3) franchising (either as franchisor or franchisee).

Entry wedge strategy categories were initially linked to the innovation strategy being examined in this study in the following manner. The new product/service idea and the franchisor subgroup of the franchising strategy were classified as innovative strategies, while the competitive duplication and the franchisee subgroup were viewed as non-innovative. However, since only one firm of the 91 in the sample chose the franchising subgroup, the franchising strategy and this firm were eliminated from the study; hence, the study sample size became 90.

Firm performance was measured by the 1982-1986 sales growth rate. Information for this measure was available from the December 1987 *Inc.* issue. Several researchers have proposed sales growth as a performance measure for entrepreneurial research (Feeser 1987; Neiswander and Fulton 1989; Ozanian, Maher, and Mansano 1988).

Analytical Technique

This study's hypothesis focuses on the relationship between a firm's performance and its strategy process and content. To test this hypothesis, a regression analysis was performed using sales growth rate as the dependent variable. In terms of the independent variables, the model contained each strategy process and content variable as main or di-

Table 1
STRATEGY PROCESS AND CONTENT RESULTS

	Frequency	Percentage
Business Plan Preparation Classes		
No formal business plan	45	50
A partial plan	28	31
A complete plan	17	19
Total	90	100
Product/Service Innovation Classes*		
New product/service idea	50	56
Competitive duplication	39	44
Total	89	100

*One of the firms did not provide the requested information.

rect effect terms and the multiplicative product of these variables as an interaction term. Dummy variables were used due to the nature of the variables: planning formality was measured by using ordinal information about business plan preparation, while product/service innovation was assessed by using the new product/service idea class and the competitive duplication class.

RESULTS AND DISCUSSION

Strategy Information

Frequencies and percentages for the strategy process and content variables are presented in table 1. Of the 90 firms in the sample, 45 (50 percent) had not developed a pre-start-up formal business plan, 28 (31 percent) had created a partial plan, and 17 (19 percent) had formulated a complete plan.

Business plan preparation is often viewed as an important pre-start-up activity to help reduce the chance of business failure. Yet, half of the rapidly growing, surveyed firms did not develop an initial formal plan. This result is consistent with a finding of Shuman, Shaw, and Sussman (1985), who established that 51 percent of their sampled firms did not prepare a business plan. Naturally, this does not mean that these firms did not plan at all, but rather that they did not plan formally.

Regarding the strategy content varia-

ble, 50 firms (56 percent) selected the innovative (new product/service idea) class, 39 (44 percent) chose the non-innovative (competitive duplication) class, while one firm did not respond to this question, reducing the sample size for the regression to 89. Small, rapidly growing firms, then, appear to more frequently use innovation as a start-up strategy. Perhaps a firm is more likely to gain a competitive advantage with an innovative rather than a non-innovative strategy.

Given that the sample consists of firms from different industries, it is necessary to examine industry effects (in this case, different patterns of strategic behavior concerning strategy process and content results among firms across industries). Chi-square tests, comparing each of the industry percentages for the strategy process and content results with the overall percentages for the entire sample listed in table 1 indicated no significant differences.

Strategy-Performance Information

Results for the regression analysis are presented in table 2. Due to the small number of firms reporting the development of a complete formal plan, the three categories of the business plan preparation variable were dichotomized into (1) no formal plan, and (2) partial or complete formal plan.

Table 2
REGRESSION ANALYSIS RESULTS

Sample Size ^a	Regression Coefficients ^b				R ²	F ^c
	Int	Bus	Inn	Bus-Inn		
89	1625.64	-6.91	226.65	-437.65*	.089	2.756*

^aOne of the firms did not provide the requested information.

^bInt is the coefficient for the Y (sales growth) intercept, Bus is the coefficient for the business plan preparation variable (a dummy variable where 1 = no plan, and -1 = partial or complete plan), Inn is the coefficient for the innovation variable (a dummy variable where 1 = new product/service idea, and -1 = competitive duplication), and Bus-Inn is the cross-product (interaction) coefficient for the business plan preparation and innovation variables. The 1/-1 coding system was employed because the results presented in table 2 were consistent when these same codes (1/-1) were switched on each dummy variable. This was not the case when a 0/1 coding system was employed. For this reason other authors have suggested that the 0/1 coding system must be interpreted cautiously (see Burke and Schuessler 1974).

^cThe F value for the entire model.

* $p < .05$.

Observe that the process-content cross product in the model was significant. Hence, there is support for the hypothesis that the performance of small, rapidly growing firms is influenced by the interaction of the planning formality and the product/service innovation variables. The R^2 value, however, was only .089. Although only a small portion of the total variation in the dependent variable was explained, the purpose of the study was to explore interactions between strategy variables and not to completely explain performance.

The result that a firm's performance is influenced by strategy process and content interaction suggests that process and content variables should be examined together. However, the combined investigation of these variables is not always possible. In such cases, researchers should control for the effects of the strategy area that they are not studying. That is, when analyzing the strategy process-performance relationship in firms, researchers should control for content by restricting their investigation to firms that are using the same strategy content. Similarly, strategy process should be controlled when examining the strategy content-performance relationship.

Tabulation of the sales growth rate means and standard deviations for each strategy process and content combination helps clarify the nature of the strategy process-content interaction. These data are presented in table 3.

The interaction between the process and content variables is evident. For the new idea strategy, the formal planning approach outperforms the no formal planning alternative ($\bar{x} = 2297$ percent vs. $\bar{x} = 1408$ percent), whereas for the competitive duplication strategy, the no formal planning alternative outperforms the formal planning one ($\bar{x} = 1819$ percent vs. $\bar{x} = 968$ percent). While the performance pattern for the new idea strategy is consistent with much of the literature, the performance profile for the competitive duplication strategy is not.

Post hoc analyses examined this inconsistency by focusing on variables that might serve as contextual influences on strategy process-content relationships, an approach suggested by Pearce, Freeman, and Robinson (1987) as well as by Schwenk and Shrader (1993). Of particular interest were variables that contained information about characteristics of the CEO. This analysis was exploratory in nature, with an interest in pro-

Table 3
SALES GROWTH RATE
INFORMATION FOR THE ENTIRE SAMPLE

	No Formal Planning	Formal Planning	Totals
New Idea Strategy	$n = 29$ $\bar{x} = 1408\%$ $s = 1151\%$	$n = 21$ $\bar{x} = 2297\%$ $s = 2571\%$	$n = 50$ $\bar{x} = 1781\%$ $s = 1911\%$
Competitive Duplication Strategy	$n = 15$ $\bar{x} = 1830\%$ $s = 1819\%$	$n = 24$ $\bar{x} = 968\%$ $s = 512\%$	$n = 39$ $\bar{x} = 1300\%$ $s = 1248\%$
Totals	$n = 44$ $\bar{x} = 1552\%$ $s = 1407\%$	$n = 45$ $\bar{x} = 1588\%$ $s = 1895\%$	$n = 89$ $\bar{x} = 1570\%$ $s = 1662\%$

n = sample size
 \bar{x} = mean
 s = standard deviation

viding information about future research directions. Thus, the statistical methods employed were descriptive, not inferential.

CEO Contextual Influences

CEOs in the current study were asked to provide information about their previous management experience. Keats and Bracker (1988) suggest that the ability to comprehend and use strategic management or formal planning practices is dependent on a person's cognitive development. These authors argue that neophyte entrepreneurs (those with no prior management experience) are not prepared to use these practices and that consistent positive performance in these cases is unlikely. Table 4 presents the sales growth rate means and standard deviations for the 27 firms whose CEOs had no prior management experience.

No interaction is evident for these firms. The performance profile is the same for new idea and competitive duplication firms. However, the no formal planning alternative outperforms the formal planning one. The suggestion by Keats and Bracker (1988) regarding the lack of ability of neophyte entrepre-

neurs to comprehend and to use formal planning practices may apply in this case. Future research along this line would appear to be valuable.

Further post hoc analyses were conducted for the 62 firms headed by entrepreneurs with prior management experience by including information about the motivations of entrepreneurs. Shapero (1975, 1978) characterized the initial motives of entrepreneurs for starting their business as either negative or positive. Negative factors (such as the individual being fired, frustrated, or dissatisfied with the present situation) "push" the person out of inertia. Positive factors (such as the need to achieve, innovate, or gain more control over one's destiny) act to "pull" the person toward a new state. Brockhaus (1980) has examined the impact of these factors on performance and found that unsuccessful (no longer in business) entrepreneurs were more likely to have been influenced by external or push factors than successful ones.

In the current study, CEOs were asked to state why they started their businesses. Responses were: (1) it removed dissatisfaction with a prior job; (2) the person was unemployed; and (3) the per-

Table 4
SALES GROWTH RATE INFORMATION FOR FIRMS WITH
CEOs WHO HAD NO PRIOR MANAGEMENT EXPERIENCE

	No Formal Planning	Formal Planning	Totals
New Idea Strategy	$n = 14$ $\bar{x} = 1528\%$ $s = 936\%$	$n = 6$ $\bar{x} = 1480\%$ $s = 1397\%$	$n = 20$ $\bar{x} = 1513\%$ $s = 1055\%$
Competitive Duplication Strategy	$n = 5$ $\bar{x} = 2508\%$ $s = 2236\%$	$n = 2$ $\bar{x} = 969\%$ $s = 80\%$	$n = 7$ $\bar{x} = 2068\%$ $s = 1974\%$
Totals	$n = 19$ $\bar{x} = 1785\%$ $s = 1393\%$	$n = 8$ $\bar{x} = 1352\%$ $s = 1204\%$	$n = 27$ $\bar{x} = 1657\%$ $s = 1332\%$

n = sample size
 \bar{x} = mean
 s = standard deviation

son desired to create, develop, and grow an idea. In the remaining post hoc analyses, the first two response categories were combined, which resulted in classes that matched those of Shapero (1975, 1978) and Brockhaus (1980). Next, the 62 firms that were started by entrepreneurs with prior management experience were categorized based on whether their founders were "pushed" via external factors or "pulled" due to the intrinsic value obtainable from starting a new venture. Table 5 displays the sales growth rate means and standard deviations for the 43 firms (69 percent) that were started by entrepreneurs who were pulled into starting their business.

The firms in this table exhibit the same interaction pattern as the 89 firms in table 3. Hence, the fact that entrepreneurs had previous management experience and were pulled into starting their business does not seem to play an influential part in the aforementioned inconsistency. However, this was not the case with the 19 remaining firms whose CEOs had prior management experience and who were pushed into starting a new venture. Table 6 contains these results.

No interaction is evident in this case.

The formal planning alternative outperforms the no formal planning one for both the new idea and the competitive duplication strategies. Interestingly, it is this result that is consistent with much of the normative or prescriptive planning literature. Perhaps firms whose CEOs have prior management experience and who are pushed into starting a new venture is one context or set of conditions for which the planning literature is applicable.

CONCLUSION

This study has provided support for the hypothesis that the performance of small, rapidly growing firms is influenced by the interaction of planning formality (strategy process) and product/service innovation (strategy content). Furthermore, based on post hoc analyses, it was suggested that certain contextual factors such as CEO characteristics may impact the nature of this interaction. Thus, further research on the contextual conditions affecting strategy process-content interaction is recommended.

Regarding study limitations, the current findings are only generalizable to small, rapidly growing start-up firms

Table 5
SALES GROWTH RATE INFORMATION FOR FIRMS WITH
CEOs WHO HAD PRIOR MANAGEMENT EXPERIENCE AND WHO
WERE PULLED INTO STARTING THEIR FIRMS

	No Formal Planning	Formal Planning	Totals
New Idea Strategy	$n = 12$ $\bar{x} = 884\%$ $s = 189\%$	$n = 10$ $\bar{x} = 2085\%$ $s = 2120\%$	$n = 22$ $\bar{x} = 1430\%$ $s = 1523\%$
Competitive Duplication Strategy	$n = 7$ $\bar{x} = 1869\%$ $s = 1804\%$	$n = 14$ $\bar{x} = 797\%$ $s = 232\%$	$n = 21$ $\bar{x} = 1154\%$ $s = 1131\%$
Totals	$n = 19$ $\bar{x} = 1246\%$ $s = 1160\%$	$n = 24$ $\bar{x} = 1333\%$ $s = 1487\%$	$n = 43$ $\bar{x} = 1295\%$ $s = 1337\%$

n = sample size
 \bar{x} = mean
 s = standard deviation

Table 6
SALES GROWTH RATE INFORMATION FOR FIRMS WITH
CEOs WHO HAD PRIOR MANAGEMENT EXPERIENCE AND WHO
WERE PUSHED INTO STARTING THEIR FIRMS

	No Formal Planning	Formal Planning	Totals
New Idea Strategy	$n = 3$ $\bar{x} = 2946\%$ $s = 2710\%$	$n = 5$ $\bar{x} = 3701\%$ $s = 4115\%$	$n = 8$ $\bar{x} = 3418\%$ $s = 3454\%$
Competitive Duplication Strategy	$n = 3$ $\bar{x} = 609\%$ $s = 102\%$	$n = 8$ $\bar{x} = 1269\%$ $s = 773\%$	$n = 11$ $\bar{x} = 1089\%$ $s = 718\%$
Totals	$n = 6$ $\bar{x} = 1777\%$ $s = 2140\%$	$n = 13$ $\bar{x} = 2204\%$ $s = 2740\%$	$n = 19$ $\bar{x} = 2069\%$ $s = 2514\%$

n = sample size
 \bar{x} = mean
 s = standard deviation

rather than to all small firms. In addition, measures used for the strategy process and content variables may have affected the results. Additional research is recommended concerning both different samples and measures to examine whether the current study results can be validated. Another limitation pertains to the strategy process area in that only the planning sub-area of how a decision is made at start-up was considered.

Some firms may have changed their start-up strategy process practices during implementation, which, in turn, may have influenced their performance. Further research on this issue would appear valuable.

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