The Erosion of the Competitive Advantage of Strategic Planning: A Configuration Theory and Resource Based View*

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This study draws upon configuration theory and the resource based view of the firm to better understand the relationship of strategic planning and performance. There is partial support for the prediction that there is a positive relationship between strategic planning and performance and that this relationship is negatively moderated by organizational stage of development. It is proposed that strategic planning is beneficial to early stage firms because of the structure and future thinking it provides. In addition, strategic planning may be less beneficial to late stage firms because the processes are imitable and the competitive advantage is more prone to erosion.

"Does strategic planning improve performance?" This has been a long-standing question that has resulted in debates with advocates on both sides of the question (see Ansoff, 1965, 1991; Mintzberg, 1991, 1994). Defined broadly, strategic planning processes emphasize "the execution of plans produced through comprehensive analysis and systematic procedure" (Hart, 1992, p. 334). There is much to be understood about the relationship of strategic planning and firm performance. Some contend that early stage organizations often do not have the resources to engage in strategic planning (Robinson & Pearce, 1986) or that planning can be detrimental to performance (Mintzberg, 1994; Lumpkin & Dess, 1995), especially in unstable industries (Fredrickson & Mitchell, 1984; Fredrickson & Iaquito, 1989). Others argue that strategic planning promotes long-range thinking, reduces the focus on operational details, and provides a structured means for identifying and evaluating strategic alternatives, all of which have the potential of improving performance (Ansoff, 1991; Hart & Banbury, 1994; Robinson & Pearce, 1986; Schwenk & Shrader, 1993). As scholars attempt to unravel this question, there has been increased attention on conditions in which strategic planning impacts firm performance for all types of organizations (Brews & Hunt, 1999, Boyd & Reuning-Elliott, 1998). Several literature reviews and meta-analyses find a modest, but positive relationship between strategic planning and performance (Boyd, 1991; Miller & Cardinal, 1994; Pearce, Freeman, & Robinson, 1987, Schwenk & Schrader, 1993). It is because of these findings that Schwenk and Schrader (1993) conclude that the question should not be whether strategic planning effects firm performance, but rather under what condition performance is enhanced by strategic planning. Boyd (1991) proposes that key insights are to come from investigating the impact of moderating variables in the planning performance relationship.

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Our interest here is in the role of organizational stage of development in understanding the link between strategic planning and performance. Organizational stage of development, defined as the sequence of changes organizations exhibit beginning at inception (Galbraith, 1982), has been found to moderate other decision making-performance relationships. Examples of this research include Robinson, Pearce, Vozikis, and Mescon (1984) evidence that later stage firms have a stronger relationship between strategy intensity and performance. Lumpkin and Dess (1995) find that the effectiveness of simple strategy processes is negatively moderated by stage. Koberg, Uhlenbruck, and Sarason (1996) suggest that the effectiveness of information processing is stronger for early stage firms than later stage firms. Even though these studies contribute to our understanding of the role of stage of development in strategic planning, the studies do not reflect theory driven research. It has been suggested that lack of theoretically grounded research may be the reason there has been little cumulative body of knowledge on the relationship between stage of development and strategic processes (Stubbart & Smalley, 1999). This study will draw upon configuration theory and the resource based view to explore the moderating relationship of stage of development in understanding the planning performance link.

In this study we differentiate between early and late stage firms. Empirical evidence demonstrates that firms are likely to progress in a specific sequence (Kazanjian & Drazin, 1989) and that changes in organizational structure and organizational processes reflect changes consistent with this sequence (Kazanjian & Drazin, 1990; Miller & Friesen, 1984; Hanks, Watson, & Chandler, 1993; Sarason & Tegarden, 2001). There have been a number of stages offered (e.g., Galbraith, 1982; Hanks et al., 1993; Kazanjian & Drazin, 1990; Miller & Friesen, 1984; Koberg, Rosse, & Sarason, 1996). This study investigates the differences among early and late stage firms. In looking at differences among organizations, the most significant differences occur between early stage firms, which are trying to produce and bring to market a product or service, and late stage firms that are either experiencing high growth rate or struggling for increases in market share (Kazanjian, 1988). This classification is consistent with similar research that has investigated differences between early and late stage firms in effectiveness of strategic processes and financial performance (Lumpkin & Dess, 1995) and effectiveness of organizational variables on innovation (Koberg, Uhlenbruck, et al., 1996). The broad research question that is investigated is: Does stage of development moderate the relationship between strategic planning and organizational performance? (See Figure 1).

THEORETICAL FOUNDATIONS AND HYPOTHESES

To explore this link, we draw upon two theoretical orientations: configuration theory and resource based view of the firm. Configuration theory emphasizes the fit between the dominant problem or the environment and the organization (Miller, 1987). Organizational configurations are defined as commonly occurring clusters of attributes of organizational strategies, structures, and processes (Miller & Mintzberg, 1983) and include stage research (Mintzberg, 1990). A complementary perspective, the resource based view, focuses on the attributes of a firm's resources that lead to competitive advantage. The resource based view of the firm presents organizations as bundles of resources (Penrose, 1959). From this viewpoint, it is attributes of firm's resources that contribute to above industry average performance (Dierickx & Cool, 1989). We will further explore how configuration theory and the resource based view

of the firm relate to strategic planning by elaborating on the nature of the relationship between performance and strategic planning for early and late stage firms.

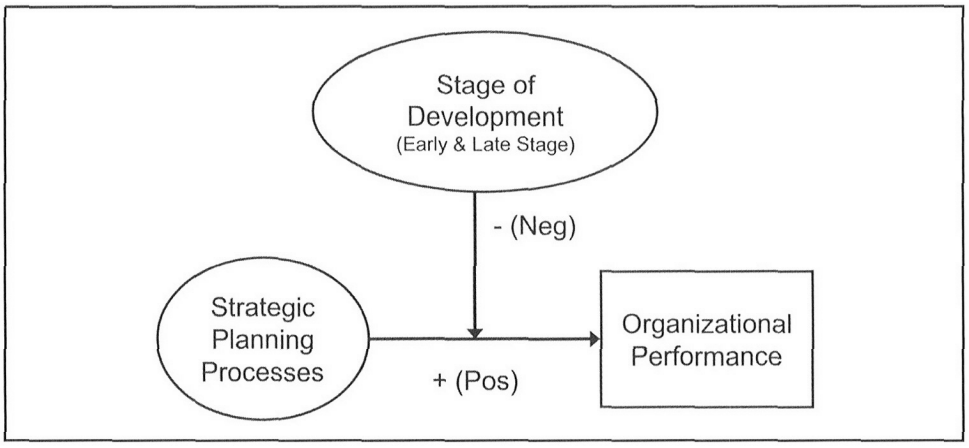

Figure 1. Stage as a moderator for the process/performance link.

Configuration Theory Perspective of Strategic Planning in Early and Late Stage Firms

Configuration theory has been used in strategic management and organizational theory to help explain differences in firm performance (Mintzberg, 1990). The focus of the theory is the congruence of the attributes of organizations with the organization's dominant problems, the environment, and with the organization's strategies (Miller, 1986, 1996). This theory has been valuable in understanding strategic processes (Dess, Lumpkin, & Covin, 1997; Miller, 1986), organization processes (Kazanjian & Drazin, 1990) and entrepreneurial issues (Lumpkin & Dess, 2001; Covin & Slevin, 1990). We are suggesting that a configuration theory view would predict that strategic planning will contribute to firm performance if strategic planning fits with the dominant problems in the company's stage of development.

Early stage firms are new entrepreneurial organizations that are focusing on either conception and development of a product or on commercializing the product or service. One of the dominant problems for most early stage manufacturing firms is construction of a prototype (Block & MacMillan, 1985). If the prototype can be built, the focus is on learning how to make the product work well and how to produce it efficiently (Kazanjian, 1988). Similarly, early stage service firms are striving to package their services in a manner that will be attractive in the market (Robinson et al., 1984). Another major problem for early stage firms is the securing of adequate financial backing (Timmons, Smollen, & Dingee, 1977, Moore & Tushman, 1982). Structures and tasks beyond those needed for product development are beginning to be developed (Scherer & McDonald, 1988), but the firm still has a very informal organizational structure and low functional specialization (Kazanjian & Drazin, 1990).

Indeed, there is evidence that when there is a fit between the stage of development and the organizational structure, as firms exhibit higher profit growth (Miller & Friesen, 1983) and higher sales growth (Kazanjian & Drazin, 1990). Miller and Friesen (1983) presented evidence that successful early stage firms are better at processing information and decision-making

than less successful firms. We suggest that in addition to the multiple tasks in front of them, early stage firms also need to be anticipating the challenges of the future. These firms, in particular, need the structure that strategic planning processes provide. Therefore, the firms that engage in strategic planning will have an advantage over firms that do not partake in strategic planning. In configuration terms, there is a fit between the organization and the task. That is to say that early stage firms need to look beyond their immediate problems so that they can begin to plan and invest in the infrastructure necessary to make the transition to a more established company. Strategic planning fits with the requirement for start-up firms to anticipate changes in their organizational needs as they progress. Therefore:

> ***Hypothesis 1A:*** *There will be a positive relationship between strategic planning processes and firm performance in early stage firms.*

Late stage firms are more mature organizations that are currently manufacturing and selling their product or service and are focusing on either growing or maintaining their market positions (Kazanjian, 1988; Koberg, Sarason, et al., 1996). The dominant problems involve how to produce, sell and distribute the product or service and how to avoid being ineffective or inefficient. For those firms whose growth has leveled off, they need to manage growth momentum and market position (Kazanjian, 1988). The critical financial issues involve managing cash flow and carefully balancing profits against future growth (Moore & Tushman, 1982). While there is a formalized structure in place in later stage firms (Sarason & Tegarden, 2001), there is pressure to continue to be flexible and continue to innovate and develop new products and processes (Utterback & Abernathy, 1975). Following the work of others who have advocated strategic planning, we suggest that planning processes allow later stage firms to inform and engage multiple levels of the organization in the planning process (Hart, 1992), incorporate changes in the environment in the planning process (Covin & Slevin, 1990; Goll & Rasheed, 1997) and provide direction for the company (Hamel & Prahalad, 1994).

This suggests that there will be a positive relationship between strategic planning and performance for later stage firms. Therefore we predict the following:

> ***Hypothesis 1B:*** *There will be a positive relationship between strategic planning processes and firm performance in late stage firms.*

While we are predicting a positive relationship for both early and late stage firms, we are suggesting that the positive relationship is grounded in different rationales. For early stage firms, strategic planning provides a formalized structure that helps anticipate the future. For late stage firms, strategic planning enables the firm to continue to be a changing organization that can not only adapt, but anticipate future conditions. These different reasons help provide the bases for the reasoning of the effectiveness of strategic planning by stage of development from a resource based perspective.

Resource Based View of Strategic Planning in Early and Late Stage Firms

The resource based view of the firm also explains difference in firm performance (Penrose, 1959; Teece, Pisano, & Shuen, 1997). Barney (1991) presents the resource based perspective by focusing on the attributes of resources associated to types of competitive advantage. He

suggests that resources that are valuable, but can be imitated, and can be a source of short-term competitive advantage. That is, they can offer above average returns in the short run. However, it is resources that cannot be imitated or substituted that can be a source of *sustained* competitive advantage, or in other words, allow firms to realize above average returns in the long run. As the theory has evolved, there is greater importance on bundles of resources, becoming known as capabilities, as sources of competitive advantage (Teece et al., 1997; Makadok, 2001). This would suggest that strategic planning processes can be a source of sustained competitive advantage to the extent they are rare, valuable, non-substitutable and non-imitable.

We submit that the resource based view is particularly important in predicting the relationship of strategic planning and performance by stage of development. The dominant problem for all firms is how to manage growth and maintain their competitive position. Early stage firms are focusing on getting their product to market, their sources of competitive advantage are more focused on their product or service and the speed they can get them to market (Utterback & Abernathy, 1975; Moore & Tushman, 1982). Later stage firms, by definition, have survived the early amorphous years of getting their product to market. Late stage firms are more focused on organizational capabilities that will allow them sources of competitive advantage (Makadok, 2001). The capabilities that can be imitated or substituted are available to the strategic factor market (Barney, 1986). This means that the strategic planning processes that we suggest offer late stage firms a limited competitive advantage. We are drawing upon the reasoning presented by Barney (1991) that strategic planning systems are unlikely by themselves to be a source of sustained competitive advantage. As he states:

Even if these planning systems are valuable, in the sense that they enable firms to recognize opportunities and threats in their environment, there is empirical evidence that suggests that many firms engage in such formal planning exercises, and thus such planning mechanisms are not rare (Kudla, 1980; Steiner, 1979). Even if in a particular industry formal planning is rare, the formal planning process has been thoroughly described and documented in a wide variety of public sources (Steiner, 1979). Any firm interested in engaging in such formal planning can certainly learn how to do so, and thus formal planning seems likely to be highly imitable (Barney, 1989b). Apart from substitutability considerations, formal strategic planning by itself is not likely to be a source of sustained competitive advantage (1991, p. 113).

Others who have investigated the effectiveness of strategic planning processes from a resource based perspective use logic that is consistent with our reasoning. The work of Powell (1992) presents evidence that the relationship between planning and performance depends on how easy strategic planning processes are to imitate or substitute. He presents evidence that strategic planning processes are more effective in industries that are less efficient in strategic planning factor markets. Hart and Banbury (1994) also provide evidence of the relationship between planning and performance from a resource based perspective in their study that indicates that bundled planning process are sources of competitive advantage, because they are more difficult to imitate. We are suggesting that by the time a firm is in a later stage of development, most firms have more access to strategic planning tools and time to implement the processes do early stage firms. Therefore, it is less a source of competitive advantage. We predict:

Hypothesis 2: *The relationship between strategic planning processes and firm performance will be negatively moderated by organizational stage. The positive relationship between planning and performance will be stronger for early stage firms that later stage firms.*

To summarize, drawing upon configuration theory, Hypotheses 1A and 1B predict a positive relationship between strategic planning and performance for early and late stage firms. Drawing upon the resource based view of the firm, Hypothesis 2 predicts that the positive relationship for planning and performance will be stronger for early stage than the relationship with late stage firms.

SAMPLE

We obtained our sample of firms from the 1996 directory of U.S. firms published by the Corporate Technology Information Services (CorpTech). In order to have an adequate representation of early and late stage companies, we selected firms from three strata, according to the years in which they were founded: 1995-1996, 1993-1994, and before 1993. These procedures are consistent others that have looked at questions regarding stage of development (Kazanjian, 1988; Koberg, Uhlenbruck, et al., 1996).

The sample consisted of 2000 firms. The unit of analysis is the firm or operating division of a firm that is comprised of multiple, but independent businesses. The CEO of each firm was mailed a copy of the survey and asked to complete it. A total of 377 surveys were returned, representing a 19% response rate. This rate is typical for research using CEOs as respondents, is not an uncommon response rate when sampling smaller, private firms (Milliken, 1990; Provan & Skinner, 1989), and allows for adequate statistical power for generalization. Non-responding firms did not differ significantly from responding firms in number of employees, sales revenue, annual percentage growth in number of employees or year of formation. Of the 377 surveys returned, 314 contained complete information for this study. Of these, 140 were classified as early stage firms and 174 were classified as late stage firms.

Table 1 reports descriptive statistics for the sample. Most are private firms (80%) and over half of the firms report annual sales revenues of less than $5 million and employ fewer than 25 workers. Over 70% of the firms have been in business nine years or less. The sample represents a broad spectrum of industries including both service and manufacturing operations as well as hard technologies such as computers and turbines and soft technologies such as software and biotechnology.

MEASURES

The scales used have been standardized and validated by other researchers. The multiple item measures are listed in the Appendix as they appeared on the questionnaire. All alpha coefficients exceed .70, which is acceptable for moderately broad constructs such as those used in this investigation (Van de Ven & Ferry, 1979).

We employed Harman's one-factor test as outlined by Podsakoff and Organ (1986) to detect common method variance problems associated with the use of self-reported measures (Campbell & Fiske, 1959; Fiske, 1982). The questionnaire items used in this study were

entered into a factor analysis. If a substantial amount of common method variance is present, either a single factor will emerge or one general factor will account for the majority of the covariance (Podsakoff & Organ, 1986). The unrotated factor solution showed that the first factor accounted for 28.2% of the variance. This represented less than half of the 63.0% total variance explained by the factor solution, an indication that common method variance is not a problem with our measures.

TABLE 1
Profile of Sample Firms

		Number of Firms	Percent
Number of Employees			
Up to 24		217	58
25 to 49		50	13
50 to 499		83	22
500 to 4999		17	5
Over 5,000		5	1
Not Given		5	1
	Total	314	100
Sales Volume			
Under $1m		120	32
$1m to $5m		124	33
$5m to $50m		91	24
$50m to $500m		17	5
Over $500m		11	3
Not Given		14	4
	Total	314	100
Nature of Product or Services			
Automation		12	3
Biotechnology		9	2
Chemicals		6	2
Computers		59	16
Defense		3	1
Energy		12	3
Environment		20	5
Manufacturing		24	6
Advanced Materials		8	2
Medical		10	3
Pharmaceuticals		5	1
Photonics		9	2
Software		17	5
Subassemblies and Components		109	29
Test and Measurement		35	9
Telecommunications		12	3
Transportation		21	6
Holding Companies		3	1
Not Given		3	1
	Total	314	100

Performance. Performance in this study is measured as *financial performance* and *sales growth*. Financial performance is computed as the mean of three items that measure different aspects of financial performance over the past three years. Sales growth is computed as the mean of two items that indicate the extent to which growth is outstanding or has exceeded competitors. Both measures have been used in previous studies (Powell, 1996). There are two reasons why subjective rather than objective measures of performance are employed in this study. First, a cross-industry study makes it difficult to control for industry differences in both profitability and growth. Second, 80% of the firms in our sample are privately owned, so objective financial data is not available. In addition, high validity has been demonstrated between perceptual and objective performance measures (Dess & Robinson, 1984; Hart & Banbury, 1994; Venkatraman & Ramanujam, 1986). The measure for *financial performance* exhibits a reliability coefficient of 0.88 and the measure for *sales performance* exhibits a reliability coefficient of .85.

Strategic Planning Processes. *Strategic planning processes* are defined as an intentional process involving a logical, sequential, analytic and deliberate set of procedures (Bailey, Johnson, & Daniels, 2000). This construct is measured using a four-item scale developed by Hart and Banbury (1994). An example of a question measuring these processes is: "Strategic planning in our firm is a formal procedure occurring in a regular cycle." Respondents were asked for their level of agreement to each item using a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The measure exhibits a reliability coefficient of 0.78.

Early and Late Stage of Development. *Stage of development* was measured through a scale developed by Kazanjian (1988). Respondents were asked to indicate which description best characterized their firm at the time that the survey was completed. Categorizing firms as early or late stage has helped simplify a plethora of stage models, while maintaining the most important differences in organizations (Koberg, Uhlenbruck, et al., 1996; Preece, Miles, & Baetz; 1998). Early stage firms identified themselves in the conception or commercialization stage. Later stage firms identified themselves as growth or stable. Early stage firms were coded a 'zero' and late stage firms were coded a 'one'. This variable was used to test Hypothesis 2, which looks at the significance of the planning by stage interaction term.

Environmental Dynamism. *Environmental Dynamism* is used as a control variable. This construct is measured using five items from a scale developed by Powell (1996) that allows us to capture environmental uncertainty. An example of a question measuring this variable is "Our industry is more unstable than most, changing more quickly and unpredictably." Respondents were asked for their level of agreement to each item using a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The measure exhibits a reliability coefficient of 0.70.

Firm Size. *Firm size* is used as a control variable. It is defined as the number of employees and is obtained from the 1996 CorpTech database. Size is estimated by using the midpoint of the category coded for each firm to account for ordinal differences within the sample. Following guidelines used in other studies (Frederickson & Mitchell, 1984) we employ the natural log of firm size as well as the square of the natural log to account for midrange effects.

Table 2 reports means, standard deviations and correlations for the variables. As expected the two performance measures are significantly related (r=.46, p<.01). The control variables are also related to performance in expected ways. Dynamism is positively related to growth and size has a curvilinear relationship with profitability. Dynamism is negatively related to stage, indicating dynamic environments are more common for early stage firms. The stage of development is also related to financial profitability and growth measures, indicating that later stage firms are more profitable and have higher sales growth, as we would expect.

Table 2
Means, Standard Deviations and Correlations (N=314)

Variables	Mean	SD	1	2	3	4	5	6
1. Financial	3.14	1.06						
2. Growth	3.30	1.05	.460**					
3. Dynamism	3.54	0.71	-.098	.133*				
4. Firm Size	3.28	1.69	-.018	-.003	-.031			
5. Firm Size^2	13.61	14.91	.015	.022	-.016	.964**		
6. Stage (1=late, 0=early)	0.55	0.50	.309**	.361**	-.158**	.056	.076	
7. Planning	3.18	0.89	.095	.052	.030	-.110	-.094	.060

2-tailed test:

*p<.05; **p<.01

RESULTS

To test the hypotheses, we used hierarchical moderated regression analysis following the procedure described by Cohen and Cohen (1983) and used by other researchers investigating similar questions (Brews & Hunt, 1999; Dean & Sharfman, 1996; Lumpkin & Dess, 1995). We employed two-step regression analysis. Step two in all models test the significance of the strategic planning performance relationship specified in each hypothesis. All hypotheses are tested using a one-tailed test, since direction is predicted. Statistics to test Hypothesis 1A are reported in Table 3. The test of Hypothesis 1B is reported in Table 4 and Hypothesis 2 is reported in Table 5.

Table 3 reports results for a two-step regression analysis for *financial performance* and *sales growth* performance for *early* stage firms, following the procedure to evaluate the strength of a moderated relationship as outlined by Prescott (1986). These results are used to evaluate Hypothesis 1A that predicts that there will be a positive relationship between strategic planning processes and firm performance in early stage firms. Step 1 includes dynamism and size as the control variables. In the Step 2 *strategic planning* is added to the equation and this variable is positive for both *financial performance* (b=.222) and for *sales growth* (b=.173). Since direction is predicted, a one-tailed test is employed to test the change in R^2. Step 2 for *financial performance* indicates that the change in R^2 (R^2 D = .034) is significant (FD = 5.013, p=.014). Step 2 for *sales growth* indicates that the change in R^2 (R^2 D = .025) is significant

(FD= 3.512, p=.032). Hypotheses 1A is supported since the positive coefficients for planning are significantly greater than zero (p<.05) for both financial performance and sales growth.

Table 3
Regression Analysis on Performance by Early Stage Firms (N=140)
Unstandardized Coefficient (Standard Error)

Variables	Financial Performance		Sales Growth	
	(1) Step 1	(2) Step 2	(3) Step 1	(4) Step 2
Constant	3.833***	3.127***	3.067***	2.518***
	(.626)	(.693)	(.578)	(.643)
Dynamism	-.010	-.005	.089	.093
	(.130)	(.128)	(.120)	(.119)
Firm Size	-.630**	-.632**	-.323	-.324
	(.221)	(.218)	(.205)	(.203)
Firm Size^2	.079**	.079**	.041	.041
	(.026)	(.026)	(.024)	(.024)
Planning		.222*		.173+
		(.099)		(.092)
Step Statistics:				
R^2 or ($R^2\Delta$)	R^2 = .062	$R^2\Delta$ = .034	R^2 = .024	$R^2\Delta$ = .025
F or (FΔ)	F = 3.019	FΔ = 5.013	F = 1.114	FΔ = 3.512
P	.032	.014 = .027/2	.346	.032 = .063/2

Regression coefficient significance is reported as a 2-tailed test:

* p<.05; ** p<.01; *** p<.001

To test Hypothesis 1, changes in R were analyzed using a one tailed test, so P is divided by 2 as indicated in the table.

Table 4 reports results for a 2-step regression analysis for *financial performance* and *sales growth* for *late* stage firms. These results are used to evaluate Hypothesis 1B that predicts that there will be a positive relationship between strategic planning processes and firm performance in later stage firms. Step 1 includes dynamism and size as the control variables. In Step 2 strategic planning is added to the equation and this variable is not significant for either financial performance or for sales growth. The regression equations are not significant for Step 1 or Step 2 in predicting financial performance. The regression equation is significant in predicting *sales growth* with the control variables (F=6.51, p=.000) but the change in R^2 (R^2 D = .011) when *strategic planning* is added is not significant (F=2.045, p=.0775). Hypothesis

1B is not supported since strategic planning is not significantly different from zero ($p<.05$) when it is added to either the financial performance or sales growth models.

Table 4
Regression Analysis on Performance by Late Stage Firms (N=174)
Unstandardized Coefficient (Standard Error)

Variables	Financial Performance		Sales Growth	
	(1) Step 1	(2) Step 2	(3) Step 1	(4) Step 2
Constant	4.076***	4.166***	2.206***	2.613***
	(.476)	(.558)	(.472)	(.550)
Dynamism	-.124	-.122	.433***	.443***
	(.100)	(.101)	(.100)	(.100)
Firm Size	-.087	-.094	-.014	-.041
	(.152)	(.154)	(.151)	(.151)
Firm Size^2	.005	.006	-.001	.001
	(.017)	(.017)	(.017)	(.017)
Planning		-.026		-.116
		(.083)		(.081)
Step Statistics:				
R2 or (R2Δ)	R^2 = .015	$R^2\Delta$ = .001	R^2 = .103	$R^2\Delta$ =.011
F or (FΔ)	F = 0.873	FΔ = 0.097	F = 6.513	FΔ = 2.045
P	.456	.378 = .756/2	.000	.078 = .155/2

Regression coefficient significance is reported as a 2-tailed test:

* p<.05; ** p<.01; *** p<.001

To test Hypothesis 2, changes in R were analyzed using a one tailed test, so P is divided by 2 as indicated in the table.

Table 5 reports results for a moderated regression analysis for *financial performance* and *sales growth*. Hypothesis 2 states that the relationship between strategy planning processes and firm performance will be negatively moderated by organizational stage of development. This means that the relationship is higher with early stage firms compared to late stage firms. Early stage firms were coded zero and late stage firms were coded one. A negative relationship between the interaction term (stage x planning) and performance would support Hypothesis 2. We test the hypothesis by inspecting both the direction and significance of the interaction term when it is added to the model in Step 2, as recommended by Prescott (1986). As predicted by the hypothesis, the *stage x planning* interaction term is negative for both *financial*

performance (b=-.251) and *sales growth* performance (b=-.281). Since direction is predicted, a one-tailed test is employed to test the change in R^2 (R^2D). Step 2 in the equation that estimates the relationship between the interaction term and *financial performance* shows that the change in R^2 (R^2 D = .011) is significant (FD= 3.808, p =.026). Step 2 in the equation that estimates the relationship between the interaction term and *sales growth* shows that the change in R^2 (R^2 D = .014) is significant (FD= 5.220, p =.012). Hypothesis 2 is supported since the sign is negative and significant (p<.05) when the interaction term is added to the model. The strength of the relationship is higher for early stage firms when compared to late stage firms for both *financial performance* and *sales growth*.

Table 5
Moderated Regression Analysis on Performance (N=314)
Unstandardized Coefficient (Standard Error)

Variables	Financial Performance		Sales Growth	
	Step 1	Step 2	Step 1	Step 2
Constant	3.288***	2.867***	2.018***	1.546***
	(.451)	(.498)	(.433)	(.477)
Dynamism	-.090	-.083	.280***	.288***
	(.080)	(.080)	(.077)	(.077)
Firm Size	-.244+	-.260*	-.128	-.146
	(.127)	(.126)	(.122)	(.121)
Firm Size^2	.027+	.028+	.014	.015
	(.014)	(.014)	(.014)	(.014)
Stage (1=late,	.612***	1.410***	.814***	1.708***
0=early)	(.116)	(.424)	(.111)	(.407)
Planning	.085	.224*	.022	.177+
	(.064)	(.020)	(.061)	(.091)
Stage x Planning		-.251*		-.281*
		(.128)		(.123)
Step Change Statistics:				
R2 or (R2Δ)	R^2 = .115	$R^2\Delta$ = .011	R^2 = .171	$R^2\Delta$ = .014
F or (FΔ)	F = 8.018	FΔ = 3.808	F = 12.719	FΔ = 5.220
P	.000	.026 = .054/2	.000	.012 = .023/2

Regression coefficient significance is reported as a 2-tailed test:

* p<.05; ** p<.01; *** p<.001

To test Hypothesis 3, changes in R were analyzed using a one tailed test, so P is divided by 2 as indicated in the table.

In summary, all hypotheses are supported with these results. Stage of development moderates the relationship between planning and performance. The relationship is significant and positive for early stage firms and not significant for later stage firms. The moderating relationship is significant and negative for all firms in the sample meaning that the relationship is stronger for early stage firms when compared to late stage firms. In addition, the effects of strategic planning on performance are only significant when dominant problem or stage are taken into consideration.

DISCUSSION

This study draws upon configuration theory and the resource based view of the firm to contribute to a better understanding of the complex relationship between strategic planning processes and firm performance. The results support the argument that the early stage firms that adopt strategic planning processes will have a competitive advantage, at least in the short term. The results from investigation of the research question, regarding whether organizational stage of development negatively moderates the relationship between strategic planning processes and firm performance, suggests that it does. Strategic planning is related to performance for early stage firms.

The prediction of the relationship between strategic planning and firm performance for later stage firms was based on analyzing competing forces. From a configuration perspective, we predicted that strategic planning would be a positive influence because it would contribute to flexibility. From a resource based perspective, we predicted that since these processes are imitable, their advantage would be limited. Since our finding suggests no relationship between strategic planning and firm performance for later stage firms, we cannot determine if this result is due to strategic planning processes not offering a competitive advantage or if it is because these planning processes are imitable or substitutable. Future investigations could help unravel these relationships. We found that strategic planning is not a significant predictor of performance if organizational stage of development is not taken into consideration. It seems that if these variables are not included, the relationship between strategic planning and firm performance is under estimated. This reinforces the call for including these important moderating variables in future investigations (Boyd, 1991; Schwenk & Schrader, 1993; Miller & Cardinal, 1994).

The combination of configuration theory and the resource based view led us to our predictions. Had we not used configuration theory, we may have missed the important role strategic planning processes plays in early stage firms. Had we not used the resource based view, we might have missed the insight that the advantage to strategic planning may be related to stage of development. This underscores the potential of drawing upon differing perspectives to yield and highlight significant insights (Gioia & Petre, 1990; Schultz & Hatch, 1996). The study also reinforces the call for more theory based research (Whetten, 1989).

There are several implications of this study for managers. We suggest that managers of entrepreneurial firms who are involved in the early stages of development should continue to focus on implementing strategic planning processes. The tasks involved in these strategic planning processes (developing mission statements that are internalized by employees,

formally analyzing the business environment, and developing strategic plans) may feel overwhelming to the entrepreneur, but our evidence suggests that these strategic planning processes contribute to structure and forward thinking. A benefit is that it seems there is an impact to the early stage firms' overall performance. On the other hand our results provide evidence that planning processes do not directly relate to performance in late stage firms. The resource based view would suggest that strategic planning processes for later stage firms may be a necessary, but not sufficient condition for superior firm performance. A better understanding of the relationship between strategic planning and performance in late stage firms may be found with finer grained definitions of strategic planning or with further exploration of other moderating variables. Managers of later stage firms should be open to the negative as well as positive consequences of strategic planning processes that other researchers have explored (Mintzburg, 1994; Lumpkin & Dess, 1995).

There are some limitations of this study. Our methodology was cross-sectional survey research and we can only prove association, not causality. The problem of reciprocal causality between planning and performance is a limitation of other studies and is a limitation of ours as well. This is to say that some of our results may actually be from increased performance leading to increased levels of strategic planning. Longitudinal investigations are needed to provide greater insight into the relationships that we are suggesting.

The limitations of self-reported data pose potential problems in interpretation. Self-reported, cross-sectional data are particularly susceptible to errors resulting from consistency and priming. We have attempted to minimize these limitations by testing for common method variance (Podsakoff & Organ, 1986). Our sample focuses on technology intensive firms. There are different types of service and manufacturing firms represented in our sample, as well as different types of technology based firms. However, future research should examine other samples to ensure greater generalizability of the findings. The size of the sample in this study prevented meaningful analysis on more than a two stage model. A larger sample size would enable a multiple stage analysis similar to other studies that have looked at the role of stage of development in performance related issues (Kazanjian & Drazin, 1990; Miller & Friesen, 1983).

If generic strategic planning processes do not offer a source of competitive advantage, then future investigations should investigate firm specific strategic planning processes that could contribute to sustained competitive advantage. This matches the call for finer grained definitions of strategic planning in unraveling the link between strategic planning and performance (Boyd & Reuning-Elliott, 1998; Brews & Hunt, 1999; Goll & Rasheed, 1997; Hopkins & Hopkins, 1997), as well as the call for more insight into firm specific capabilities in relationship to competitive advantage (Teese et al., 1997). We suggest that if future studies investigate finer grained definitions of strategic planning processes, as well as processes that are firm specific and difficult to imitate, additional insight could be offered to the question of strategic planning processes as sources of competitive advantage.

The results of this investigation indicated that for early stage firms, investment in strategy planning processes does contribute to competitive advantage. In the early stages of development, firms can have a competitive advantage if they implement strategic planning processes, however, this advantage may erode. Later stage firms are advised to continue to

invest in firm specific capabilities that are difficult to imitate. For strategic planning processes to significantly improve firm performance, senior managers need to be aware of and plan for the possible erosion of the important impact of their strategic planning processes.

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APPENDIX

MEASUREMENT SCALES

Performance. *(Powell, 1996).* Respondents were asked to rate their firm's performance over the past 3 years. Respondents were asked to indicate, on a scale of 1-5, the extent they agreed with each item. The scale was anchored with "Strongly Disagree" as a 1, "Neutral" as a 3, and "Strongly Agree" as a 5. The statements were presented in a different order.

Financial Performance (Alpha Coefficient = .88)

- Over the past 3 years our financial performance has been outstanding.
- Over the past 3 years, our financial performance has exceeded our competitors'.
- Over the past 3 years, we have been more profitable than our competitors.

Sales Growth (Alpha Coefficient = .85)

- Over the past 3 years, our revenue growth has exceeded our competitors.
- Over the past 3 years our revenue (sales) growth has been outstanding.

Planning Processes. *(Hart & Banbury, 1994).* Respondents were asked to indicate, on a scale of 1-5, the extent they agreed with each item. The scale was anchored with 'Strongly Disagree' as a 1, 'Neutral' as a 3, and 'Strongly Agree' as a 5. The following represents the statements, with the variable being measured in parentheses. The statements were presented in random order. (Alpha coefficient = .78)

- Our company adopts a written strategic plan each year to guide our operating activities
- Strategic planning in our firm is a formal procedure occurring in a regular cycle.
- We have a written mission statement that is communicated to the employees.
- Formal analysis of the business environment and our competitors forms the basis for our company's strategic plan.

Environmental Dynamism. *(Powell, 1996).* Respondents were asked to indicate, on a scale of 1-5, the extent they agreed with each item. The scale was anchored with 'Strongly Disagree' as a 1, 'Neutral' as a 3, and 'Strongly Agree' as a 5. The statements were not presented together or in this order. (Alpha coefficient = .70)

- Demand in our industry has been growing rapidly in the past 3 years.
- Innovation and R&D are more prevalent in our industry than in most industries.

- Our industry is still in early growth and infancy.
- Our industry would be characterized as a high-technology industry.
- Our industry is more unstable than most, changing more quickly and unpredictably.

Organizational Stage. *(Kazanjian, 1988).* Respondents indicated which one description best characterize their firm.

Early Stage includes Conception and Development and Commercialization stages. These stages are defined as follows:

- Conception and Development. Within this company, the primary of our activities is on product development and design, securing adequate financial resources and developing a market.
- Commercialization. The company has a product that performs well and meets a need in the marketplace. We have the capability to produce and sell but we have yet to firmly establish the company in the market .

Late Stage includes Growth and Stability stages. These stages are defined as follows:

- Growth. The company is characterized by high growth rates in both sales and number of employees. The major internal focus is around issues of how to produce, sell and distribute the products while attaining profitability.
- Stability. Within this company the major internal activities include: (a) development of second, third generation products and/or totally new product lines; (b) securing growth funding; (c) securing or growing market share; (d) penetrating new geographic territories.