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THE LINKAGES BETWEEN BUSINESS STRATEGIES
AND COMPENSATION POLICIES USING
MILES AND SNOW'S FRAMEWORK

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Abstract

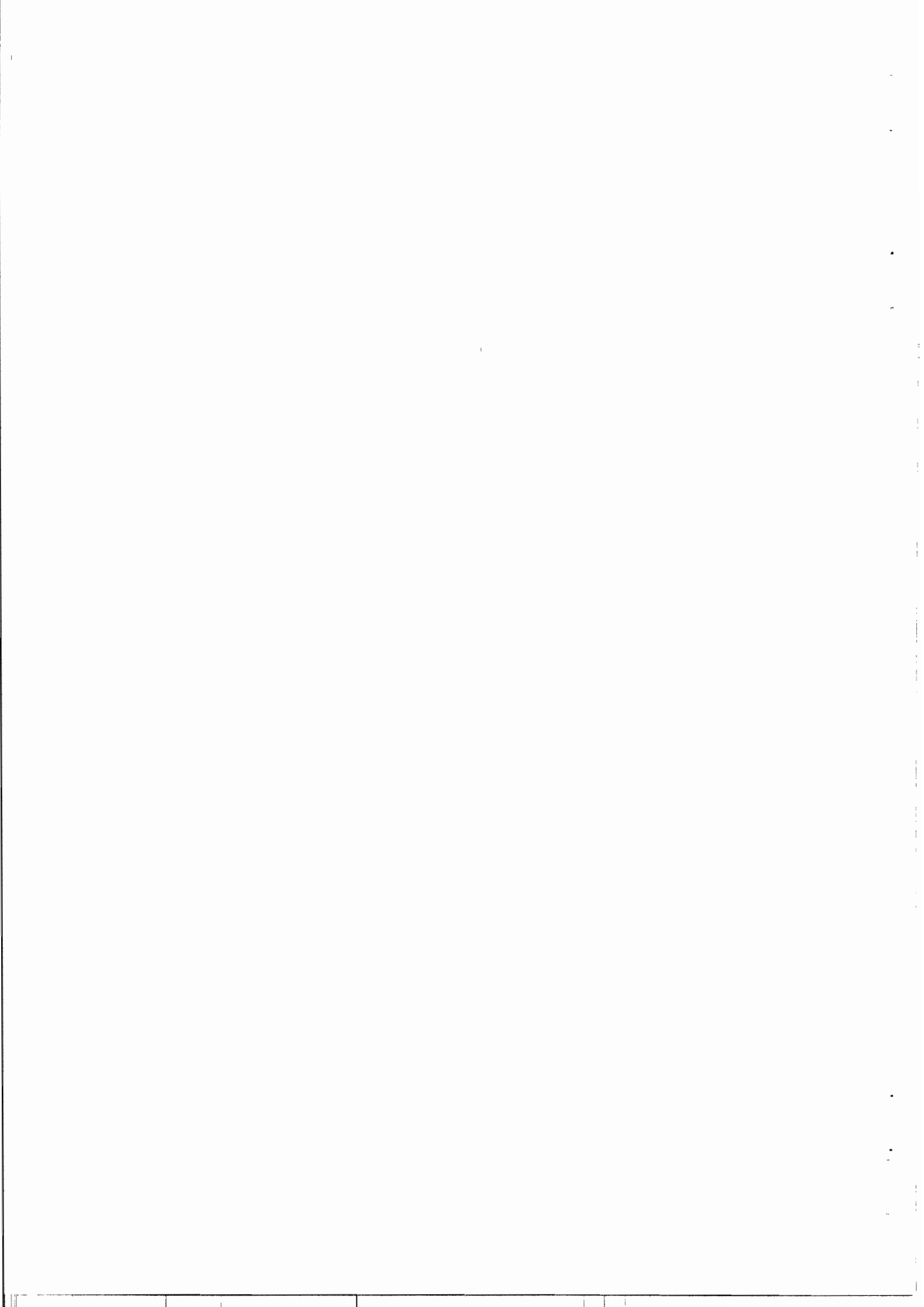
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Key Words

Compensation strategies; Business strategies; Mechanistic policies.

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Abstract

This study links a multidimensional measure of compensation strategy to Miles and Snow's (1978) business strategies, and examines their interactive impact on firm performance. The results reported here indicate that a more mechanistic compensation strategy makes a greater contribution to firm performance among defenders, while a more organic compensation strategy makes a greater contribution to firm performance among prospectors.

There has been an increasing awareness in human resource management that organizational context is an important determinant of personnel practices and their effectiveness (e.g., Jackson, Schuler, & Rivero, 1989; Guthrie & Olian, 1991). One area that has received much attention is the compensation system. Authors such as Kerr (1985), Milkovich (1988), Balkin and Gomez-Mejia (1984, 1990), Welbourne & Gomez-Mejia (1995) among others, have argued that the reward structure should serve as an essential integrating mechanism through which the efforts of individuals are directed toward the achievement of a firm's strategic objectives. The conceptual root underlying most of this research is that effectiveness in strategy implementation depends significantly on the existence of a match between compensation strategies and organization strategies. If different compensation strategies are needed for the effective implementation of organizational strategies, then it follows that a systematic matching of compensation and organizational strategies will yield superior firm performance (e. g. , Balkin & Gomez-Mejia, 1990; Gomez- Mejia & Balkin, 1992; Wallace, 1987; Stroh, Brett, Baumann, & Reilly, 1996).

While firm performance is posited as the ultimate dependent variable, extant research has focused on the more intermediate task of ascertaining the degree to which different reward system profiles reflect variations in organizational strategies (e.g., Broderick, 1986; Kerr, 1985). In two previous studies, Balkin and Gomez-Mejia (1984, 1990) indirectly dealt with the firm performance implications of a compensation-organization strategy match. These authors found that there are consistent and recurrent patterns of compensation strategies (in terms of pay package design, market positioning, and pay policy choices) associated with a firm's overarching business strategies, and that the greater the deviation from the ideal compensation pattern for a particular organizational

strategy, the less effective the firm's reward system is perceived to be. In a later study, Gomez-Mejia (1992) found that degree of diversification and compensation strategies interactively predicted firm performance. Along similar lines, Gerhart and Milkovich (1990) report that firms relying on variable compensation strategies (bonus and long-term income) for mid to upper level managers tend to be more profitable than those which rely on fixed pay.

Unfortunately, prior research on these issues focuses almost exclusively on the performance of large diversified firms rather than business units. The study reported here tries to fill this gap by linking a multifaceted measure of compensation strategy to the business strategy typology developed by Miles and Snow (1978), and then tests for their interactive influence on firm performance as a dependent variable. The Miles and Snow (1978) business strategy typology was chosen because (a) it "...seems to have the clearest implications for compensation system differences" (Carroll, 1987: 350); (b) it is widely known and has been extensively used to study a variety of organizational phenomena (e.g., Hambrick, MacMillan, & Barbarosa, 1983; Adam, 1983; Segev, 1989), including compensation (Broderick, 1986; Miles & Snow, 1984); and (c) there is strong empirical support for its reliability and validity (Shortell & Zajac, 1990). The firm's compensation strategies and its business strategies (using the Miles & Snow's framework) were subjectively assessed while firm performance was independently calculated from archival data, reducing the possibility that obtained results are artifactual in nature.

Compensation choices that are purported to have strategic significance are discussed first. This provides the background material for making differential predictions concerning the extent to which a particular compensation pattern makes a greater contribution to firm performance as a function of Miles and Snow's (1978) business strategies. Next, the hypothesized interactive impact

of compensation and business strategies on firm performance is tested in a sample of 112 single and dominant product firms. Overall, empirical results support the notion that a match between organizational and compensation strategies has a salutary effect on firm performance. The paper concludes with a discussion of the theoretical and applied implications of this research for compensation in particular and human resource management practices in general.

STRATEGIC COMPENSATION CHOICES AND PATTERNS

Numerous compensation choices have been identified in the strategy and personnel literature that are useful in understanding and analyzing compensation phenomena from a strategic perspective. Based on an extensive review of the literature, Gomez-Mejia and Balkin (1992) suggest that compensation choices can be broadly grouped in terms of basis for pay (such as job held vs. individual characteristics, Wallace, 1991; seniority vs. performance, Broderick, 1986; internal vs. external equity, Lawler, 1990); system design (such as incentives as a proportion of total pay, Salscheider, 1981; pay level vs. market, Ehrenberg & Milkovich, 1987); and administrative framework (such as centralization vs. decentralization of pay decisions, Hambrick & Snow, 1989; and open vs. secret pay, Lawler, 1983).

In another literature review, Ehrenberg and Milkovich (1987) note that:

“ ... disentangling the effects of each of these dimensions will be a difficult and perhaps unfeasible task. It is possible that a firm's economic performance is affected by its compensation strategy in toto. If this is the case, then we need to examine a firm's behavior on these policy dimensions simultaneously rather than treating each as a discrete decision. Empirically, a firm's compensation strategy needs to be measured as a set of interrelated dimensions" (p. 91) and “ ... future research needs to examine a firm's policy about the various dimensions of compensation policy simultaneously rather than focusing on one policy to the exclusion of others. Empirically, a firm's compensation strategy needs to be measured as a set of interrelated dimensions" (p. 102).

There is increasing evidence that Ehrenberg and Milkovich (1987) are right, namely that firms seldom make these strategic compensation choices in isolation, but as an interrelated set of decisions evolving into common patterns or themes. This means that, in general, organizations tend to adopt multiple pay strategies that are internally consistent. This literature, appearing since Ehrenberg and Milkovich's (1987) review, is discussed next.

Gomez-Mejia and Welbourne (1988) examined 18 published papers on compensation strategies appearing prior to 1988. Because most of these were conceptual in nature or based on case studies (e.g., Salter, 1973; Miles & Snow, 1984), it was not feasible to use data reduction techniques (e.g., meta-analysis) to draw underlying patterns. Alternatively, Gomez-Mejia and Welbourne (1988) used a heuristic method to sort and aggregate strategic compensation dimensions postulated by various authors into two major groupings, designated as mechanistic and organic, whereby firms adopting a particular compensation strategy within each of these patterns also tend to make other related pay choices germane to that pattern. The mechanistic pattern is characterized by formalized rules and procedures that routinize pay decisions and that are applied uniformly across the entire organization. Strategic compensation choices associated with this pattern include: job held rather than personal skills as basis for payment; base salary above market; individual appraisals; seniority contingent pay and other pay policies designed to "lock" employees into the firm, making it difficult for them to find comparable compensation packages elsewhere. These firms are more likely to develop and carefully implement traditional job evaluation-procedures in order to attain "internal equity" between jobs and grade levels. This encourages transfers within the internal labor market, resulting in longer tenure, a "grown from within" work force, and an expectation of

intraorganizational upward mobility overtime. The firm's culture bestows prestige and pecuniary rewards to individuals as they move up the corporate ladder. Risk sharing is minimal (with a pay mix that emphasized fixed compensation) and the system for administering rewards is typified by centralization, secrecy, lack of participation, and bureaucratic procedures.

The organic pattern identified by Gomez-Mejia and Welbourne (1988) is associated with compensation strategies that are inherently flexible and fluid in nature, designed to be responsive to varying conditions, contingencies, and individual situations. Firms exhibiting this pattern reward for skills (rather than job held), individual and group performance (rather than seniority), risk sharing and market value of individuals (rather than worth of jobs assessed apriori via job evaluation procedures and salary surveys). There is greater reliance on non-recurrent bonuses and deferred income. The reward system is more egalitarian in nature. The administrative apparatus tends to be decentralized, with greater pay openness and employee participation, and a minimum of rules, procedures, and bureaucratic red tape.

An empirical compensation profile of 192 firms in a study by Balkin and Gomez-Mejia (1990) found support for the two major strategic pay patterns discussed above, a more mechanistic pattern at one end (e.g., paying for the job, not the individual, a pay mix consisting primarily of salary and benefits; low risk sharing; centralization; and secrecy) and a more organic pattern at the other end (e.g., paying for the individual not the job; a higher proportion of "at risk" compensation; decentralization; and openness). More recently, and building upon the previous studies reviewed above, Gomez-Mejia (1992) found additional support in a sample of 243 manufacturing firms for the existence of two major compensation patterns. The first pattern is labeled as algorithmic because "the main emphasis is on the use of mechanistic, predetermined, standardized, repetitive procedures, with

minimal attention to mitigating circumstances, exceptions to the rule, and external contingency factors." The second pattern is labeled as experiential "because the firm's compensation strategies are flexible and adaptive so that these can be molded to respond to changing circumstances, factors mediating their effectiveness, sudden environmental shifts, and fluid organizational structures."

Characteristics of the algorithmic and experiential compensation patterns in terms of basis for pay, design issues and administrative framework are summarized in Figure 1. The present study uses the algorithmic-experiential compensation continuum and corresponding measurement instrument (see Appendix) developed by Gomez-Mejia (1992). The psychometric properties of this scale in the context of the present sample are described in the results section. Two hypotheses are tested concerning the extent to which a firm's performance is a function of the interaction between its relative position on the algorithmic-experiential continuum and its strategic orientation using Miles and Snow's (1978) scheme.

BUSINESS STRATEGY, COMPENSATION STRATEGY, AND FIRM PERFORMANCE

A number of researchers have argued that pay strategies should differ according to the well known framework of Miles and Snow (1978). Hambrick and Snow (1989), Miles and Snow (1984), Carroll (1987), Wallace (1987, 1991), and Broderick (1986), among others, have advanced the notion that the appropriateness of different compensation strategies depend on the extent to which the business follows a prospector, defender or analyzer strategy.

Prospectors pursue a growth strategy by capitalizing on environmental opportunities, searching for new product/market innovations, risk taking, experimenting with potential responses to emerging environmental trends, and the creation of change/uncertainty to which competitors must

respond (Miles & Snow, 1984). The prospector strategy is "best implemented through an organic or loose, non-formalized organization that emphasizes decentralization of decision making and lateral communication" (Carroll, 1987: 345). Thus, prospectors tend to have organic structures, fluid and complex tasks, and unstable environments with a rapid rate of change (Miles & Snow, 1978). Flexibility is very important to firms following this strategy. This means that "...there is less formalization and centralization... managers are freer to develop policies fitting their unique situations" (Wallace, 1987:176).

A compensation strategy that is more experiential in nature is most likely to meet the needs of prospectors (see Figure 1). Conceptual work by Miles and Snow (1984), Wallace (1987), Carroll (1987), Gomez-Mejia and Balkin (1992) and a descriptive survey by Broderick (1986) indicate that the following characteristics of the pay system are purported to be most appropriate for prospectors: a high performance orientation, a low emphasis on seniority, external competitiveness rather than internal consistency, total compensation heavily oriented toward incentives, decentralization, long-term income, high risk sharing, greater reliance on pecuniary rewards, open communication, and extensive employee participation.

At the opposite end, a more algorithmic compensation strategy is purported to be more appropriate for defenders (see Figure 1). Defenders are characterized by narrow and relatively stable product market domains, employee specialization, stable technology and methods of operation, an emphasis on efficiency, a placid environment, and a mechanistic organizational structure. Unlike prospectors which devote themselves to the "entrepreneurial" task, defenders attend primarily to the "engineering" task (Hambrick, 1983). Complimentary compensation strategies for defenders include, according to Miles and Snow (1984:49), "an orientation to position in the hierarchy, internal

consistency, a total compensation heavily oriented toward cash (versus long-term income such as stock offerings), formal/extensive planning, and process oriented appraisals." Carroll (1987) adds the following characteristics which are also part of algorithmic compensation pattern: lower pay level relative to market, less use of deferred compensation, more emphasis on short run performance, individual based appraisals and rewards. A survey by Broderick (1986) supports the above contentions.

A built-in notion in the above arguments is that "successful firms display a consistent strategy... and that compensation should match the organization's business strategies" (Miles & Snow, 1984: 40). The firm performance implication of this proposition is that congruent combinations of pay strategies and business strategies are purported to lead to higher performance (see Figure 2). In the words of Donaldson (1987:10): "Fit causes higher performance and misfit causes lower performance."

Unfortunately, the consequences of pay fit discussed in the previous paragraph have not been examined. To do so is crucial because, as argued by Milkovich (1988: 264), "... the most fundamental of all the tenets on which a strategic perspective on compensation is based is the belief that fitting compensation systems to environmental and organizational conditions [read business strategy] makes a difference; that systematic variation in compensation systems is more than random noise; that making compensation policies and practices contingent on organizational and environmental conditions [read business strategy] has some desired effects on ... the performance of

organizations.” Thus, the need for the following hypotheses¹:

Hypothesis 1: An experiential compensation strategy makes a greater contribution to firm performance among prospectors.

Hypothesis 2: An algorithmic compensation strategy makes a greater contribution to firm performance among defenders.

METHOD

Sample

The Miles and Snow (1978) strategic orientations are only relevant for business level strategies. Consequently, they cannot be meaningfully used to study the strategies of diversified firms because each business unit under a corporate umbrella is likely to pursue its own unique strategy (Zahra & Pearce, 1990).

In other words, as a corporation's products become more heterogeneous, operating in diverse industries, each business unit tends to make its own strategic decisions in dependent of the

¹ In the present study, we do not examine the potential interactive effect of compensation strategies and the analyzer business strategy (which exhibit characteristics of both prospectors and defenders) on firm performance. This decision was made for a number of related reasons. Miles & Snow (1984) and others (e.g., Broderick, 1986) suggest that analyzers should have a mix of seniority and performance based compensation, internal consistency and external competitiveness etc. What the appropriate mix should be is ambiguous and arbitrary and there are no clear theoretical directives to arrive at one. Consequently, it is difficult to operationally define with any acceptable degree of reliability and confidence what the most appropriate compensation strategy mix should look like for analyzers.

corporation so that it may be possible (indeed desirable in many cases) for various units under the same corporate umbrella to be defenders, prospectors or analyzers (see Snow & Hrebiniak, 1980). The main strategic concern of diversified product firms is the mix of businesses the corporation should hold, and decisions concerning acquisition, divestment, diversification, and flow of funds (Ramanujan & Varadarajan, 1989). The Miles and Snow's framework (Miles & Snow, 1978) is most appropriate for firms that formulate multi-functional strategies for businesses that operate in a single product or dominant product markets (Segev, 1989). For this reason, only single product or dominant product firms were used in this study to test the hypothesized relationships.

The sample of firms used for this study consists of 112 firms that met the well known criterion established by Rumelt (1974, 1986) for single product (companies that obtain 95 percent or more of their revenue from a single product domain) and dominant product (firms that derive between 70 and 94 percent of their revenues from a single product domain). The top human resource management executive from each firm responsible for compensation completed a survey on the company's pay strategies (see Appendix) and the business' strategic orientation using Miles and Snow's (1978) scheme. Firm performance data was obtained from Compustat, an archival source. The operational measures are described in more detail below.

Algorithmic - Experiential Compensation Pattern

The 14 scales (see Appendix A) measuring various dimensions of the compensation strategy profile shown in Figure 1 were factor analyzed using a principal component procedure. The intercorrelation matrix of all 14 scales and factor analytic results are shown in Table 2. As can be seen at the foot of that table, all scales load highly on a single factor. Only one factor emerged with

an Eigenvalue exceeding 1.0. A positive factor loading indicates that a high score on that scale represents a more experiential orientation, while a negative factor loading means that a high score on that scale represents a more algorithmic orientation².

A composite factor score was calculated for each of the 112 firms by multiplying its score for each of the 14 scales by the respective factor loading, summing across the weighed scales and dividing the resulting total by 14. Therefore, a firm scoring higher on the composite is more experiential in nature, while a firm scoring lower on the composite exhibits a more algorithmic orientation in its pay strategies. In other words, the resulting composite provides a measure of a firm's compensation strategies in toto.

Miles and Snow Business Strategies

The actual items used to measure the extent to which a firm follows a defender or a prospector strategy represents a slightly simplified version of Miles and Snow's (see Snow & Hrebiniak, 1980) original scales. Participants were asked to indicate on a 1 (strongly disagree) to a 5 (strongly agree) response format the extent to which they concur that the following descriptors of strategy types apply to their firm³:

²The reader should keep in mind that the labels used to describe the algorithmic-experiential compensation pattern in Figure 1 provide a dichotomous description (e.g., job vs. individual) for the sake of clarity in presentation, but the actual scales used (see Appendix for scales and Table 5 for descriptive statistics) are continuous in nature, so that a firm can be higher or lower on any particular dimension as well as the composite pay strategy score.

³Traditionally business policy researchers have tended to operationalize Miles & Snow's (1978) strategic orientations as a nominal variable. However, Miles and Snow's (1978) note that categories of prospectors, defenders and analyzers represent "pure types." The continuous approach being taken in this study captures the extent to which a firm shares characteristics associated with each of these pure types (for a similar approach, see Gupta & Govindarajan, 1984).

Defenders. Firm has a narrow and relatively stable product market domain. Firm seldom needs to make major adjustments in technology, structure or methods of operation. Emphasis is on efficiency. Other characteristics of defenders include a limited product line; single, capital intensive technology; a functional structure, and skills in production efficiency, process engineering, and cost control.

Prospectors. Firm tries to be a "first mover" in new product and market areas, even if some of its efforts fail. There is strong concern for product and market innovation. Other characteristics include a diverse product line; multiple technologies; a product or divisionalized structure; and skills in product research and development, market research, and development engineering.

Analyzers. This type of organization attempts to maintain a stable, limited line of products or services, while at the same time moving out quickly to follow a carefully selected set of the more promising new developments in the industry. The organization is seldom "first in" with new products or services but it is often a fast follower.

Firm Performance

The firm performance measure consisted of a quartile membership integer ranging from 1 for companies that were in the bottom 25 percent of the performance distribution to 4 for companies that were in the upper quartile of the performance distribution. All firms were assigned to one of the four ranks prior to the survey mailing, and the color of the paper was varied to identify the appropriate performance cohort for each respondent. This procedure allowed the researcher to link survey data to an independent external firm performance measure while at the same time preserve the anonymity of the respondent.

The index used to assign firms into one of the performance quartiles was an average of the standardized values of four widely used measures of firm performance for the five years preceding the survey: earnings per share, return on investment, return on common stock); and annual percent change in a firm's market value. In a review of 44 studies dealing with firm performance issues during a twenty year period, Hofer (1983) reports that these are among the most frequently used performance measures.

All four components of the average performance index used to rank firms were obtained from Compustat, an archival source. Use of multiple indicators of firm performance provides a more reliable assessment (see Weiner & Mahoney, 1981); these measures are also correlated, all loading on a single factor (Tosi & Gomez-Mejia, 1991), providing statistical support for their aggregation into a common index. The correlation between the quartile performance rankings and the raw scores on the performance composite was .91, indicating that little information was lost by assigning firms to these four groups.

Control Variables

Four control variables were also included in the analysis because these may be correlates of a firm's business and compensation strategies, as well as financial performance. These control variables included as part of the survey are: (a) R&D intensity measured as expenditures in research and development as a proportion of total operating expenditures (Milkovich, Gerhart, & Hannon, 1991); (b) firm size, measured as a composite of standardized values of number of employees and dollar sales (Martell, Carroll, & Gupta, 1992; Henderson & Fredrickson, 1996) ; (c) life cycle, measured as "zero" for firms at the growth stage and "one" for firms at the maintenance stage, using the operational indicators of life cycle stage applied in previous research by Hambrick (1981, 1983),

Hofer (1975), and Balkin and Gomez-Mejia (1984) ; and (d) proportion of labor costs to total costs (Ehrenberg & Smith, 1988).

Analysis

A hierarchical moderated regression procedure (Cohen & Cohen, 1983) was used to ascertain the interactive effect of compensation strategy (Comps) and business strategy (using the Miles & Snow framework) on firm performance. Variables were entered in three steps: control variables (i.e., R&D intensity, firm size, life cycle, and proportion of labor costs to total costs); main effects (defender, prospector, analyzer, and compensation strategy or Comps) ; and interaction terms for prospector x Comps (Hypothesis 1) and defender x Comps (Hypothesis 2).

By entering the cross product terms last, a significant effect for an interaction term would indicate that a particular business strategy moderates the relationship between compensation strategy and firm performance. More specifically, if the unstandardized regression coefficient (B) is positive and significant for "prospector x Comps" one would conclude that, controlling for other factors, the positive impact of a more experiential pay strategy on firm performance is greater for companies that are higher on the prospector measure (supporting Hypothesis 1).

Alternatively, a negative and statistically significant B for "defenders x Comps" indicates that, controlling for other factors, a more algorithmic compensation strategy makes a greater contribution to firm performance among firms that have a stronger defender orientation (supporting hypothesis 2).

RESULTS

The intercorrelation matrix, including means and standard deviations for all variables, appears in Table 3; Table 4 summarizes the regression equations testing the interactive effect of Miles and

Snow dimensions and compensation strategy (Comps) on firm performance.

As can be seen in Table 4, the regression coefficient for "defender x Comps" is negative and statistically significant ($\beta = -.73, P \leq .01$). This confirms that a more algorithmic compensation strategy makes a greater contribution to firm performance among businesses that follow a defender strategy (supporting Hypothesis 1). On the other hand, the cross-product regression coefficients for "prospector x Comps" is positive and statistically significant ($\beta = .66, P \leq .05$) indicating that a more experiential compensation strategy makes a greater contribution to firm performance among prospectors (supporting Hypothesis 2).

The ΔR^2 in Table 4 is relatively small when the interaction terms are entered into the regression equation ($\Delta R^2 = .07$). Not surprisingly, this indicates that firm performance is responsive to many factors other than compensation. However, the effects are large enough to have practical significance and fall within the typical range of explained variance found in executive compensation research (see reviews by Finkelstein & Hambrick, 1989; Gomez-Mejia & Welbourne, 1989). To put these results into perspective, Zajac and Shortell (1989) could only account for 10 percent of the variance in profitability differences for firms in their sample using Miles and Snow's framework and seven independent variables. The practical significance of the findings reported here in terms of compensation - organization strategy fit on firm performance is addressed in Table 6 and will be revisited shortly.

Table 5 provides descriptive statistics for each of the compensation strategy scales and the compensation strategy composite broken down by defenders and prospectors. It is the numerical counterpart of Figure 1. Consistent with expectations and earlier research by Broderick (1986), defenders score higher on job emphasis, individual performance focus, lead market policy, and

pay secrecy. Prospectors, on the other hand, score higher than defenders on performance emphasis, long term orientation, risk sharing, egalitarianism, incentives, multiple rewards/high frequency, pecuniary emphasis, decentralized pay decisions, and employee participation. The compensation strategy composite for prospectors averaged 1.19 versus an average of .79 for defenders ($P \leq .01$), indicating a more experiential pay orientation for the former.

Table 6 provides descriptive statistics to show the practical effect of a compensation-organization strategy match on firm performance. The entries in the matrix represent the average and standard deviation scores of the dependent variable (i.e., firm performance quartile) for firms following a predominantly algorithmic (those below the median on Comps) or experiential (those above the median on Comps) compensation strategy nested within defenders and prospector groups.

As can be seen moving down the rows in Table 6, prospectors that rely on a more algorithmic compensation strategy are, on average, almost one and a half quartile lower on firm performance than prospectors which rely on a more experiential compensation strategy ($\bar{x} = 1.85$ vs. $\bar{x} = 3.30$, $P \leq .01$). Among defenders the situation is reversed. Defenders relying on a more algorithmic compensation strategy are, on average, almost half a quartile higher on firm performance than defenders which rely on a more experiential compensation strategy ($\bar{x} = 2.41$ vs. $\bar{x} = 1.93$, $P \leq .01$).

Moving across columns in Table 6, firms that rely on a more algorithmic compensation strategy are, on average, more than half a quartile higher on firm performance if they exhibit a defender vis-a-vis a prospector orientation ($\bar{x} = 2.41$ vs. $\bar{x} = 1.85$, $P \leq .01$). The reverse is true for firms following a predominantly experiential compensation strategy, with those that are prospectors showing, on average, one and a half performance quartile higher than those designated as defenders ($\bar{x} = 3.30$ vs. $\bar{x} = 1.93$, $P \leq .01$).

DISCUSSION AND CONCLUSIONS

The purpose of this study has been to examine the relationship between organizational and pay strategies, and their interactive effect on firm performance. Consistent with previous research, the results reported here indicate that compensation strategies do vary according to Miles and Snow's business strategies. Furthermore, the factor analytic findings reported here confirm the heuristic conclusions of earlier research (e.g., Gomez-Mejia & Welbourne, 1988; Balkin & Gomez-Mejia, 1990) that there are two major patterns of strategic compensation choices that tend to "hang together" -- a more algorithmic pattern at one end and a more experiential pattern at the other end.

Most importantly, our results support the notion that firm performance is a positive function of the degree to which compensation strategies reinforce or match organizational strategies. Specifically, an algorithmic compensation pattern (with its emphasis on formalized rules and procedures and a more mechanistic orientation) tends to make a greater contribution to firm performance among businesses that try to maintain secure positions in relatively stable product or service areas (i.e., defenders). An experiential compensation pattern (designed to be more responsive to varying conditions, contingencies, and individual situations) tends to make a greater contribution to firm performance for entrepreneurial companies actively searching for new products and markets, not afraid of pursuing opportunities both within and outside existing areas of expertise (i.e., prospectors).

Reward systems represent one of the most important and prominent features of organizations. Numerous papers have been published on the subject across a wide variety of disciplines such as finance (e.g., Baker, Jensen, & Murphy, 1988), sociology (e.g., Allen, 1961), economics (e.g., Abowd, 1990), marketing (e.g., Stanton & Buskirk, 1987), strategic management (e.g., Galbraith &

Merrill, 1991), human resource management (Balkin & Gomez-Mejia, 1984), and industrial relations (e.g., Ehrenberg & Milkovich, 1987). A common theme in this diverse literature is that reward systems exert a powerful signalling effect on a firm by conveying to employees what the organization considers to be most critical.

Within this larger context, this study has several key behavioral implications in terms of firm performance. First, organizational members tend to behave in accordance to what they perceive leads to rewards they value (see Vroom, 1964; Hinkin, Podsakoff, & Schriesheim, 1987). Thus, a firm that is able to tie valued rewards to the behaviors it needs to effectively implement organizational strategies is more likely to find that the reward system is a positive contributor to firm performance. Next, the culture or climate of an organization is deeply affected by its reward structure (Hansen & Wenerfelt, 1989). To the extent that compensation strategies can influence the degree to which a firm is viewed as having a bureaucratic oriented culture, an entrepreneurial culture, a competence based culture, or a political culture (see Lawler, 1990) and the cultural norms being reinforced are attuned to the firm's strategic orientation, one would expect a positive contribution of the reward system to firm performance. Lastly, the reward system of a firm is one of the most prominent factors that reinforce and define the organization's structure (Tosi, Rizzo, & Carroll, 1996) For instance, it can help define the status hierarchy, the most desirable career ladders, the nature of interunit relations, and local rationality (Gomez-Mejia & Balkin, 1992). Thus, compensation strategies may contribute to firm performance by supporting those structural elements that need to be in sync with the firm's overall strategic orientation.

The Miles and Snow's framework is sufficiently rich that it can provide an avenue for much additional research on how the effectiveness of a firm's compensation strategy is affected by

contextual factors. Important issues that should be examined in future research are discussed next.

A crucial concern for organizations attempting to tailor unique compensation strategies for different employee groups, management levels, and subunits is how to balance their simultaneous need for consistency and contingency in the reward system. To the extent that organizational boundaries are permeable (e.g., with substantial interdependence across units, extensive communication flows, and close physical proximity) this dilemma may present problems in terms of perceived inequities, and associated dysfunctions such as intense conflict, lack of coordination, and parochialism. Coombs and Gomez-Mejia (1991) often find this to be the case among high technology firms with special compensation programs for R&D employees, engendering resentment among other groups who feel disenfranchised such as manufacturing engineers. Carroll (1988) refers to this "balancing act" as one of the most significant challenges in contingency based compensation programs, yet very little if any research has been conducted on the topic. Prospectors are most likely to be caught in the paradox of consistency versus contingency because they rely on experiential pay strategies operating within a matrix type organization, with little buffering across employee groups. This is unlike a defender which tends to be organized along rigid functional structures with extensive buffering between groups of specialized employees (see Hambrick & Snow, 1989), and relying on more algorithmic pay strategies.

A second issue to be examined longitudinally is how alignment of pay and organizational strategies can be maintained as firms modify and adjust their strategies overtime. Adaptive compensation decisions made today tend to harden and become aspects of tomorrow's compensation strategies. In other words, because alignment is a dynamic process it is quite possible that at any given point in time the reward structure constrains the firm's business strategies, and vice versa. This

raises the specter that functional fit between pay and business strategies in the short run could be dysfunctional in the long run. For instance, a defender type firm attempting to become more prospector oriented may find much resistance from employees accustomed to the predictability of an algorithmic compensation strategy.

Third, compensation is only one aspect of human resource management (HRM) strategy, and as such should be part of an integrated human resources management system. Indeed, Miles & Snow (1984) made specific predictions concerning various subfunctional HRM, strategies purported to be most appropriate for defenders and prospectors. These span such areas as recruitment", selection, placement, human resource planning, training and development, and performance appraisal (see Miles & Snow, 1984). To our knowledge, the linkages between these subfunctional HRM strategies and Miles and Snow's business strategies remain unexplored, either singularly or in toto. Likewise, the relationship between compensation and other subfunctional HRM strategies, and their interactive effect on firm performance as a function of a firm's defender or prospector orientation have yet to be studied.

Fourth, the present study has been exclusively focused on between group differences (i.e., defenders and prospectors) in compensation strategies and performance, ignoring within group differences. It is important to keep in mind, however, that Miles and Snow's conceptualization of business strategy may be too simplistic to capture the richness and nuances of organizational life that molds the reward system over time. In other words, "each firm has its own unique history and tradition, cultural norms, and sociotechnical and environmental forces that shape the framework within which the compensation system must operate" (Gomez-Mejia & Welbourne, 1988: 186). Future work in this area would benefit from qualitative studies that show how idiosyncratic firm

characteristics within the defender and prospector groups affect compensation strategies and their effectiveness.

Lastly, some studies suggest that there is a contingent relationship between business strategy and managerial characteristics, and that an appropriate match enhances the effectiveness of strategy implementation (e.g., Gupta & Govindarajan, 1984). A study by Guthrie and Olian (1991) showed that organizational contextual features (environmental stability, strategy, firm performance, and size) are related to the background characteristics of general managers selected to head business units. Gupta and Govindarajan (1984) report that personality characteristics of the general manager affect the quality of strategy implementation. Gomez-Mejia and Balkin (1989) found that the effectiveness of compensation strategies is mediated by personality characteristics of those affected (namely, willingness to take risks and tolerance for ambiguity). It would be interesting to integrate this research stream with the research reported here. For instance, one could examine managerial and employee characteristics that are more algorithmic or experiential compensation congruent with an strategy, and how a fit/misfit between the two affects business strategy implementation.

There are a number of methodological limitations to this study worth mentioning; most of these are intractable problems in field research of this nature. First, while method variance is minimized in this study because the firm performance indices and the strategy measures were obtained (Compustat and a survey), measures were obtained independently from each other (i.e., Compustat and a survey), it can be eliminated entirely. For example, greater intercorrelation among the pay choice dimensions may be obtained via a survey approach (increasing the likelihood of finding a common underlying factor) than there is in the real world due to perceptual and affective cognitions

on the respondent's part. Second, only one cognizant respondent (i.e., the Compensation Director) answered the survey from each firm. Costs and time constraints prevented us from securing additional respondents from each company. Moreover, attempts to match multiple respondents from each firm necessitates dropping the anonymity requirement (which may provoke a sharp drop in the return rate and less candid or biased responses). Finally, there is the potential that exogenous factors not controlled for in the study (such as human resource management policies in the areas of staffing, training and development, labor relations) may confound the observed findings. Yet, theoretical grounding of the hypotheses is derived from a long stream of earlier conceptual and empirical work on compensation-organization strategy relations, and this increases our level of confidence in the interpretation of results advanced here.

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TABLE 1

FIRM CHARACTERISTICS
(N = 112)

| <u>Number of Employees</u> | <u>N</u> | <u>£</u> |
|--|----------|----------|
| 1. Under 700 | 16 | 14.3 |
| 2. 700-999 | 23 | 20.5 |
| 3. 1,000-2499 | 16 | 14.3 |
| 4. 2500-9999 | 32 | 28.6 |
| 5. 10,000 or more | 25 | 22.3 |
| <u>Sales (in million)</u> | | |
| 1. under 50 | 22 | 19.6 |
| 2. 51-100 | 27 | 24.1 |
| 3. 101-150 | 19 | 17.0 |
| 4. 151-500 | 24 | 21.4 |
| 5. 501 or more | 20 | 17.9 |
| <u>Performance Quartile</u> | | |
| 1. Lowest quartile | 33 | 29.5 |
| 2. Second quartile | 24 | 21.4 |
| 3. Third quartile | 19 | 17.0 |
| 4. Highest quartile | 36 | 32.1 |
| <u>Life Cycle</u> | | |
| 1. Start up/Growth | 49 | 43.8 |
| 2. Maintenance | 63 | 56.2 |
| <u>Labor Costs/Total Costs</u> | | |
| 1. 0-19% | 17 | 15.2 |
| 2. 20-39% | 33 | 29.5 |
| 3. 40-59% | 32 | 28.6 |
| 4. 60-79% | 24 | 21.4 |
| 5. 80-99% | 6 | 5.4 |
| <u>R&D Expenses/Total Expenses</u> | | |
| 1. under 5% | 53 | 47.3 |
| 2. 5-10% | 19 | 17.0 |
| 3. 11-16% | 16 | 14.3 |
| 4. 17-22% | 12 | 10.7 |
| 5. 23% or more | 10 | 8.9 |

FIGURE 1

Compensation Strategy Profile Purported to Make Greatest Contribution to Firm Performance Among Defenders and Prospectors

| Compensation Strategy Dimensions | <u>Defenders</u> (Algorithmic Pattern) | <u>Prospectors</u> (Experiential Pattern) |
|----------------------------------|---|--|
| <u>Basis For Pay</u> | | |
| Unit of Analysis | Job | Individual |
| Payment Criterion | Seniority | Performance |
| Performance Focus | Individual | Individual & Aggregate |
| Reward Orientation | Short Term | Long Term |
| Risk Sharing | Low | High |
| Equity Concern | Internal Consistency | Market Equity |
| Structural Form | Hierarchical | Egalitarian |
| <u>Design Issues</u> | | |
| Salary Policy | Lead Market | Lag Market |
| Pay Mix | High Fixed Pay | High Incentives |
| Reinforcement Schedule | Fewer Rewards/ Low Frequency | Multiple Rewards/ High Frequency |
| Reward Emphasis | Security/ Non-Monetary | Pecuniary |
| <u>Administrative Framework</u> | | |
| Decision making | Centralized | Decentralized |
| Openness | High Pay Secrecy | High Pay Disclosure |
| System Design | Participative | Authoritarian |

FIGURE 2

Matched and Mismatched Combinations of
Business and Compensation Strategies:
Predicted Firm Performance Consequences

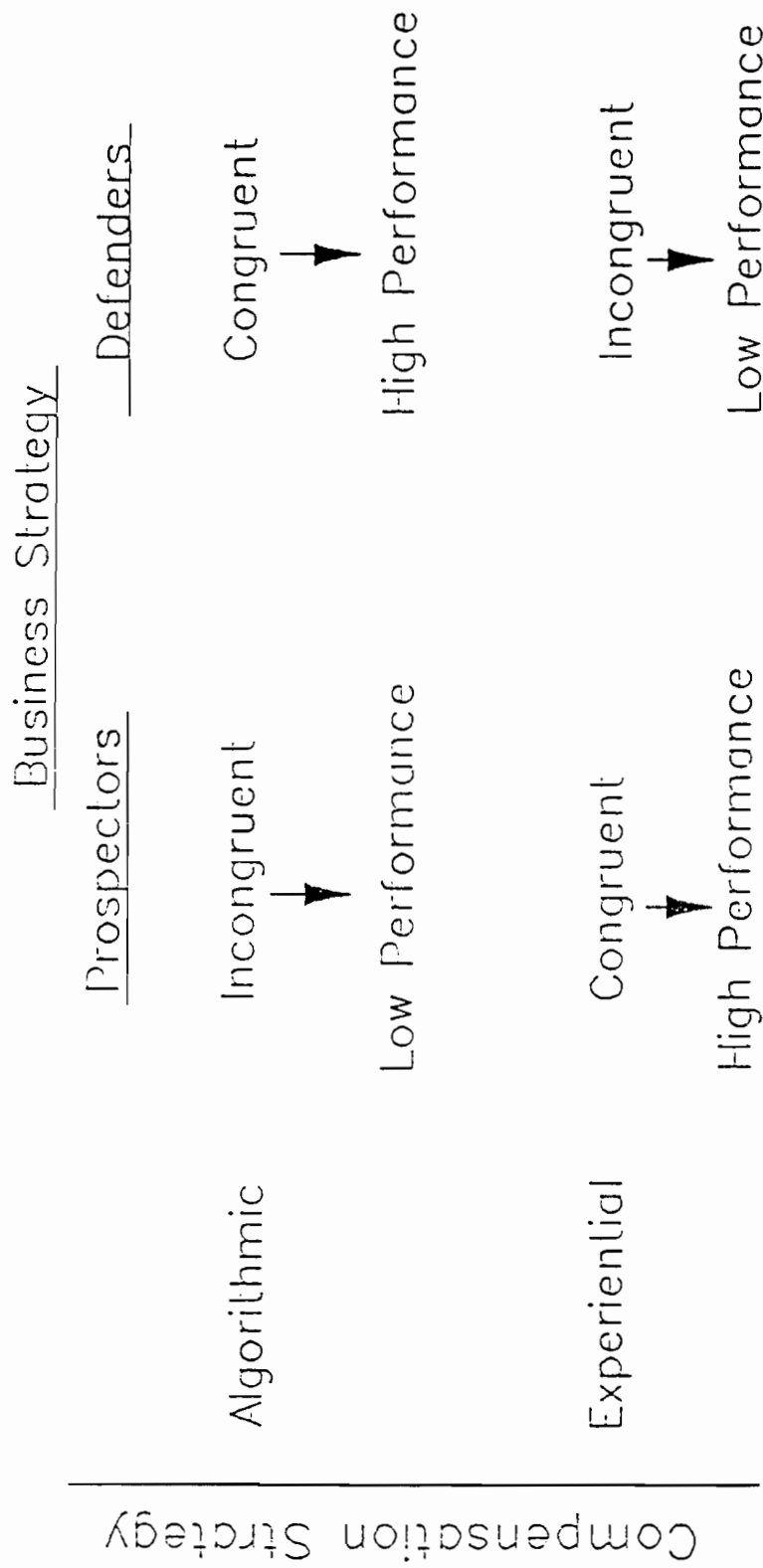


TABLE 2

INTERCORRELATION MATRIX OF COMPENSATION STRATEGY DIMENSIONS AND FACTOR ANALYTIC RESULTS
(N = 112)

| Component Strategy Dimensions ^a | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 1. Job Emphasis | --- | | | | | | | | | | | | | |
| 2. Performance Emphasis | -.72 | --- | | | | | | | | | | | | |
| 3. Individual Perf. Focus | .83 | -.72 | --- | | | | | | | | | | | |
| 4. Long Term Orientation | -.71 | .65 | -.76 | --- | | | | | | | | | | |
| 5. High Risk Sharing | -.63 | .80 | -.66 | .76 | --- | | | | | | | | | |
| 6. Internal Consistency | .66 | -.66 | .72 | -.72 | -.76 | --- | | | | | | | | |
| 7. Egalitarian Orientation | -.76 | .86 | -.76 | .73 | .78 | -.63 | --- | | | | | | | |
| 8. Lead Market Policy | .62 | -.61 | .59 | -.59 | -.65 | .70 | -.59 | --- | | | | | | |
| 9. High Incentives | -.82 | .76 | -.86 | .76 | .71 | -.73 | .77 | -.67 | --- | | | | | |
| 10. Multiple Rewards/ High Frequency | -.67 | .68 | -.58 | .52 | .58 | -.48 | .61 | -.55 | .70 | --- | | | | |
| 11. Pecuniary Emphasis | -.77 | .79 | -.78 | .72 | .71 | -.61 | .80 | -.48 | .81 | .72 | --- | | | |
| 12. Decentralized Pay Decisions | -.82 | .82 | -.81 | .73 | .73 | -.66 | .80 | -.58 | .82 | .80 | .84 | --- | | |
| 13. High Pay Secrecy | .51 | -.69 | .60 | -.56 | -.73 | .67 | -.66 | .57 | -.59 | -.41 | -.56 | -.60 | --- | |
| 14. High Participation | -.78 | .81 | -.79 | .81 | .80 | -.70 | .92 | -.67 | .83 | .65 | .79 | .82 | -.68 | --- |
| Factor Analysis ^b | | | | | | | | | | | | | | |
| Loadings | -.87 | .89 | -.88 | .84 | .86 | -.81 | .90 | -.74 | .91 | .75 | .88 | .91 | -.74 | .91 |
| Communality | .75 | .79 | .77 | .70 | .76 | .65 | .81 | .56 | .83 | .56 | .77 | .83 | .54 | .87 |

Note: All correlations in the matrix are statistically significant at $P \leq .01$

^a See Appendix for scales

^b Eigenvalue is 10.7. Only one factor emerged with an Eigenvalue exceeding 1.0. Percent of variance explained is 72.6

TABLE 3
Intercorrelation Matrix, Means, and Standard Deviations
(N=112)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---------------------------|---------|---------|---------|---------|---------|-------|------|--------|------|
| 1. Firm Size | -- | | | | | | | | |
| 2. Life Cycle | .71*** | -- | | | | | | | |
| 3. Labor Cost Ratio | -.44*** | -.31*** | -- | | | | | | |
| 4. R & D Intensity | -.34*** | -.44*** | .39*** | -- | | | | | |
| 5. Defender Orientation | .62*** | .65*** | -.36*** | -.44*** | -- | | | | |
| 6. Prospector Orientation | -.71*** | -.69*** | .42*** | .41*** | -.71*** | -- | | | |
| 7. Analyzer Orientation | .10 | .03 | -.25* | -.03 | .04 | .01 | -- | | |
| 8. Compensation Strategy | -.12 | -.13 | .15 | .44*** | -.24** | .24** | -.08 | -- | |
| 9. Firm Performance | -.23** | -.38*** | .19* | .35*** | -.32*** | .24** | -.08 | .32*** | -- |
| \bar{x} | 3.09 | .44 | 2.72 | 2.16 | 2.87 | 3.27 | 3.18 | .99 | 2.52 |
| S_D | 1.36 | .50 | 1.13 | 1.37 | 1.28 | 1.45 | .92 | .96 | 1.22 |

* $P \leq .05$

** $P \leq .01$

*** $P \leq .001$

TABLE 4

Regression Results Between Control Variables, Business Strategy,
 Compensation Strategy, and Interaction Terms (As Predictors) with
 Firm Performance As Dependent Variable
 (N=112)

| Firm Performance | | | | | |
|--------------------------------------|----------------|-------------|----------|-------------------------|-----------------------|
| EP 1 | | | | | |
| <u>Control Variables</u> | <u>B/SE</u> | <u>Beta</u> | <u>F</u> | <u>Pearson Corr</u> | <u>ΔR²</u> |
| Firm Size | .089/(.124) | .099 | .51 | -.234 | |
| Life Cycle | -.826/(.338)* | -.337 | 5.96 | -.375 | |
| Labor Cost Ratio | .046/(.117) | .042 | .15 | .190 | |
| R&D Intensity | .197/(.095)* | .221 | 4.24 | .350 | .188 |
| EP 2 | | | | | |
| <u>Business Strategy</u> | | | | | |
| Defender | -.105/(.131) | -.111 | .64 | -.075 | |
| Prospector | -.140/(.131) | -.166 | 1.14 | .241 | |
| Analyzer | -.040/(.126) | -.030 | .10 | -.075 | |
| <u>Compensation Strategy (Comps)</u> | .317/(.132)* | .249 | 5.78 | .327 | .059 |
| EP 3 | | | | | |
| <u>Interaction Terms</u> | | | | | |
| Defender x Comps | -.299/(.098)** | -.727 | 9.33 | .038 | |
| Prospector x Comps | .189/(.079)* | .658 | 5.74 | .412 | .070 |

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

Standard errors appear in parentheses

TABLE 5

Means and Standard Deviations of Compensation Strategy Scales for Prospectors and Defenders^a

| Compensation Strategy Dimensions | Defenders (N=45) | | Prospectors (N=55) | |
|--|---------------------|-------|-----------------------|-------|
| | \bar{x} | S_D | \bar{x} | S_D |
| <u>Basis for Pay</u> | | | | |
| Job Emphasis (Scale 1) | 3.15 | 1.21 | 2.55 | 1.23 |
| Performance Emphasis (Scale 2) | 3.42 | 1.12 | 3.55 | 1.31 |
| Individual Perf. Focus (Scale 3) | 3.30 | 1.57 | 2.64 | 1.78 |
| Long Term Orientation (Scale 4) | 2.67 | 1.18 | 3.55 | 1.28 |
| High Risk Sharing (Scale 5) | 3.15 | 1.24 | 3.62 | 1.34 |
| Internal Consistency (Scale 6) | 3.08 | 1.22 | 2.81 | 1.29 |
| Egalitarian Orientation (Scale 7) | 3.11 | 1.13 | 3.52 | 1.48 |
| <u>Design Issues</u> | | | | |
| Lead Market Policy (Scale 8) | 3.00 | 1.18 | 2.74 | 1.46 |
| High Incentives (Scale 9) | 2.79 | 1.28 | 3.12 | 1.47 |
| Multiple Rewards/High Frequency (Scale 10) | 3.08 | 1.33 | 3.52 | 1.55 |
| Pecuniary Emphasis (Scale 11) | 3.09 | 1.36 | 3.47 | 1.44 |
| <u>Administrative Framework</u> | | | | |
| Decentralized Pay Decisions (Scale 12) | 3.03 | 1.28 | 3.44 | 1.37 |
| High Pay Secrecy (Scale 13) | 3.21 | 1.14 | 2.83 | 1.37 |
| High Participation (Scale 14) | 2.82 | 1.14 | 3.35 | 1.33 |
| <u>Compensation Strategy Composite^b</u> | .79 | .90 | 1.19 | 1.03 |

^a Prospectors and defenders are those responding "4" (Agree) or "5" (Strongly Agree) to the corresponding Miles & Snow's scales.

^b Composite is the average of the 14 scales, after each has been weighed by the corresponding factor loading.

TABLE 6

Mean Firm Performance Quartile for Prospectors and Defenders that Follow an Algorithmic vs. an Experiential Compensation Strategy^a

| | Defenders (N=45) | | Prospectors (N=55) | |
|------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|
| | <u>\bar{x}</u> | <u>S_D</u> | <u>\bar{x}</u> | <u>S_D</u> |
| Algorithmic (N=56) | 2.41 | 1.11 | 1.85 | .99 |
| Experiential (N=56) | 1.93 | 1.28 | 3.30 | .98 |

^a Prospectors and defenders are those responding "4" (Agree) or "5" (Strongly Agree) to the corresponding Miles & Snow's scales. Those below the median in the compensation strategy composite are designated as algorithmic while those above the median in that composite are designated as experiential.

APPENDIX

Compensation Strategies: Scales and Items

For each of the following items, please indicate if you agree using the following response format:

| | | | | |
|----------------------|----------|-----------|-------|-------------------|
| 1 | 2 | 3 | 4 | 5 |
| Strongly Disagree | Disagree | Undecided | Agree | Strongly Agree |

- | | | |
|----|---|--------------|
| 1. | <u>Job Emphasis</u> | (Circle one) |
| | a) We have a job based pay system. That is, factors within the job are key determinants of the amount of pay received by incumbents. | 1 2 3 4 5 |
| | b) We have a skill based pay system. That is, individuals are rewarded in part on their mastery of job skills.* | 1 2 3 4 5 |
| | c) The job is a more important factor than an incumbent's ability or performance in the determination of pay rates in this organization. Heavy emphasis is placed on job evaluation procedures to determine pay levels. | 1 2 3 4 5 |
| 2. | <u>Performance Emphasis</u> | |
| | a) Firm has a strong commitment to distribute rewards based on contributions to organization. | 1 2 3 4 5 |
| | b) There is a large pay spread between low performers and high performers in a given job. | 1 2 3 4 5 |
| | c) An employee's seniority does not enter into pay decisions. | 1 2 3 4 5 |
| 3. | <u>Individual Performance Focus</u> | |
| | Individual performance is emphasized as a basis for pay rather than group performance. | 1 2 3 4 5 |
| 4. | <u>Long Term Orientation</u> | |
| | a) The pay system has a futuristic orientation. It focuses employee's attention on long-term (two or more years) goals. | 1 2 3 4 5 |
| | b) The pay system rewards employees for short-term accomplishments during a fixed time period.* | 1 2 3 4 5 |
| 5. | <u>High Risk Sharing</u> | |
| | a) In this organization a portion of an employee's earnings is contingent on group or organization performance goals being achieved. | 1 2 3 4 5 |
| | b) We designed our compensation system so that a substantial portion of our compensation costs is variable. | 1 2 3 4 5 |

- c) We believe that employees should be risk takers with some of their pay. 1 2 3 4 5

Internal Consistency In Pay Relationships

- a) Internal pay equity is an important goal of our pay system. 1 2 3 4 5
- b) We try hard to achieve comparable pay relationship across different parts of the organization. 1 2 3 4 5
- c) In our organization we give a higher priority to internal pay equity than we do to external market factors. 1 2 3 4 5

Egalitarian Orientation

- a) Our compensation system reflects a low degree of hierarchy. In other words, we try to give a minimum of perks (reserved parking spots, 1st class air travel, etc.) to top executives. 1 2 3 4 5
- b) We try to avoid special pay packages and privileges as status symbols to the higher echelons in the organization. 1 2 3 4 5
- c) We try to make our pay system as egalitarian as possible. There are very few perks or special rewards available to any "elite" groups of employees. 1 2 3 4 5

Lead Market Compensation Policy

- a) Preferred position of organization's salary levels with respect to competitors is clearly above market. 1 2 3 4 5
- b) Preferred position of organization's benefits level with respect to competitors is clearly above market. 1 2 3 4 5

High Incentives

- a) The base salary is not an important part of the total compensation package. 1 2 3 4 5
- b) The base salary is low relative to other forms of pay that an employee may receive in this organization. 1 2 3 4 5
- c) The benefits are not an important part of the total pay package. 1 2 3 4 5
- d) The employee benefits package is not very generous compared what it could be. 1 2 3 4 5
- e) Pay incentives such as a bonus or profit sharing are an important part of the compensation strategy in this organization. 1 2 3 4 5
- f) Pay incentives are designed to provide a significant amount of an employee's total earnings in this organization. 1 2 3 4 5

10. Multiple Rewards/High Frequency

Multiple rewards are provided frequently; frequency of raises is viewed as more important than the actual size of the raise.

1 2 3 4 5

11. Pecuniary Emphasis

a) Compensation plays a dominant role in the human resource strategy of the firm.

1 2 3 4 5

b) Compensation is used as a critical tool to signal as well as to support organizational change.

1 2 3 4 5

12. Decentralization Pay Pensions

a) Pay policy is not centralized in this organization.

1 2 3 4 5

b) The Personnel staff in each division/business unit has freedom to develop its own compensation programs. We recognize the fact that jobs within the firm are flexible and change often and that employee exchanges and transfers are common.

1 2 3 4 5

c) There is a minimum of interference from corporate headquarters with respect to pay decisions made by line managers.

1 2 3 4 5

13. High Pay Secrecy

a) We keep pay information secret from the employees.

1 2 3 4 5

b) We have formal policies that discourage employees from divulging their pay to coworkers.

1 2 3 4 5

c) Our organization does not openly disclose the administrative procedures on how pay levels and pay raises are established.

1 2 3 4 5

14. High Participation

a) Employees' feelings and preferences for various pay forms (e.g., bonus vs. profit sharing) are taken very seriously by top management.

1 2 3 4 5

b) Many different kinds of employees (individual contributors, managers, Personnel staff, executives) have a say in pay policies.

1 2 3 4 5

c) Pay decisions in this organization are seldom made on an autocratic basis. Employees have input to pay decisions and performance evaluations.

1 2 3 4 5

These items are reverse scored.

