STRATEGIC REWARDS SYSTEMS: A CONTINGENCY MODEL OF PAY SYSTEM DESIGN

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ABSTRACT

A limited number of studies have addressed the idea of "strategic" reward systems – the matching of compensation systems to a firm's strategy. Prior research on this topic has been confined to US firms, however, and a number of key questions remain unanswered. Using a sample of 917 employees from two large Swiss financial institutions, we found that pay systems are linked with divisional strategic orientation, but in a different form than prior studies. Additionally, we identify hierarchical position as an important variable in the tailoring of reward systems. Hierarchy has a significant main effect on pay plan design, and an interactive effect with strategic orientation.

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An organization's employees provide an important basis for a sustainable competitive advantage: Socially complex – i.e., people based – resources are considered more durable and less susceptible to imitation than other types of assets (Barney, 1991). As such, the strategic management of human resources can play a key role in an organization's survival. A firm's compensation plan plays a prominent role in recruiting, motivating, and retaining employees, and thus is central to building a durable advantage.

Consistent with this perspective, early compensation theorists (e.g. Salter, 1973) proposed that firms should match their compensation systems to their strategies. The matching hypothesis has been generally supported, with empirical studies of diversification (e.g. Kerr, 1985), type of product market strategy (e.g. Gupta & Govindarajan, 1984), and type of industry (Galbraith & Merrill, 1991). However, many of these early studies emphasize beneficial strategy-compensation combinations versus an explicit focus on fit between strategy and compensation (Rajagopalan, 1997). Additionally, there have been mixed results across studies (Balkin & Gomez-Mejia, 1990; Rajagopalan & Finkelstein, 1992), and questions regarding the generalizability of findings to date.

We make multiple contributions to existing research on strategic rewards. First, we provide a better understanding of the role that managerial discretion plays in the design of reward systems. Two studies have argued that managerial discretion is a key factor in the matching of pay practices to strategy (Rajagopalan & Finkelstein, 1992; Rajagopalan, 1997). In these papers, a firm's strategic orientation – measured via the Miles and Snow (1978) strategy typology – is viewed as a proxy for discretion. We confirm those findings, and also suggest that discretion varies substantially across levels of the managerial hierarchy. We also find that,

separate from their main effects, strategic orientation and hierarchy have a strong interactive effect on multiple aspects of pay plan design.

By testing our hypotheses with 917 employees from two large, Swiss financial institutions, we also provide an important test of the generalizability of prior findings to non-U.S. firms. Such studies have been identified as a prominent omission of current research on human resources: "Finally, the bias in compensation research toward American companies threatens the generalizability of this research to global settings. Until comparative research is conducted, it will be difficult to determine how this bias has influenced current theory and research. (Gomez-Mejia & Wiseman, 1997: 364)". Additionally, the results of prior international comparisons has been mixed: For example, Pennings (1993) concluded that agency models of incentives were *not* applicable to certain European contexts. In contrast, Roth & O'Donnell (1996) found support for an agency model of incentives, but that the effect varied at different levels of the organizational hierarchy.

LITERATURE REVIEW AND HYPOTHESES

Linking Pay and Strategy

As shown in Table 1, there are a number of empirical studies which have examined the matching of pay plan design to strategy. The bulk of these studies have used diversification as the measure of strategy. More recent studies, though, have examined the role of a firm's strategic orientation (Rajagopalan and Finkelstein, 1992; Rajagopalan, 1997). The level of diversification is a firm-level variable, while strategic orientation can vary substantially across divisions of a firm. As such, the latter variable has practical relevance to a wider range of human resource managers – i.e., those at both corporate and division levels. Additionally, strategic

orientation has seen comparatively less attention than diversification in prior compensation studies. Therefore, our focus is on the matching of pay plan design to strategic orientation.

An important contribution to clarifying the fit between compensation and firm strategy originated in the work of Balkin and Gomez-Mejia (1987), who found that the effectiveness of pay systems was contingent upon firms' strategic characteristics such as size, stage in the product life cycle, and technology emphasis. In a subsequent study (Balkin & Gomez-Mejia, 1990), the authors explored the implications of corporate and SBU strategies for pay package design. They classified firms by their degree of diversification, and the corresponding SBU by their growth vs. maintenance orientation. The authors suggested that both corporate and SBU strategies are significant predictors of the pay package design. Moreover, firms pursuing growth strategy placed more emphasis on incentive pay. However, several questions remain unanswered: is the degree of leverage (ratio of incentive to base pay) also related to firm and SBU strategies? Do these findings hold if we use other taxonomies of strategic orientation? Does organizational strategy affect the pay of all job clusters equally?

These questions are partially addressed in a study by Rajagopalan and Finkelstein (1992), who reported that strategic orientation has significant effects on compensation practices. Firms with discretionary strategic orientations made greater use of outcome-based rewards mechanisms (incentive and options plans), tied greater proportions of pay to performance, and offered higher overall compensation levels than did firms with more conservative strategic orientations. However, several questions were raised by their findings: their results for base pay were counter to those of Balkin and Gomez-Mejia (1990), and results on long-term incentives plans were

contrary to expectations. Finally, given the highly regulated nature of their sample – electrical utilities – it is unclear how well their sample mirrors that of other populations.[1]

More recent studies have yet to provide definitive conclusions on the subject. Wright, Smart and McMahan (1995) offer empirical support for links between strategies and human resources characteristics, but the study has limited relevance for most organizations, since the sample was made of basketball teams. Barkema (1996) concluded that top manager inclination to change the current strategy in the direction of more growth is curbed by their share holdings, but not by their bonuses. These results suggest that growing SBUs do not link bonus to strategy; which is contrary to other studies on this topic. Finally Rajagopalan (1997), in a subsequent study, found global support for the fit between compensation and firm strategy. These results were also based on a sample of highly regulated utilities, so the question of generalizability remains unanswered.

In summary, prior research has produced preliminary support for the notion that firms match their pay systems to their strategic orientation. Concurrently, other studies have found that a firm's strategic orientation can shape many aspects of internal structure and processes. For example, managerial philosophies (Zahra, 1987), planning systems (Boyd & Reuning-Elliott, 1998; Odom & Boxx, 1988; Shortell & Zajac, 1990) and human resources practices (Slocum et al., 1985) have all been found to vary according to strategic orientation. Consequently, the matching of pay and strategy has strong theoretical and empirical justifications.

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[1] A comparison of strategic orientation in their sample versus other studies reveals marked differences; presumably due to the high levels of government regulation for electrical utilities. For example, no firms in their sample were Analyzers, while Analyzer is the most commonly reported strategy in several studies (e.g., Boyd & Reuning-Elliott, 1998; Balkin & Gomez-Mejia, 1990; James & Hatten, 1995; Shortell & Zajac, 1990). Similarly, none of these studies reported having any Reactors; in comparison, 34% of firms in the Rajagopalan and Finkelstein sample were classified as Reactors. Recognizing this limitation, the authors concluded there was a need for replication using samples with more balanced strategy categories (Rajagopalan & Finkelstein, 1992: 139), as well as in more competitive markets (Rajagopalan, 1997: 782).

Strategic orientation

To categorize business-level strategies, we will adopt the Miles and Snow framework (1978), as it is one of the most commonly studied typologies (Zahra & Pearce, 1990). Their framework is predicated on three underlying domains: entrepreneurial, administrative, and technical. The entrepreneurial domain concerns the firm's markets, the administrative domain focuses on strategy execution, and the technical domain relates to underlying product and process technologies. Miles and Snow then distilled three primary approaches for addressing these domains: Prospectors have a strong market orientation, and emphasize new product development and early entry. Defenders, in contrast, have a strong internal orientation, and emphasize cost efficiency and a stable set of products. Analyzers follow a hybrid strategy, combining elements of both Prospectors and Defenders.

Rather than treat the Miles and Snow strategies as discrete categories, we follow the convention of recent research (Shortell & Zajac, 1990; Boyd & Reuning-Elliot, 1998), who subsumed them within a continuum of 'orientation towards change'. On this continuum, Prospectors represent a strong orientation towards change, and Defenders a weak orientation. A continuous measure offers a richer form of data than categorical measures; hence we use the 'strategic orientation' label in both our hypotheses and measurement. However, we will use the Prospector and Defender categories as a shorthand when developing our rationale, as they are widely understood, and serve as anchor points of the measure. Strategic orientation will be analyzed relative to key dimensions of the compensation package: compensation level (base salary), incentives (bonus), and risk exposure (pay mix) (Gomez-Mejia, 1994).

The Prospector type is characterized by uncertainty, growth perspectives, risks, innovation, and considerable managerial discretion (Miles & Snow, 1978; Hambrick & Snow,

1989; Snow & Hrebiniak, 1980). On the other hand, Defenders are defined by more stable demand, pressure for lower costs and prices, reliable quality, and less managerial discretion (Miles & Snow, 1978; Hambrick & Snow, 1989; Snow & Hrebiniak, 1980; Rajagopalan & Finkelstein, 1992).

Strategic orientation and discretion

Rajagopalan (1997: 764) has proposed that the firm's strategic orientation – and, by extension, the Miles and Snow strategy categories – are proxies for managerial discretion: "A firm's strategic orientation has direct implications for the type and extent of managerial discretion available to key executives within the firm."

Managerial discretion refers to the latitude of options top managers have in making strategic choices. Discretion has been applied empirically in a broad range of settings and operationalizations. For instance, discretion has been measured at the industry (Finkelstein & Hambrick, 1990), firm (Finkelstein & Boyd, 1998), and individual (Carpenter & Golden, 1997) levels. Similarly, discretion has been measured as categories (Finkelstein & Hambrick, 1990), multiple indicators (Finkelstein & Boyd, 1998), survey measures (Carpenter & Golden, 1997), and expert assessment (Hambrick & Abrahamson, 1995). It has been studied directly, and inferred indirectly (e.g., Rajagopalan & Finkelsteiin, 1992; Roth & O'Donnell, 1996). This broad range of prior use would suggest that discretion is fairly robust – i.e., applicable to a variety of contexts and measurement schemes.

Compensation plans that reward risk-seeking and long-term decision horizons seem appropriate for Prospectors because their strong incentive components reduce risk-aversion by managers (Holmstrom, 1979; Larcker, 1983) and minimize monitoring costs (Walsh & Seward, 1990). Conversely, pay packages oriented toward rewarding efficiency, short-term objectives

and past performance (Galbraith & Merrill, 1991) appear more suited to Defenders since their strong emphasis on base salary and benefits motivate less risky behaviors (Balkin & Gomez-Mejia, 1990; Hambrick & Snow, 1989) and foster adherence to past norms (Rajagopalan, 1997).

As a result, firms in Prospector positions should use larger incentives than Defenders companies, and their pay mix should reflect a higher leverage than Defenders ones. Additionally, strategic orientation should affect base pay as well. Since Prospectors strategies increase outcome uncertainty (Hambrick & Snow, 1989), higher base salaries are needed to offset this risk and attract and retain managers (Rajagopalan & Finkelstein, 1992). Similarly, since most Defenders compete on a basis of process efficiency and cost containment, there are typically less financial resources available, leading to lower base salaries (Hambrick & Snow, 1989). Consequently, our first hypotheses postulate a fit between compensation and strategic orientation:

H1: Base salary will be positively related to strategic orientation.

H2: Bonus pay will be positively related to strategic orientation.

H3: Pay mix will be positively related to strategic orientation.

The Role of Organizational Hierarchy

The contribution of our first three hypotheses is to replicate prior research in a different setting, and to address inconsistencies between prior findings. In this section, we extend on prior research by introducing hierarchy as a new variable in the study of strategic rewards. As shown in Table 1, the issue of organizational hierarchy has not been an explicit focus of prior studies, except from a sampling perspective. Of the studies on strategic orientation, two have addressed the top management team (Rajagopalan & Finkelstein, 1992; Rajagopalan, 1997), and one addressed all employees (Balkin & Gomez-Mejia, 1990). In contrast, studies on diversification

have not addressed CEO and TMT pay; rather, these studies have sampled division-level managers and those lower in the hierarchy.

There are discrepancies in the findings of prior studies, and hierarchy is a potential omitted variable which may explain such differences. For example, the use of incentives among firms pursuing growth-oriented strategies is very different for TMTs (Rajagopalan & Finkelstein, 1992) than for lower levels of the organization (Balkin & Gomez-Mejia, 1990). Similarly, in the context of diversification, very different findings on pay practices have been reported for corporate-level (Napier & Smith, 1987) versus lower-level managers (Berg, 1973; Pitts, 1976). Additionally, within the narrower context of TMTs, some studies have found systematic differences in pay packages for CEOs versus other top managers (Murphy, 1985; Rajagopalan & Prescott, 1990). Thus, there is an empirical basis to infer that hierarchy may be an important moderator in the design of pay systems.

Hambrick and Snow (1989) argued that a *strategic* compensation system should not treat general managers as a homogeneous lot, given the overall number and diversity of general management positions. Additionally, Milkovich (1988) noted that, since a broad range of employees are responsible for executing strategies, reward systems for these staff are of strategic importance. However, short of anecdotal data, no study has addressed this statement to date. As a result, a question raised by Balkin and Gomez-Mejia (1990: 164) still remains unanswered: "do strategic factors explain the pay policies of executives and sales representatives, and non strategic factors explain the pay policies that affect pay for production workers and clericals?" In other words, does the firm's strategy play a differing role in setting compensation as we move throughout the hierarchy?

Previously, Rajagopalan argued that strategic orientation is a proxy for discretion. Here, we suggest that hierarchical position may also be an indicator of discretion. Hambrick and Finkelstein (1987) focused their discussion exclusively on top managers. Yet, the roots of discretion – including determinism, managerial constraints, and superior-subordinate relations[2] – clearly apply to employees beyond top managers. If discretion is loosely defined as 'latitude of action', do higher level managers have greater latitude than those below? If so, what then are the implications for pay plan design?

Sitting at the 'strategic apex' of the firm, the chief executive clearly has the greatest opportunity to take action. By virtue of hierarchical position, the top executive has the strongest levels of reward, coercive, and legitimate power (Mintzberg, 1983). As a result, the top executive has broad latitude for action, being subordinate only to external powers such as the board and financial markets. Similarly, members of the top management team have considerable latitude, lessened only by their subordinance to the CEO. It is not surprising, then, that most discussions of managerial discretion are confined to senior staff.

Mintzberg (1983: 126), however, argues that even the lowest manager has some discretion: "We see shades of all of the same bases of power in the middle line. Each manager is, by definition, in charge of an organizational unit – a division, department, factory, shop, or whatever. And within that unit he is like a mini-CEO, with many of the same types of power over it that the CEO has over the whole organization." Concurrently, though, these managers will experience less latitude as they are increasingly subject to bureaucratic controls. Thus, rather than discretion 'ending' at the upper echelon, it is likely rather to flow down the hierarchy, albeit with greater and greater restriction.

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[2] For a brief review, see Pfeffer and Salancik's (1978: 244-47) discussion of discretion and organizational decision-

That said, can we extend discretion further down the hierarchy to non-managerial staff? Pfeffer and Salancik (1978) cautioned against the notion of powerless subordinates, noting that these staff "frequently controls resources or performance critical to the activities of the manager (1978: 246)." Additionally, professional staff typically possess specialized skills and knowledge, which limits the administrative controls that can be placed on them. Consequently, Mintzberg noted that professional staff "must be given considerable discretion in their work, and so come to amass a great deal of power (1983: 132)." Similarly, Finkelstein and Hambrick (1990) applied discretion to a study of strategic decision-making. While they found strong support for their hypotheses, they also noted that future research should address a broader spectrum of the hierarchy, as "lower level employees may be influential in professional firms or in those with emergent strategies (1990: 500)." Echoing our rationale, Carpenter and Golden (1997) reported that hierarchical position was the strongest covariate of an employee's perception of their own discretion.

Our first three hypotheses proposed that levels of all three pay components would be higher in more discretionary contexts, i.e., in divisions with a strong orientation toward change. If hierarchy is indeed a proxy for discretion, then we would expect this variable to have a similar effect on pay plan design. Therefore, we propose:

H4: Base salary will be positively related to hierarchical position.

H5: Bonus pay will be positively related to hierarchical position.

H6: Pay mix will be positively related to hierarchical position

Thus far, we have argued that both strategic orientation and hierarchical position are proxies for discretion. And, consistent with prior research (Rajagopalan & Finkelstein, 1992; Finkelstein & Boyd, 1998), we expect more emphasis on both base and incentive pay at higher

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making.

levels of discretion. In our final hypotheses, we suggest that there will be a synergisitic effect as well – i.e., that strategic orientation and hierarchy will have both main and interactive effects. Therefore:

H7: Strategic orientation and hierarchy will have an interactive effect on base salary.

H8: Strategic orientation and hierarchy will have an interactive effect on bonus pay.

H9: Strategic orientation and hierarchy will have an interactive effect on pay mix

METHOD

Sample

To enhance the generalizability of our findings, we collected data from two independent Swiss financial institutions. Using company records, we obtained data on compensation and demographic variables, for a total of 917 employees across the two firms. To ensure a representative group of employees, we used a random sample, stratified by each strategic business unit and hierarchical position. Within each SBU and hierarchical level, we sampled a proportional number of subjects, based on the size of that pool. A review of both firms indicate that divisions operate autonomously (Roth & O'Donnell, 1996): SBUs have control over production activity and innovation, marketing, and strategy. Additionally, profit and loss is calculated at the division level .

Sample 1. The firm was divided into five Strategic Business Unit: Private Banking (PB), Investment Banking (IB), Institutional Asset Management (IAM), Retail Banking (RB) and Logistic (LOG). In 1996, the bank employed a total of nearly 30,000 employees. In our sample, approximately two-thirds of the employees were male. The average age was 38 years, and mean tenure was 13 years. We sampled 401 employees from this firm.

Sample 2. The second firm was divided into five slightly different strategic divisions: Private Banking (PB), Investment Banking (IB); Institutional Banking (IAM), Retail Banking (RB) and

Corporate Clients (CC). In 1996, the bank employed nearly 40,000 employees worldwide. The male/female ratio of our sample was .69/.31, the average age was 39 years, and mean tenure was 12 years. We sampled 516 employees from this firm.

Measurement

Compensation. Data were collected from personnel records for two compensation variables: **total base salary** (using a log transform to normalize the distribution), and **total bonus pay**. From these, we computed the **degree of leverage**, defined as the ratio of bonus to base pay. By using archival measures of pay, we are free from problems of nonrespondent or common method bias. A comparison of means for these variables determined that neither base salary (t=1.28, p=.20) nor bonus pay (t=0.5, p=.0.62) differed significantly across samples

Strategy. Next, we coded a measure of strategic orientation for each business units. This measure subsumes the Miles and Snow strategic types under a continuum of 'orientation towards change'. On this scale, Defenders (coded '1') represent the low orientation towards change, Prospectors (coded '3') the high orientation towards change, and Analyzers (coded '2') the midpoint. Previously published analyses have demonstrated the reliability and validity of this continuum measure, including its correspondence with a number of archival indicators (Boyd & Reuning-Elliott, 1998; Shortell & Zajac, 1990).

Many studies have used either investigator or other expert opinion to assess a firm's strategic orientation (e.g., Meyer, 1982; Hambrick, 1983; Slocum, et al., 1985; Chaganti & Sambharya, 1987). As part of a broader project, one of the authors has been hired in the Human Resources Department of the Sample 1 bank for about 18 months, working across all five SBUs, including interviews with all of the subjects mentioned above, as well as with other executives and directors. Based on a combination of expert interviews and archival sources, and prior to this

research, the author evaluated each of the SBUs on multiple criteria, such as orientation towards new products and innovation, stage in the life cycle, market context, investment allocations, orientation toward costs, and strategic objectives[3].

Based on this information, each SBU was rated on the Shortell and Zajac orientation toward change scale. Next, this paper's co-author also classified the divisions, using descriptions of each area. Finally, the strategic orientation scores for each division were reviewed and vetted by key decision-makers within the firm. A similar process was used to evaluate the divisions of the second sample.

Hierarchy. Both companies used the same hierarchical structure with identical levels and designations. Position in the hierarchy was coded as a continuous variable, ranging from 0 (Employees) to 7 (Managing Director). We chose to measure hierarchy as a continuous variable versus a set of dummy indicators since the latter are less parsimonious, less powerful, and more problematic in the study of interaction effects (Cohen & Cohen, 1975).

Control variables. We included five control variables to provide a meaningful test of hypotheses, and to avoid omitted variable problems (Barkema, 1996). Our controls included both individual and division level factors. At the individual level, we controlled for age, gender (0/1 dummy variable, with '0' for male), and tenure. At the division level, we controlled for division size (number of employees) and financial performance (measured as EBIT).[4] A comparison of means indicated no significant differences between the two samples for any of our control variables,

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[3] We did not attempt to weigh these factors into any sort of cumulative or index score, as there was no empirical basis for doing so. Rather, we collected this information solely to provide a more detailed context for assigning business units to levels of the strategic orientation continuum.

[4] We did not include controls for education, due to differences in the Swiss educational system as compared to the United States. All employees sampled in the study were considered to be professional or white-collar employees; none of our subjects were clerical or secretarial staff. Additionally, each of our subjects had completed, at the very least, an apprenticeship program in the banking profession lasting four years; a rough analogue for collegiate education in the States.

with the exception of prior performance (t=6.96, p=.001). Data for the hierarchy measure and all control variables were obtained from company records.

Analysis

As with similar studies, there is the potential for colinearity between hypothesized predictors and control variables. To control for this potential, we follow the lead of other studies (e.g., Gomez-Mejia, 1992; Roth & O'Donnell, 1996) and used a hierarchical regression to test hypotheses. By comparing nested models, and entering predictor terms after all controls were introduced, we offer a conservative test of the unique variance explained by our hypotheses.

Table 4 reports three stages of models: First, we enter all control variables. Second, we introduce the main effects for strategic orientation and hierarchy concurrently. Finally, we introduce the interaction term between strategic orientation and hierarchy. Incremental F-statistics were used to formally assess the improvement in explained variance at each step.

RESULTS

Descriptive information

Table 2 provides descriptive statistics for our variables. For comparison purposes, we have included summary statistics for each of the two subsamples. To illustrate the potential interaction between strategic orientation and hierarchy, we report more detailed statistics in Table 3. This Table compares average levels of base salary, bonus, and leverage, for each combination of strategic orientation and hierarchical level. For parsimony, we report this information for subsample 1 only. As shown in the Table, levels of base salary do not vary systematically by strategic orientation, except at higher hierarchical levels. In contrast, Prospectors have the highest levels of bonus pay and leverage, regardless of hierarchical

position. Additionally, the differences between Defenders and Analyzers are minor, except for upper levels. Interestingly enough, the discrepancy between the highest and lowest overall wage in our sample represents a 13.5 coefficient (FTE converted base salary). For the highest and lowest paid bonus, this coefficient raises to 1428.6.

Results of hypothesis tests

The regression models in Table 4 explain a substantial amount of variance in our dependent variables: Adjusted R^2 was 0.89 for base salary, 0.48 for bonus, and 0.53 for leverage. Incremental F-tests reported that both main effect and interaction models were a statistically significant improvement. The Sample variable was significant for both bonus and leverage models. Therefore, while levels of base pay are comparable across the two firms, our second sample firm offered significantly lower (p=.001, both models) levels of bonus pay and leverage.

Base salary. Strategic orientation, hierarchy, and the interaction term were all significant (p=.01 or greater), and in the expected direction. Thus, hypotheses for base salary were fully supported. A graphic representation of the interaction in shown in Figure 1.

Bonus pay. All three independent variables were significant at the p=.001 level. The relationship was more complex than for base salary, however. In the main effect model, the coefficient for strategic orientation was nonsignificant, while hierarchy had a coefficient of 0.70 (p=.001). When adding the interaction term, the coefficient for hierarchy drops to 0.23 (p=.001), and strategic orientation has a *negative* coefficient of -.22 (p=.001).

Initially, it would appear that the effect for strategic orientation is counter to expectations. However, a surface map, shown in Figure 2, helps to clarify the relationship. The graph shows that the highest bonus levels are at the top of the hierarchy, and in divisions with a strong change orientation. At low levels, though, strategic orientation has a minimal effect on bonus pay. In

other words, sample firms offer more bonus pay in change oriented divisions; however, this matching is quite weak at lower levels, and quite strong at upper levels.

Leverage. The findings for this variable closely resemble those of bonus pay, including the same crossed interaction term. The surface map of the contingency relationship is shown in Figure 2, and differs only slightly in form from that of bonus pay. On average, leverage is higher in change oriented divisions, and at upper levels of the hierarchy. Again, tailoring is quite strong for upper levels, and fairly minimal at lower levels.

DISCUSSION

Research Findings

Our study offers some valuable insights into the design of strategic reward systems. Prior work has found that firms to tend to align their pay systems to their strategy, yet only a few studies (e.g., Rajagopalan & Finkelstein, 1992; Rajagopalan, 1997) have explicitly explored the link between strategic orientation and compensation plan design. A comparison of our results with prior studies is shown in Table 5. Our findings provide a useful confirmation and extension of this nascent line of inquiry. Specifically, we found that strategic orientation affects the pay of all employees, not just top managers. Additionally, orientation affects multiple aspects of the compensation plan, and this link holds – at least for our two sample firms – outside the US.

A second major contribution to theory is the role of hierarchy. Our findings indicate that the hierarchy component is an important element of the way firms design reward systems. Prior research (Balkin & Gomez-Mejia, 1990; Rajagopalan & Finkelstein, 1992) concluded that firms match their pay plans to strategic orientations. While our results echo the overall conclusion of these studies, there are also some important differences. First, the magnitude of the strategic orientation main effect varies with and without including the interaction term. Consequently, interpretation of the main effect, by itself, is inherently misleading. Second, the strong

significance of the hierarchy variable – both main and interaction effects – indicates that this relatively ignored variable warrants further attention.

While levels of managerial discretion are likely to increase substantially as one ascends the corporate hierarchy, very little work has addressed the intersection between hierarchy and discretion. Three key points emerge from our analysis: First, our study extends other work (Finkelstein & Boyd, 1998; Hambrick & Snow, 1989) which has suggested that managerial discretion is a major driver of pay systems. Specifically, our findings demonstrate that discretion is applicable to a broader range of employees than previously studied. More importantly, the interaction term demonstrates that firms weigh discretion and strategic orientation jointly when designing pay systems. Finally, our analysis also provides evidence that the discretion construct is generalizable to non-US firms.

Implications and Future Research

Unlike Bonus and Leverage, the factors influencing Base Salary seem to be very well delimited, since our control variables alone explain a substantial porportion of the variance. Thus, Base Salary can be viewed as more determined by individual characteristics (gender, age, hierarchical position) than by strategic orientation. However, the inclusion of hierarchy and its interaction term double the levels of explained variance. Given this fact, Base Salary, even if still strategic, tend to be is more static and more difficult to use as a strategic leverage.

In contrast, Bonus is largely explained by Strategic Orientation, Hierarchy and the interaction, which are under the control of the top management. As individual factors have little effect on the bonus, it is more flexible and easier to adapt to a strategic orientation. Consequently, Bonus should be considered as the favorite strategic compensation weapon, and since allying consistency and flexibility is one of the most challenging task in designing the pay

system, we would advocate to rely on Base Pay to preserve consistency, and on Bonus to foster flexibility.

One limitation of this paper is that we offer only a descriptive test of theory – i.e., what factors are found to explain the design of compensation plans. Equally interesting, and largely untested, is a normative analysis – i.e., what the implications of this 'matching' between strategy and pay systems for performance outcomes?

This question could be explored at multiple levels. For example, one study found that, while discretion was linked to executive pay, this relationship was stronger among high performers (Finkelstein & Boyd, 1998). Similarly, then, it would be useful to compare whether high and low performing firms – or SBUs – place differing emphasis on strategic orientation or discretion when designing pay systems. Do high performing Prospectors use equally large base salary cushions as their less effective counterparts? And, do they concentrate their incentives as heavily at the top end of the hierarchy? Exploring how the matching of pay and strategy today affects tomorrow's performance would provide valuable insights into the optimum design of reward systems.

A second approach would be to study this topic at a more fine-grained level. Our hypotheses assume that a specific pay system – i.e., the cushion of a large base salary, plus generous incentives – will encourage a level of risk-taking appropriate for a Prospector. However, given the nature of our data, we are unable to observe either attitudinal or behavioral correlates of these pay practices. It would be fruitful, then, to examine how such rewards affect individual attitudes towards risk, and actual risk-taking behaviors. Additionally, a panel design would help explore this issue more fully; for instance, how dynamic are the relationships between these variables?

Finally, the significance of the hierarchy effect – both main and interaction – demonstrates that we would have a substantial omitted variable problem had it not been included in our analysis. As we noted earlier, there are a number of strategic pay topics which have reported conflicting results when hypotheses have been tested at different hierarchical levels (e.g., Rajagopalan & Finkelstein, 1992 versus Balkin & Gomez-Mejia, 1990; or Napier & Smith, 1987, versus Pitts, 1976). So, it would be worthwhile to revisit these analyses, and determine whether hierarchy helps to resolve these inconsistencies.

CONCLUSION

The notion that firms match pay systems to corporate strategies has been widely held, but only rarely tested. Our study provides a useful confirmation and extension of prior studies. Based on our sample of two Swiss institutions, we conclude the following: (1) The role of strategic orientation in allocating pay is more complex than previously believed; (2) Organizational hierarchy plans an important role in this process; both independently, and in conjunction with strategic orientation; (3) The stability of our findings across firms, and the similarities to studies of US firms, suggest that US-based models of compensation may be more generalizable than previously thought.

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TABLE 1

SUMMARY OF RELEVANT RESEARCH

Study	Sample	Level	Pay Data	Time	Strategy Categories	Findings
(a) Studies of strategic orientation						
Balkin & Gomez-Mejia (1990)	192 HR managers, cross-industry	All employees	Survey	Cross-section	Dynamic growth (35%) Maintenance (65%)	Growth emphasize incentive pay, Maintenance emphasize cash
Rajagopalan & Finkelstein (1992)	50 electrical utilities	5 top paid executives	Archival	Pooled cross-section	Prospectors (28%) Defenders (38%) Reactors (34%)	Strategic orientation associated with higher cash and bonus pay, greater use of incentives. Same findings for CEO and TMT members.
Rajagopalan (1997)	50 electrical utilities	5 top paid executives	Archival	Pooled cross-section	Prospectors (28%) Defenders (38%) Reactors (34%)	Firm performance affected by match between pay and firm strategies.
(a) Studies of diversification						
Gomez-Mejia (1992)	243 HR managers, mfg firms	All employees	Survey	Cross-section	Diversification	Firm performance affected by match between pay and firm strategies.
Galbraith & Merrill (1991)	79 high technology SBUs	Unit manager	Self-report via survey		BCG-based categories	Pay package design linked to tactical strategies.
Kerr (1985)	20 firms, assorted industries	All employees	Survey	Cross-section	Diversification	Diversification strategies only weakly related to pay system design.
Napier & Smith (1987)	44 mfg firms	Division managers	Survey	Cross-section	Diversification	Bonus pay linked to diversification levels; criteria and basis for bonus unrelated to div. strategy.
Hoskisson, Hitt & Hill (1993)	103 *Fortune* firms	Division managers	Survey	Cross-section	Diversification	Emphasis shifts from corp. to division level performance as firm div. increases.
Govindarajan & Gupta (1985)	46 SBUs of Fortune 500 firms	Division managers	Survey	Cross-section	BCG-based categories	Support for a contingency model between pay plan design, SBU strategy, and performance.

Table 2. Descriptive Statistics

	Sample 2	N=516		1	2	3	4	5	6	7	8	9	10	11
	Sample 1													
	N=401	Mean		0.31	38.90	12.49	5246	451	1.96	2.72	5.38	4.97	19486	10.42
			S.D.	0.46	11.53	9.24	2498	497	0.76	2.16	5.13	0.23	55194	19.12
1	Gender	0.32	0.47	1.000	-0.191	-0.184	-0.185	0.113	0.135	-0.375	-0.279	-0.360	-0.184	-0.196
2	Age	38.44	9.96	-0.206	1.000	0.688	0.073	-0.013	-0.015	0.524	0.395	0.667	0.259	0.200
3	Tenure	13.28	8.67	-0.189	0.592	1.000	-0.011	-0.010	-0.034	0.540	0.429	0.539	0.309	0.264
4	Size Employees	5185	1928	-0.076	0.083	0.000	1.000	-0.593	-0.736	-0.003	-0.297	-0.035	-0.047	-0.076
5	Performance	222	491	-0.082	-0.196	-0.138	0.125	1.000	0.944	0.065	0.454	0.111	0.247	0.338
6	Strat. Orientation	1.87	0.83	-0.094	-0.071	-0.111	0.550	0.810	1.000	0.039	0.444	0.111	0.176	0.245
7	Hierarchy	2.05	1.51	-0.335	0.373	0.340	-0.050	0.130	0.061	1.000	0.853	0.910	0.601	0.582
8	SO x Hierarchy	3.91	3.75	-0.288	0.226	0.148	0.266	0.510	0.542	0.797	1.000	0.786	0.665	0.679
9	Base Salary (log)	4.95	0.18	-0.403	0.537	0.365	0.039	0.130	0.121	0.898	0.786	1.000	0.581	0.557
10	Bonus	17401	71075	-0.154	0.143	-0.034	0.112	0.190	0.179	0.611	0.689	0.646	1.000	0.916
11	Leverage	7.53	20.86	-0.202	0.151	0.009	0.143	0.222	0.204	0.697	0.733	0.694	0.952	1.000

Sample 1 is below diagonal. Correlations > .11 are significant at $p < .01$

Sample 2 is above diagonal. Correlations > .13 are significant at $p < .01$

TABLE 3

MEANS FOR COMPENSATION VARIABLES BY STRATEGY AND HIERARCHICAL POSITION

Hierarchy	Strat. Orient.	Defender	Analyzer	Prospector	Mean overall
1	Base salary	100	104	113	105
	Bonus	100	148	298	166
	Leverage	100	155	296	169
2	Base salary	148	137	144	143
	Bonus	337	491	819	532
	Leverage	228	368	578	379
3	Base salary	178	184	183	181
	Bonus	586	599	1500	910
	Leverage	331	333	848	513
4	Base salary	219	240	247	232
	Bonus	692	820	5787	1844
	Leverage	321	337	2349	768
5	Base salary	266	304	285	284
	Bonus	2933	3535	6004	4248
	Leverage	1138	1166	2152	1526
6	Base salary	356	393	454	402
	Bonus	5151	8045	23730	12594
	Leverage	1458	2008	5022	2884
7	Base salary	478	500	575	515
	Bonus	14776	12784	45092	23140
	Leverage	3225	2599	7730	4347
Mean overall		154	153	182	161
		1027	1117	4009	1886
		366	402	1146	595

For confidentiality reasons, relative numbers only are presented.
Base (=100) is for Strategic Orientation “Defender” at hierarchical level “1” (Employee)

TABLE 4

HIERARCHICAL REGRESSION SUMMARY

Variables	Base Pay (Logarithm)			Bonus			Leverage		
	Controls	Main Effects	Full	Controls	Main Effects	Full	Controls	Main Effects	Full
Gender (0=Male)	-.26***	-.06***	-.06***	-.13***	.05*	.06*	-.16***	.02	.03
Age	.52***	.31***	.31***	.18***	-.01	.01	.13***	-.05*	-.05
Tenure	.09**	-.09***	-.09***	.02**	-.16***	-.15***	.06	-.12***	-.12***
Sample (0=sample 1)	.00	-.01	-.02	-.05	-.07**	-.11***	-.01	-.04	-.08*
Size Employees	-.03	-.01	-.02	.07*	.10***	.10***	.09**	.11***	.12***
Financial Performance	.17***	-.03	-.03	.27***	.18**	.15**	.34***	.29***	.26***
Strategic Orientation		.11***	.07**		.00	-.22***		-.04	-.24***
Hierarchy		.78***	.71***		.70***	.23***		.71***	.30***
Strategy x Hierarchy			.09**			.58***			.52***
Model Adjusted R^2	0.49	0.89	0.89	0.11	0.43	0.48	0.16	0.50	0.53
F-Value	145.51***	891.78***	800.09***	20.38***	87.90***	92.54***	29.67***	113.36***	115.17***
Incremental F-Value		1598.19***	8.40**		256.17***	73.55**		304.98***	65.36***

Note: Coefficients are standardized Beta estimates. Significance levels: *p < 0.05; **p < 0.01; ***p < 0.001

TABLE 5

COMPARISON WITH PRIOR FINDINGS

	Base pay	Bonus	Leverage
Balkin & Gomez-Mejia (1990)	Growth strategies had lower base pay	Growth strategies had greater use of incentives	N/A
Rajagopalan & Finkelstein (1992)	Prospectors had higher base pay than Analyzers and Defenders	Prospectors had higher bonus pay than Analyzers and Defenders	Leverage higher for Prospectors
Current study	• Base pay higher with change oriented strategies • Base pay higher at upper levels • Strong interaction between change orientation and hierarchy	• Bonus pay higher with change oriented strategies, but only at upper levels of hierarchy • Bonus pay higher at upper levels of hierarchy	• Leverage higher with change oriented strategies, but only at upper levels of hierarchy • Leverage higher at upper levels of hierarchy

FIGURE 1

GRAPHIC MODEL OF INTERACTION EFFECT FOR LOG BASE PAY

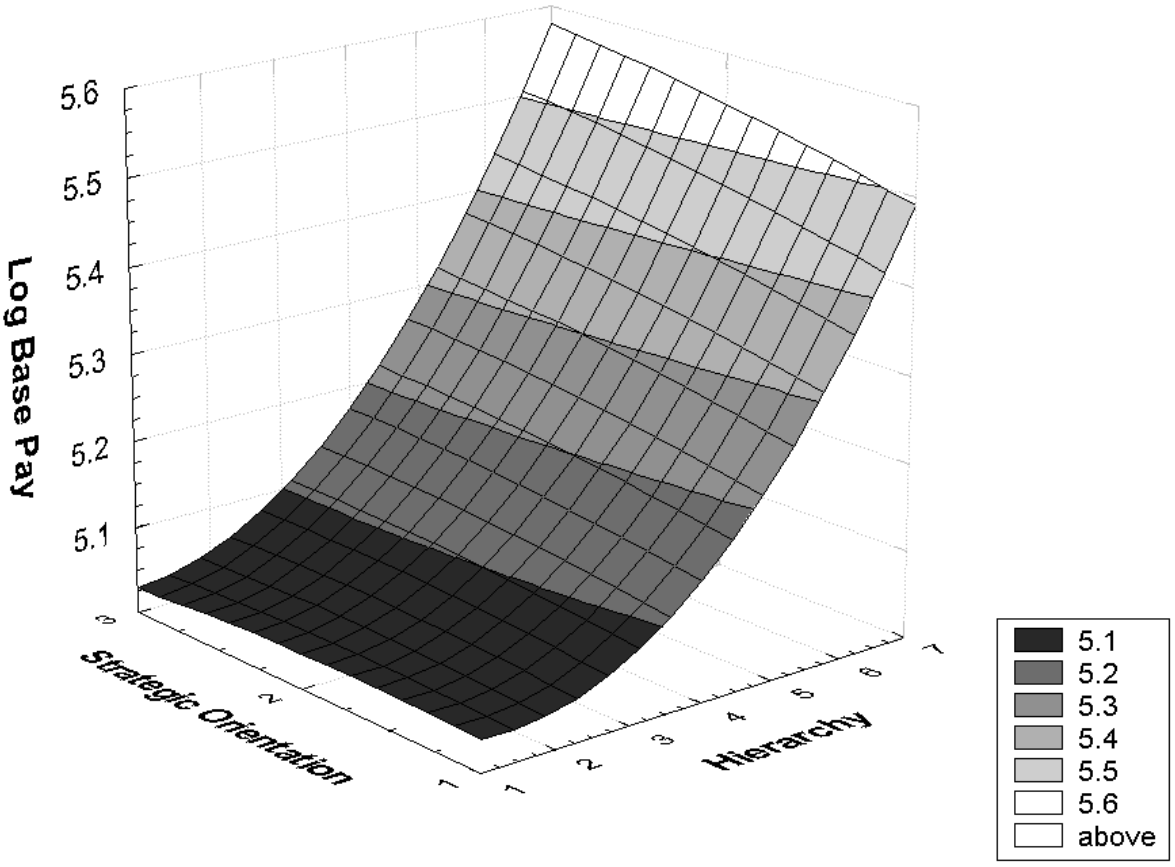

FIGURE 2

GRAPHIC MODEL OF INTERACTION EFFECT FOR BONUS

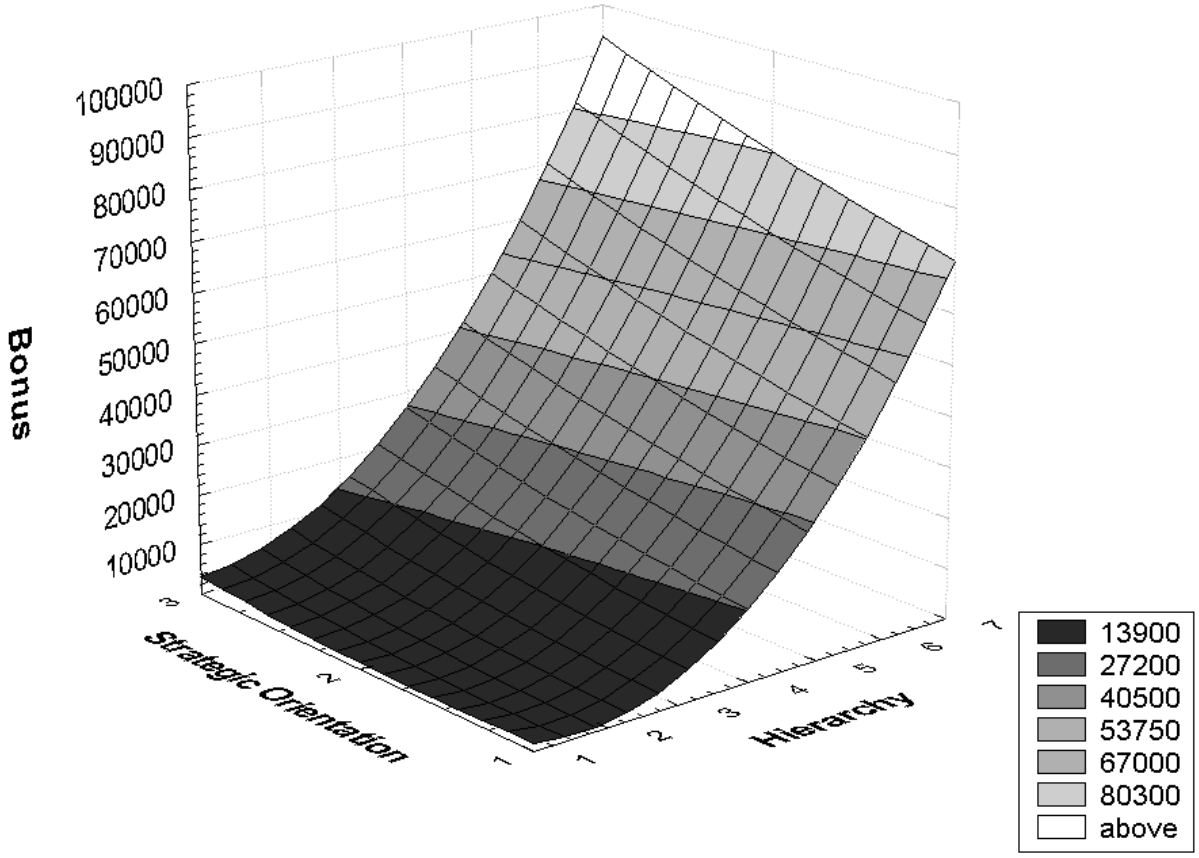

FIGURE 3

GRAPHIC MODEL OF INTERACTION EFFECT FOR LEVERAGE