© Academy of Management Journal
1995, Vol. 38, No. 6, 1672–1691.

OTHER PEOPLE'S MONEY: THE EFFECTS OF OWNERSHIP ON COMPENSATION STRATEGY AND MANAGERIAL PAY

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This study analyzes the compensation strategy of firms. We examined differences in the pay and incentives of lower-level managers in firms with different levels of management discretion. We found that firms with higher managerial discretion paid compensation premiums through higher salaries, greater bonuses, and more long-term incentives; however, changes in pay were not related to changes in performance, and high-discretion firms did not perform better than other types of firms.

Ten years ago, the academic discourse on executive compensation focused, almost without exception, on whether or not the compensation of chief executive officers (CEOs) in the largest U.S. corporations was designed so that executive decision making would be directed at improving firm performance. Currently, research on managerial compensation is beginning to examine pay and incentives *within* organizational hierarchies, shifting away from the focus on CEO pay to the study of the determinants of pay for lower-level managers (e.g., Abowd, 1990; Fisher & Govindarajan, 1992; Gerhart & Milkovich, 1990; Lambert, Larcker, & Weigelt, 1991, 1993). The dominant question, however, remains exactly the same as it was for CEO pay: To what extent does a firm's managerial compensation structure provide incentives to maximize its performance?

One way to answer the question is to understand the choices that are made in the design of firms' compensation strategies—the way that firms orchestrate different components of pay, such as base pay, bonuses and incentives, and benefits, so that they are effective motivational and control mechanisms with which to achieve different organizational performance objectives. Although numerous compensation strategy dimensions have

We are indebted to Professor George Milkovich and the Center for Advanced Human Resource Studies at Cornell University for making the data for this study available. We are grateful to Luis Gomez-Mejia, George Milkovich, Robert Keller, Paula Rechner, and two anonymous reviewers for their insightful and constructive comments on earlier drafts of this article. We would also like to thank Linda Pike for her editorial assistance.

been suggested in the literature (cf. Gomez-Mejia & Balkin, 1992), compensation decisions can be classified into four distinct areas of compensation policy (Gerhart & Milkovich, 1993). The first is the pay-level policy, which determines whether a firm will pay above, meet, or pay below the current market wage level (Milkovich & Newman, 1993). The second area is how firms make pay differentiation decisions at the individual level; how, for example, pay is related to performance or to organizational tenure. The third is the pay-structure policy, which governs the relationships between pay rendered at the various levels of an organization. Finally, the benefits policy is the basis for how a firm provides employees with indirect financial compensation. This article focuses on the first two areas, pay-level policies and pay differentiation at the individual level.

Drawing on concepts from agency theory and managerial capitalism, we addressed the question of whether the structure of the compensation of managers at lower levels of an organizational hierarchy is designed to motivate actions in the best interests of equity holders or those of the firm's incumbent management.

THEORY AND HYPOTHESES

Theoretical Foundations

In agency theory, firms are defined as systems of explicit and implicit contracts among those who participate in them. Owners are seen as principals who contract with agents (the managers) to "perform some service on their behalf which involves delegating some decision making authority to the agent" (Jensen & Meckling, 1976: 308). The principals face the problem of controlling the agents, because (1) both principals and agents are assumed to be rational and self-maximizing individuals with divergent interests, (2) agents can have private information that principals cannot gain without costs, so information asymmetry exists, and (3) agents are assumed to be averse to work and risk.

Control of an agent is sought through monitoring, risk sharing, or both. Monitoring involves gathering information on the agent's effort, on random external factors that may affect the success of the agent's efforts, and on the outcomes of the agent's activities (Jensen & Meckling, 1976; McGuire, 1988). Monitoring is unnecessary, however, if the principal and the agent share risks, because their goals will be aligned. But too much risk sharing may make the agent so risk averse that the principal's returns are adversely affected (Walsh & Seward, 1990). Incentive alignment, or goal alignment through incentives, can be achieved through contracts that make the agent's compensation contingent on outcomes of the agent's performance (Hunt & Hogler, 1990; McGuire, 1988).

Although the agency model has been extensively developed theoretically and has generated many hypotheses about CEO compensation, the results of empirical work based on the model have often been inconsistent with the theory's formal models of contracting (Jensen & Murphy, 1990).

This inconsistency is due in large part to internal political forces that affect contracts but are not accounted for in the theory or are not amenable to assessment with the methodology commonly used (Jensen & Murphy, 1990).

These political forces are considered in managerial capitalism, which places managerial power in a more central theoretical position (Berle & Means, 1932; Marris, 1964). Managerial capitalism has two key propositions. The first is that because high status, salaries, and security accrue to managers in large firms, firms operated by managers with a high degree of power will strive for growth, but firms operated by managers with lower power will strive for financial performance goals that maximize shareholder wealth. The second proposition is that ownership structure determines the degree of managerial power in a firm. Ownership structure is defined by the distribution of equity holdings. When equity holdings in a large firm are widely dispersed, principals have less influence over management and the board of directors, which, though formally charged with representing the owners, is in fact controlled by management. In these management-controlled firms, managers can act in their own interests at the expense of the owners. When equity holdings are more highly concentrated in a single stockholder, principals can exert more influence over management; in such a situation, a firm is owner-controlled. When managers have large equity holdings, a firm is called owner-managed. In owner-managed firms, there should be no principal-agent problem, because managers hold a significant share of the ownership. Thus, owner-managed firms should behave like owner-controlled firms (McEachern, 1975).

There is empirical evidence that a firm's ownership structure is reflected in the way top managers are paid, since compensation strategy is one way to align the incentives of principals and agents. Because they have more influence than the board of directors in setting their own compensation, managers who control a firm can reduce their compensation risk by designing pay structures that minimize the effects of fluctuating performance (Tosi & Gomez-Mejia, 1989). This is not the case in owner-controlled firms. Although evidence shows a strong relationship between firm performance and CEO pay in owner-controlled firms, pay is strongly related to growth and sales increases in management-controlled firms (Gomez-Mejia, Tosi, & Hinkin, 1987; McEachern, 1975).

Whether ownership structure affects the incentives of managers at levels lower than the top management team remains empirically untested, but theoretical work on agency problems within firms may be revealing. Fama and Jensen (1983) and Stiglitz (1975) proposed that internal agency problems are resolved when lower-level managers, who are themselves agents, act as principals because of decision hierarchies and mutual monitoring. Baker, Jensen, and Murphy (1988) theorized that there are a number of problems when managers within a firm act as principals, monitoring other agents further down the organizational hierarchy. First, unless the

agent-monitors are themselves monitored or there is risk sharing, they will have little reason to enforce value-maximizing contracts with subordinates. Second, monitoring may be unreliable, because agents must bear all of the monitoring costs, such as the effort necessary for monitoring, while receiving little benefit from more accurate monitoring.

Baker, Jensen, and Murphy's (1988) arguments suggest (1) that firms lacking compensation-performance alignment at the top will not show more alignment at lower hierarchical levels, and (2) that although there may be monitoring and incentive alignment at the highest managerial levels, there will be decrements in control, or control loss, as monitoring cascades through hierarchical levels (Williamson, 1967). In other words, the alignment of managerial compensation and firm performance may weaken at progressively lower levels of an organization's hierarchy. This should be apparent in the firm's compensation strategy.

Therefore, because ownership structure affects the way that top managers are paid, obvious differences in the compensation strategies of firms should be present as a function of their ownership structures. Our central thesis is that, because CEO incentive alignment is weak in management-controlled firms, incentive alignment will be weaker throughout such firms than it is in owner-controlled and owner-managed firms. We therefore formulated hypotheses about differences in the compensation strategies for managers at lower hierarchical levels in these types of firms. The hypotheses specifically focus on how ownership structure is related to two aspects of compensation strategy: pay-level policy and policies that govern individual differences in pay. Pay structure and benefit policies were not included because there was insufficient information available in the data set used for the analysis.

Hypotheses

Ownership structure and pay-level differences. Firms make decisions as to whether they should pay above, meet, or pay below prevailing labor market rates. Since evidence shows that agency costs to principals resulting from excessive CEO compensation are greater in management-controlled firms than in owner-controlled firms (Allen, 1981; Dyl, 1988; Santerre & Neun, 1989), this same relationship should hold at lower hierarchical levels, for two reasons. First, consistent with efficiency wage theory, paying above-market wages may make upper-level managers' jobs easier because such a strategy makes it easier to attract and retain high-quality employees. Second, because pay structures are linear, providing higher pay for subordinates will have the effect of elevating top-level managers' own pay. Thus, although all managers may elect to pay above the market rate to benefit themselves rather than the firm, managers in management-controlled firms may have the discretion to do so. Therefore, assuming that owner-managed firms behave like owner-controlled firms and that compensation strategies are reflected in actual pay levels,

Hypothesis 1: Management-controlled firms will have higher levels of management pay than owner-controlled and owner-managed firms.

Ownership structure and individual differences in pay. If monitoring and risk sharing do cascade through an organization, then the form they take at lower levels should be affected by their form at the highest levels, though it should be less pronounced at lower levels because of control loss. Research has shown that, with firm size controlled, CEO pay in owner-controlled firms is closely related to performance, but in management-controlled firms CEO pay is closely related to growth (Gomez-Mejia et al., 1987; McEachern, 1975). This finding suggests that there is greater compensation risk in owner-controlled and owner-managed firms because compensation strategies will be designed to link pay more strongly to firm performance, but in management-controlled firms compensation strategies will be designed to link pay more strongly to growth. Thus,

Hypothesis 2: Changes in managerial pay will be related to changes in financial performance in owner-controlled and owner-managed firms and to changes in size in management-controlled firms.

Pay can be linked to firm performance through long-term or short-term incentives. Short-term incentives do not shift as much risk to managers as long-term incentives, since long-term goals may be less clear and more uncertain. According to managerial capitalism, pay in management-controlled firms has a short-term orientation: Risk-averse managers should prefer to avoid long-term incentives because they are far more uncertain and risky. Thus,

Hypothesis 3: The percentage of managers eligible for long-term performance incentives in owner-controlled and owner-managed firms will be greater than in management-controlled firms.

Two questions about compensation strategy that reflect pay risk are (1) what proportion of total pay should be placed at risk through incentives, and (2) what proportion of the workforce should be eligible for bonuses. Incentives are related to high organizational performance (Terborg & Ungson, 1985), individual performance (Asch, 1990), shareholder return (Abowd, 1990), productivity (Frisch & Dickinson, 1990), and employee retention (Lakhani, 1988) and to low absenteeism (Jacobson, 1989). The following predictions are consistent with Hypothesis 2 and the finding that high percentages of variable managerial pay have positive effects on subsequent firm financial performance (Gerhart & Milkovich, 1990).

Hypothesis 4: The percentage of employees eligible for bonuses will be greater in owner-controlled and owner-managed firms than in management-controlled firms.

Hypothesis 5: Bonuses will account for a higher percentage of managerial pay in owner-controlled and owner-managed firms than in management-controlled firms.

Although the five hypotheses concentrate on the relationship of ownership structure to compensation strategy, other variables play important roles. For example, firm size, firm performance, organizational level, responsibility, type of industry, and human capital indicators such as age, tenure, and experience have been shown to be associated with pay (Becker, 1964; Brown & Medoff, 1989; Fisher & Govindarajan, 1992; Gerhart & Milkovich, 1990; Milkovich & Newman, 1993; O'Reilly, Main, & Crystal, 1988). Thus, we controlled for their effects in the analysis that follows.

METHODS

Sample

The hypotheses were tested with compensation data from a database provided by the Center for Advanced Human Resource Studies (CAHRS) at the Cornell University School of Industrial and Labor Relations, and with data on ownership structures obtained from proxy statements. The CAHRS database, which was collected by a large compensation consulting firm, covers the years from 1981 to 1988 and contains compensation information from over 800 organizations on more than 200,000 managers. Broad spectra of positions (e.g., CEOs, profit center heads, and human resources generalists) and functional areas (e.g., manufacturing, marketing, and finance) are represented. Managers are categorized into 12 hierarchical levels. "Level 1" designates an organization's top level, and all CEOs are in this category. Higher numbers designate successively lower managerial levels; for instance, the lowest-level supervisor in a firm with 12 levels would be "level 12." Firms contributed to the database for an average 3.6 years.

Firms were only included in this study if ownership data on them were available and their ownership structures did not change in the years for which their compensation data were reported. These restrictions resulted in a sample of 307 firms from 34 industries. The firms averaged $4.86 billion in assets, 28,400 employees, and $5.30 billion in sales.

Measures

Because the hypotheses relate firm ownership to firm compensation strategy, all variables were analyzed at the firm level. We computed average variable values for the number of years a firm was in the CAHRS database because pooling data across years provides more accurate, reliable, and valid measures (Gomez-Mejia et al., 1987; McEachern, 1975; Zajac, 1990). For variables used in the test of pay's sensitivity to changes in performance (Hypothesis 2), we computed change scores. All financial data were adjusted to December 1992 dollars using the Consumer Price Index.

Measures of compensation strategy. Measures were developed to as-

sess how firms approached the compensation strategy dimensions of pay level and individual differences in pay.

The pay-level policy, the dependent variable of Hypothesis 1, was assessed with two variables, base pay and base and bonus. *Base pay* is the average of all surveyed managers' base salaries. *Base and bonus* is the average of all surveyed managers' salaries plus bonuses they received.

How individual pay is differentiated by a firm's compensation strategy policy, the dependent variable of Hypotheses 2–5, was assessed with four indicators of how firm performance is related to pay. One is *change in base and bonus,* measured by the average base and bonus in year t minus the average base and bonus in year $t - 1$, all divided by average base and bonus in year $t - 1$ for all surveyed managers for all years available. The second is the *percentage of managers eligible for long-term performance incentives,* calculated by dividing the number of surveyed managers who are eligible for long-term performance incentives by the total number of surveyed managers in each firm. The third is the *percentage of employees eligible for bonus,* calculated by dividing the number of employees eligible for bonus by the total number of employees per company. The fourth is the *bonus to base and bonus ratio,* calculated by dividing the average bonus of surveyed managers by the average base and bonus of surveyed managers in each firm.

Ownership structure. *Ownership structure* is a discrete variable that classifies as owner-controlled those firms ($n = 154$) in which at least 5 percent of the outstanding stock is in the hands of one individual or organization that (1) was not involved in the actual management of the company, (2) did not deny beneficial ownership, (3) did not report only disposition rights, or (4) was not an employee benefit plan (Gomez-Mejia et al., 1987; McEachern, 1975; O'Reilly et al., 1988).[1] Otherwise, firms were designated as management-controlled ($n = 112$), unless there was a manager with a 5 percent holding, in which case they were designated as owner-managed ($n = 41$). Empirical work has demonstrated the suitability of the 5 percent cutoff as a proxy for managerial power (Hunt, 1986; Tosi & Gomez-Mejia, 1989) and its validity as measure of managerial control of the compensation process (Tosi & Gomez-Mejia, 1994).

Control variables. Measures were obtained for four classes of controls: organizational variables, human capital variables, job properties, and industry variables. Organizational variables included size and financial performance. Human capital variables included years of education and years of experience, each aggregated by firm (Gerhart & Milkovich, 1990). Job properties included job level and number of employees supervised, each aggregated by firm. Dummy variables were used to control for industry ef-

[1] Beneficial ownership and disposition rights are terms used by the Securities and Exchange Commission to define a condition of ownership in which voting rights are not granted.

fects (Fisher & Govindarajan, 1992; O'Reilly et al., 1988). The Appendix gives details of control variable measurement.

Analysis

The hypotheses were tested using ordinary-least-squares (OLS) regression analysis. Models were specified with the dependent and independent variables relevant to each hypothesis. We included size, performance, the job variables, the human capital variables, and the industry dummy variables as controls when they were applicable because of their association with pay (Becker, 1964; Brown & Medoff, 1989; Fisher & Govindarajan, 1992; Gerhart & Milkovich, 1990; Milkovich & Newman, 1993; O'Reilly et al., 1988).

RESULTS

Table 1 shows the correlation matrix. Subsequent tables show both standardized and unstandardized regression coefficients, the significance of each variable in the model, and each model's R^2 and adjusted R^2. The results of the hypothesis tests are grouped by the two compensation policy dimensions that were studied.

Ownership Structure and Pay-Level Differences

Dependent variables for Hypothesis 1 were base salary and pay level. Hierarchical regression analysis was used to show the variance accounted for by ownership structure after all control variables had been entered into the equation. Table 2 shows the regression weights, betas, and standard errors for the variables in the four models (the 33 industry dummy variables were included in the model but are not shown on the table). The base and bonus of managers in owner-controlled and owner-managed firms is significantly lower than it is in management-controlled firms. The effects of ownership on base pay approached conventional significance levels ($p < .06$).

Identical regression models for base and bonus were computed for managers from the first through the sixth hierarchical levels.[2] The results are shown in Table 3. For this analysis, the control variables are averages by level rather than across each firm. The mean number of employees supervised was not included in the model for CEOs (level 1) because it would be equivalent to the total number of employees in the firm, a value used to create the size variable. Compared with owner-controlled firms, management-controlled firms pay their managers more at all six hierar-

[2] There was no analysis of the cascading effects below the sixth organizational level because, with the large number of industries used as control variables ($n = 34$), the number of cases that had more than six levels was too small and would produce meaningless results. There were instances in which the same problem occurred for analyses involving owner-managed firms.

TABLE 1
Correlation Matrix for Pay-Level Variables[a]

Variable	Mean	s.d.	1	2	3	4	5	6	7	8
1. Performance	0.00	0.96								
2. Size	0.00	0.84	.08							
3. Mean number of employees supervised	1,378	2,124	.09	.67**						
4. Mean level	3.91	0.71	.01	.25**	−.06					
5. Mean experience	21.44	4.27	.02	.41**	.40**	.12*				
6. Mean education	16.47	0.59	.05	.23**	.25**	−.23**	−.01			
7. Mean base pay[b]	$125.9	$44.4	.08	.50**	.70**	−.28**	.39**	.56**		
8. Mean base and bonus[b]	$158.6	$67.7	.17**	.49**	.74**	−.26**	.40**	.51**	.96**	
9. Owner-controlled firm			−.11	−.29**	−.27**	−.11*	−.13*	−.09	−.23**	−.24**
10. Management-controlled firm			−.01	.40**	.39**	.13*	.31**	.16**	.36**	.37**
11. Owner-managed firm			.17**	−.15**	−.16**	−.02	−.24**	−.09	−.18**	−.17**

[a] N ranges from 272 to 307.
[b] Expressed in thousands.
* $p < .05$
** $p < .01$

TABLE 2
Results of Hierarchical Regression Analysis for the Model of the Relationship Between Ownership and Managerial Pay Level[a]

	Base and Bonus				Base Pay			
	Step 1		Step 2		Step 1		Step 2	
Variables	*b*	*β*	*b*	*β*	*b*	*β*	*b*	*β*
Mean level	−$16,910**	−.18	−$17,638**	−.19	−$13,575**	−.22	−$13,933**	−.23
	($3,391)		($3,361)		($2,274)		($2,272)	
Mean education	$35,559**	.31	$34,665**	.30	$26,418**	.36	$25,986**	.35
	($3,925)		($3,892)		($2,632)		($2,631)	
Mean experience	$2,450**	.16	$2,155**	.14	$1,837**	.18	$1,695**	.17
	($564)		($571)		(379)		($385)	
Mean number of employees supervised	$21**	.62	$21**	.61	$11**	.49	$11**	.48
	($1.5)		($1.5)		($1.0)		($1.0)	
Performance	$5,725**	.08	$6,310**	.09	−$105	.00	$170	.00
	($2,268)		($2,283)		($1,521)		($1,543)	
Size	−$51	−.00	−$2,339**	−.03	$4,452	.08	$3,335	.06
	($4,250)		($4,275)		($2,850)		($2,890)	
Owner-controlled firm			−$13,095**	−.10			−$6,431	−.07
			($4,957)				($3,351)	
Owner-managed firm			−$15,044*	−.08			−$7,213	−.06
			($7,070)				($4,779)	
R^2	.81**		.82**		.80**		.80**	
Adjusted R^2	.78**		.78**		.76**		.76**	
ΔR^2			.01				.00	

[a] $N = 271$. Values in parentheses are standard errors.

* $p < .05$

** $p < .01$

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TABLE 3
Results of Regression Analysis for the Relationship of Ownership to Base and Bonus, by Hierarchical Level[a]

Variables	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Mean education	$7,781	$39,537	$30,467	$20,834	$18,101	$8,708
	(.03)	(.19)**	(.21)**	(.24)**	(.39)**	(.29)**
Mean experience	$3,250	$3,823	$2,755	$2,628	$1,751	$1,049
	(.07)	(.13)*	(.14)**	(.22)**	(.21)**	(.18)**
Mean number of employees supervised		$7.39	$16.5	$25.6	$17.9	$27.9
		(.50)**	(.52)**	(.44)**	(.27)**	(.33)**
Performance	$32,695	$25,324	$8,808	$4,505	$1,153	−$359
	(.09)	(.14)**	(.09)*	(.07)*	(.03)	(−.01)
Size	$265,742	$36,761	$24,124	$17,890	$15,318	$16,169
	(.58)**	(.17)**	(.20)**	(.24)**	(.30)**	(.38)**
Owner-controlled firm	−$114,850	−$45,535	−$23,221	−$10,260	−$7,899	−$7,299
	(−.17)**	(−.14)**	(−.13)**	(−.09)*	(−.10)*	(−.10)*
Owner-managed firm	−$219,063	−$43,013	−$22,206	−$10,992	−$8,001	−$9,339
	(−.22)**	(−.09)	(−.08)*	(−.06)	(−.07)	(−.09)
R^2	.60**	.65**	.76**	.77**	.79**	.75**
Adjusted R^2	.52**	.58**	.72**	.72**	.75**	.69**

[a] Data presented are unstandardized coefficients, with standardized betas in parentheses. Subsample *n*'s are as follows: level 1 = 264, level 2 = 267, level 3 = 270, level 4 = 258, level 5 = 239, level 6 = 200.

* $p < .05$

** $p < .01$

chical levels studied ($p < .05$). This also appears to be the case for owner-managed firms, though the regression coefficients are significant only for levels 1 and 3 ($p < .05$).

The tests of Hypothesis 1 show the cost of being a manager in an owner-controlled or managed organization. Managers in these firms earned an average of $6,431 and $7,213 less in salary and $13,095 and $15,044 less in base and bonus, respectively, than those in management-controlled firms when individual, job, organization, and industry effects were controlled. These figures vary substantially by hierarchical level, with greater differences appearing at higher levels (see Table 3).

Ownership Structure and Individual Pay Differentiation Strategy

Hypothesis 2 assessed the sensitivity of changes in pay to changes in performance and size as a function of ownership structure. It was tested only for firms that participated in the survey for at least two consecutive years and were in an industry represented by three or more firms in the sample after the data were separated by ownership. The results of the test for the whole sample, displayed in Table 4, show that change in performance ($p < .01$) was related to change in base and bonus for owner-controlled firms but not for the management-controlled firms. Change in size was not significantly related to change in base and bonus for either owner- or management-controlled firms.

The cascading effects of incentive alignment were tested with identical models of base and bonus by hierarchical level for levels 1 through 6 for owner- and management-controlled firms, with industry dummy variables included. Because no industry dummy variables were significant and each adjusted R^2 was reduced with the inclusion of the industry controls for both the owner-controlled and management-controlled subsamples, we analyzed the models without the industry controls. In the owner-controlled firms, change in base and bonus was significantly related to change in performance for managerial levels 1 and 3 ($p < .05$) and approached significance for level 2 ($p < .06$). There were no such effects in management-controlled firms. Table 4 reports the regression weights and betas for the top three levels of these firms. Levels 4–6 are not reported because no effects of changes in performance or size were found for either management- or owner-controlled firms.

The results of the test of Hypothesis 3, designed to assess the use of long-term incentives in the different classes of ownership, were in the direction opposite of the prediction. Table 5 shows that management-controlled firms made greater use of long-term incentives than owner-controlled and owner-managed firms ($p < .01$). Hypothesis 4, which specifies the relationship between ownership structure and the percentage of employees eligible for bonus, was supported in part, as Table 5 shows. Owner-managed firms have significantly greater percentages of bonus-eligible employees than management-controlled firms ($p < .05$). Table 5 also shows opposite results for the test of Hypothesis 5, which states that firms with

TABLE 4
Results of Regression Analyses for Changes in Base and Bonus and Changes in Performance, by Hierarchical Level[a]

Variables	Owner-Controlled Firms				Management-Controlled Firms			
	All Levels	Level 1	Level 2	Level 3	All Levels	Level 1	Level 2	Level 3
Change in mean level	−0.56**				−0.31			
	(−0.30)				(−0.25)			
Change in mean education	1.01*	−1.20	1.97**	2.11**	−1.57	−0.46	0.56	1.34
	(0.08)	(−0.34)	(0.40)	(0.49)	(−0.32)	(−0.17)	(0.09)	(0.22)
Change in mean experience	−0.16	−0.04	0.01	0.32	−0.16	−0.01	0.65**	0.32
	(−0.05)	(−0.03)	(0.01)	(0.25)	(−0.09)	(−0.01)	(0.42)	(0.22)
Change in mean number of employees supervised	0.31**		0.00**	0.01	0.29**		0.01	0.10**
	(0.83)		(0.36)	(0.14)	(0.66)		(0.08)	(0.38)
Base and bonus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.04)	(0.07)	(−0.16)	(0.05)	(0.10)	(−0.15)	(−0.08)	(−0.03)
Change in size	−0.01	0.00	0.00	0.01	−0.02	−0.01	0.06	0.01
	(−0.02)	(0.02)	(−0.03)	(0.11)	(−0.17)	(−0.07)	(0.27)	(0.06)
Size	−0.03	−0.09	−0.02	−0.01	0.00	0.00	0.00	−0.02
	(−0.05)	(−0.21)	(−0.05)	(−0.02)	(−0.06)	(0.03)	(0.01)	(−0.19)
Change in performance	0.03**	0.05*	0.03	0.04**	0.01	0.02	0.03	0.02
	(0.10)	(0.29)	(0.22)	(0.32)	(0.20)	(0.20)	(0.24)	(0.16)
Performance	0.01*	0.03	0.03*	0.01	0.00	0.01	0.01	−0.01
	(0.08)	(0.24)	(0.24)	(0.17)	(0.00)	(0.12)	(0.10)	(−0.12)
R^2	0.93**	0.19*	0.34**	0.29**	0.36**	0.08	0.25	0.33*
Adjusted R^2	0.92**	0.11*	0.25**	0.21**	0.23**	0.00	0.13	0.22*

[a] Data presented are unstandardized coefficients, with standardized betas in parentheses. Subsample *n*'s are as follows: owner-controlled all levels, $n = 73$, level 1 = 72, level 2 = 72, level 3 = 73; management-controlled, all levels, $n = 56$, level 1 = 56, level 2 = 56, level 3 = 56.

* $p < .05$

** $p < .01$

TABLE 5
Results of Regression Analysis for Relationship Between Ownership and Incentives[a]

Variables	Percentage of Managers Eligible for Long-Term Incentives	Percentage of Bonus-Eligible Employees	Percentage Bonus Pay to Base and Bonus for Managers
Size	.02	.00	.02*
	(.06)	(.01)	(.15)
Performance	.04	−.01	.03**
	(.11)	(−.09)	(.31)
Owner-controlled firm	−.11**	.02	−.03*
	(−.18)	(.08)	(−.16)
Owner-managed firm	−.23**	.05*	−.06**
	(−.25)	(.16)	(−.21)
N	303	295	306
R^2	.20**	.23**	.30**
Adjusted R^2	.09**	.12**	.21**

[a] Data presented are unstandardized betas, with standardized betas in parentheses.
* $p < .05$
** $p < .01$

influential owners will design compensation strategies in which bonuses are more extensively used than they are when managers are in control. Management-controlled firms had a significantly higher percentage of bonus to base and bonus than those that were owner-controlled or managed ($p < .01$).

DISCUSSION

Several implications of the results are worth noting. One is the pervasiveness of a lack of incentive alignment in management-controlled firms. Another is the differential costs of compensation strategies to the equity holders of owner-controlled firms and management-controlled firms. Results also provide some insights that embellish the story of how political processes operate to decouple compensation strategy from firm performance while maintaining the appearance of economic rationality when managers control firms.

Compensation Premiums, Control Loss, and Incentive Alignment

The test of Hypothesis 1 showed that pay premiums found in management-controlled firms at the CEO level are mimicked for managers at lower hierarchical levels. Overall, managers at the hierarchical levels studied were paid 8.2 percent more than managers in owner-controlled firms and 9.5 percent more than those in owner-managed firms. The pay differences are exaggerated at higher organizational levels. For example, the average base and bonus of CEOs in management-controlled firms was

$219,000 (29.5 percent of average CEO pay) higher than that of their counterparts in owner-managed firms. At the sixth hierarchical level, the average base and bonus differential was $9,300 (15.4 percent of average pay for sixth-level managers). These results are consistent with those of other studies of internal pay levels, which found negative relationships between the pay of top-level managers in firms and equity concentration (Lambert et al., 1993; O'Reilly et al., 1988).

There is no apparent economic justification for such premiums for the firms in this study; the management-controlled firms did not perform better than the owner-controlled firms, and they were significantly worse performers than the owner-managed ones.[3] Therefore, these premiums can be considered a lower bound of an estimate of the agency costs incurred in management-controlled firms. The average firm in this study had around 8,000 exempt employees, including both managers and professionals. Assuming the same compensation differences apply to professional employees as to managers, the mean base-and-bonus premium in management-controlled firms is about $105 million more than it is in owner-controlled firms and about $120 million more than in owner-managed firms. Thus, although the amount of variance in average pay per employee explained is modest, the financial impact is large.

Not only are there substantial managerial pay premiums in management-controlled firms—there are also compensation strategies apparently designed to decrease compensation risk for managers throughout the firms. Lower risk for CEOs in these firms (e.g., Gomez-Mejia et al., 1987; McEachern, 1975) is mimicked for managers at lower levels. Changes in performance were related to changes in pay for only the top levels in owner-controlled firms. In firms controlled by their management, there was no relationship between changes in pay and changes in firm performance for any executive level. In these firms, pay for lower-level management groups is decoupled from firm performance and not aligned with owners' interests, leaving them with less compensation risk than their peers in owner-controlled firms.

These results have implications for the control of internal agency problems. In an owner-controlled firm, the pay and incentives designed by the dominant coalition align managerial interests with those of own-

[3] A result not reported here showed that there was no difference in the performance of owner-controlled and management-controlled firms. Further, although Hunt (1986), in reviewing the literature on ownership structure, concluded that there were no performance differences related to type of control, there are some other bases for arguing that owner controlled firms do perform better. First, the research cited by Hunt (1986) is equivocal in the matter of performance differences between ownership structures, but it is very possible that in those studies the performance differences between owner-controlled and management-controlled firms are actually larger than reported, because management-controlled firms choose accounting methods that overstate results in favorable ways (Biddle & Lindahl, 1982; Salamon & Smith, 1979). Second, a recent study by Tosi and Gomez-Mejia (1994) found that compensation process monitoring was higher in owner-controlled firms and, more important, it was correlated with firm performance.

ers. Consistent with the notion of control loss, incentives are less strongly related to improving firm profitability at lower managerial levels. There are two possible explanations for this finding. One is that aligning the interests of a firm's dominant coalition with those of its owners is enough to lead to performance improvements. The other is that the alignment of incentives at the top hierarchical levels by strong pay-performance links is translated into other types of performance criteria or other types of control mechanisms at lower levels that still effectively provide motivation to strive toward better economic performance.

The issue of control loss may be moot in management-controlled firms, where there is weaker incentive alignment and lower compensation risk for CEOs and, at the same time, less monitoring of the compensation process than in owner-controlled firms (Tosi & Gomez-Mejia, 1989, 1994). The question that remains is, what are the bases of control criteria at lower executive levels within management-controlled firms? We would speculate that they are related to perpetuating the power of dominant coalitions and reducing managerial risk while maintaining a facade of economic rationality.

The unanticipated lack of support for Hypotheses 3–5 affords a useful opportunity to think a bit further about these political processes. We proposed that owner-controlled firms would put more pay at risk for more employees than management-controlled firms. However, just the opposite is the case in these data. Further, these firms pay larger bonuses, which make up a larger proportion of base and bonus than those paid in owner-controlled and owner-managed firms. In fact, bonuses account for more than 50 percent of the difference between management-controlled and owner-controlled firms in base and bonus.

One explanation for these results is that the bases for determining bonuses vary with ownership structure. The typical approach to determining bonuses is to allocate a percentage of profits to a bonus pool, portions of which are then allocated to individual senior managers (Hills, 1987). In owner-controlled firms, the triggering mechanism for the size of the bonus pool and the basis for its distribution to lower-level managers appears to be improvements in firm performance. In management-controlled firms, the triggering mechanism is not so obvious and, further, is under the control of the dominant management coalition (Tosi & Gomez-Mejia, 1989). More than likely, the measures of performance used to determine bonuses change from year to year, reflecting indicators that are more advantageous to the internal managers (Crystal, 1991: 15). Thus, in management-controlled firms bonuses may not reflect risk, but rather, may serve as a discretionary mechanism for providing higher levels of pay to managers.

Conclusion

Several caveats must be taken into account when considering the present results. First, the firms surveyed and the individual managers included in the survey do not constitute a random sample. Thus, the aver-

aged data may be biased if there were differences in the response patterns of the firms. Second, the sampled firms are more representative of *Fortune* 500 firms than of the average American firm, which may limit the generalizability of the findings. Third, the data contain neither the actual nor the estimated values of benefits and long-term incentives, nor is there any information about how bonuses were actually determined, which limits our ability to test the performance sensitivity of these plans. Further, it is likely that the consulting firm that collected the data used a somewhat standard set of recommended practices, such as job evaluation methods and industry surveys, which may limit the variance in the compensation strategies of the surveyed firms that were clients, increasing the difficulty of detecting true effects of ownership structure. Last, the testing of Hypothesis 2 involved the use of change scores, which have been the subject of considerable debate (see, for example, Tisak and Smith [1994] and Edwards [1994]). However, change scores have been conventionally used in testing pay sensitivities (e.g., Gomez-Mejia et al., 1987; Kerr & Kren, 1992; Lambert et al., 1991; Lewellen, 1968). Further, because archival measures of the type used here have less systematic error and higher reliability than individual-level, psychologically based measures, their use in the analysis of pay-performance sensitivities is less problematic (Tisak & Smith, 1994).

These limitations notwithstanding, the results show how the divergent interests of managers and owners are reflected in compensation strategies for top and upper-middle executives, which are a function of ownership structure. Further, they suggest other issues to be investigated that might broaden knowledge of pay and incentives and how they are used by firms. One is the performance criteria employed at middle hierarchical managerial levels and the relationship of these criteria to those used at the top levels and whether or not systematic differences between firms emerge as a function of ownership structure and firm performance. A second is the extent to which pay criteria may have shifted from period to period to justify pay increases and other incentives in management-controlled firms. A third is the study of the actual justifications used by boards of directors for premium compensation strategies in firms that do not have particularly strong economic performance. The difficulty with such research is obvious. It requires data that are not easily obtainable from most existing sources and that would therefore require a great deal of effort to obtain. Unless researchers attempt to undertake inquiry of this type, however, a simple fact remains: Explanations about compensation strategy will continue to only be based on very divergent theoretical frames from which can come only stronger ideological posturing and very little useful knowledge.

REFERENCES

Abowd, J. M. 1990. Does performance-based managerial compensation affect corporate performance? ***Industrial and Labor Relations Review,*** 43: 52S–73S.

Allen, M. P. 1981. Power and privilege in large corporations: Corporate control and managerial compensation. ***American Journal of Sociology,*** 86: 1112–1123.

Asch, B. J. 1990. Do incentives matter? The case of navy recruiters. ***Industrial and Labor Relations Review,*** 43: 89S–106S.

Baker, G. P., Jensen, M. C., & Murphy, K. J. 1988. Compensation and incentives: Practice vs. theory. ***Journal of Finance,*** 43: 593–616.

Becker, G. S. 1964. ***Human capital.*** New York: National Bureau of Economic Research.

Berle, A. A., Jr., & Means, G. C. 1932. ***The modern corporation and private property.*** New York: Macmillan.

Biddle, G. C., & Lindahl, F. W. 1982. Stock price reactions to LIFO adoptions: The association between excess returns and LIFO tax savings. ***Journal of Accounting Research,*** 20: 551–588.

Brown, C., & Medoff, J. 1989. The employer size-wage effect. ***Journal of Political Economy,*** 97: 1027–1053.

Crystal, G. S. 1991. Why CEO compensation is so high. ***California Management Review,*** 34: 9–29.

Dyl, E. A. 1988. Corporate control and management compensation: Evidence on the agency problem. ***Managerial and Decision Economics,*** 9: 21–25.

Edwards, J. R. 1994. Regression analysis as an alternative to difference scores. ***Journal of Management,*** 20: 683–689.

Fama, E. F., & Jensen, M. C. 1983. Separation of ownership and control. ***Journal of Law and Economics,*** 26: 301–325.

Fisher, J., & Govindarajan, V. 1992. Profit center manager compensation: An examination of market, political and human capital factors. ***Strategic Management Journal,*** 13: 205–217.

Frisch, C. J., & Dickinson, A. M. 1990. Work productivity as a function of the percentage of monetary incentives to base pay. ***Research Studies in Performance Management,*** 11: 13–33.

Gerhart, B., & Milkovich, G. T. 1990. Organizational differences in managerial compensation and financial performance. ***Academy of Management Journal,*** 33: 663–691.

Gerhart, B., & Milkovich, G. T. 1993. Employee compensation: Research and practice. In M. Dunnette & L. M. Hough (Eds.), ***Handbook of industrial and organizational psychology*** (2d ed.), vol. 3: 481–569. Palo Alto, CA: Consulting Psychologists Press.

Gomez-Mejia, L. R., & Balkin, D. B. 1992. ***Compensation, organizational strategy, and firm performance.*** Cincinnati, OH: South-Western.

Gomez-Mejia, L. R., Tosi, H. L., & Hinkin, T. 1987. Managerial control, performance, and executive compensation. ***Academy of Management Journal,*** 30: 51–70.

Hills, F. S. 1987. ***Compensation decision making.*** Chicago: Dryden Press.

Hunt, H. G., III 1986. The separation of corporate ownership and control: Theory, evidence, and implications. ***Journal of Accounting Literature,*** 5: 85–124.

Hunt, H. G., III, & Hogler, R. L. 1990. Agency-theory as ideology: A comparative analysis based on critical legal theory and radical accounting. ***Accounting, Organizations, and Society,*** 15: 437–454.

Jacobson, S. L. 1989. The effects of pay incentives on teacher absenteeism. ***Journal of Human Resources,*** 24: 280–286.

Jensen, M. C., & Meckling, W. H. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. ***Journal of Financial Economics,*** 3: 305–360.

Jensen, M. C., & Murphy, K. J. 1990. Performance and top management incentives. ***Journal of Political Economy,*** 98: 225–264.

Kerr, J., & Kren, L. 1992. Effects of relative decision monitoring on chief executive compensation. ***Academy of Management Journal,*** 35: 370–397.

Lakhani, H. 1988. The effect of pay and retention bonuses on quit rates in the U.S. army. ***Industrial and Labor Relations Review,*** 41: 430–438.

Lambert, R. A., Larcker, D. F., & Weigelt, K. 1991. How sensitive is executive compensation to organizational size? ***Strategic Management Journal,*** 12: 395–402.

Lambert, R. A., Larcker, D. F., & Weigelt, K. 1993. The structure of organization incentives. ***Administrative Science Quarterly,*** 38: 438–461.

Leonard, J. S. 1990. Executive pay and firm performance. ***Industrial and Labor Relations Review,*** 43: 13S–29S.

Lewellen, W. G. 1968. ***Executive compensation in large industrial corporations.*** New York: National Bureau of Economic Research.

Marris, R. L. 1964. ***The economic theory of "managerial" capitalism.*** New York: Free Press of Glencoe.

McEachern, W. A. 1975. ***Managerial control and performance.*** New York: D. C. Heath.

McGuire, J. B. 1988. Agency theory and organizational analysis. ***Managerial Finance,*** 14(4): 6–9.

Milkovich, G. T., & Newman, J. M. 1993. ***Compensation.*** Homewood, IL: Irwin.

O'Reilly, C. A., III, Main, B. G., & Crystal, G. S. 1988. CEO compensation as tournament and social comparison: A tale of two theories. ***Administrative Science Quarterly,*** 33: 257–274.

Salamon, G. L., & Smith, E. D. 1979. Corporate control and managerial misrepresentation of firm performance. ***Bell Journal of Economics,*** 10: 319–328.

Santerre, R. E., & Neun, S. P. 1989. Managerial control and executive compensation in the 1930s: A reexamination. ***Quarterly Journal of Business and Economy,*** 28(4): 100–118.

Stiglitz, J. E. 1975. Incentives, risk, and information: Notes towards a theory of hierarchy. ***Bell Journal of Economics,*** 6: 552–579.

Terborg, J. R., & Ungson, G. R. 1985. Group-administered bonus pay and retail store performance: A two-year study of management compensation. ***Journal of Retailing,*** 61(1): 63–77.

Tisak, J., & Smith, C. S. 1994. Defending and extending difference score methods. ***Journal of Management,*** 20: 675–682.

Tosi, H. L., & Gomez-Mejia, L. R. 1989. The decoupling of CEO pay and performance: An agency theory perspective. ***Administrative Science Quarterly,*** 34: 169–189.

Tosi, H. L., & Gomez-Mejia, L. R. 1994. Compensation monitoring and firm performance. ***Academy of Management Journal,*** 37: 1002–1016.

Walsh, J. P., & Seward, J. K. 1990. On the efficiency of internal and external corporate control mechanisms. ***Academy of Management Review,*** 15: 421–458.

Williamson, O. E. 1967. Hierarchical control and optimum firm size. ***Journal of Political Economy,*** 75: 123–138.

Zajac, E. J. 1990. CEO selection, succession, compensation, and firm performance: A theoretical integration and empirical analysis. ***Strategic Management Journal,*** 11: 217–231.

APPENDIX

Control Variables

Organizational size. A composite index constructed from a factor analysis of the standardized values of assets, sales, and number of employees. These separate standard scores

were weighted by item loadings (.96, .95, .85, respectively) to obtain the size measure. The regression results were similar when using assets, number of employees, sales, or a nonweighted composite of assets, sales, and number of employees as the size measure.

Financial performance. A composite index constructed from standardized values of return on assets (ROA) and return on equity (ROE).

Years of education. The average years of education of all surveyed managers in a firm.

Years of experience. A composite measure that includes average years of firm-specific experience and average potential market experience. Years of firm-specific experience is the number of years an employee has been with a firm. Years of potential market experience was calculated by age minus years of education minus 6; it measures the potential experience of incumbents in the labor market (Gerhart & Milkovich, 1990).

Job level. The average number of reporting levels between a company's board of directors and the position of the incumbents.

Employees supervised. The average number of exempt and nonexempt employees supervised directly and indirectly. It is a measure of supervisory responsibility.

Change variables. Used as control variables in testing Hypothesis 2. Calculated for year t as variable in year t minus variable in year $t - 1$, all divided by variable in year $t - 1$, for all years available.

Base and bonus. Used as a control variable in the model testing Hypothesis 2. A possible problem in our use of change scores is that companies initially low in pay may have larger gains than those higher in pay because there is more room for change. Thus, findings that appear to be due to changes in pay may actually be due to pay level. To control for this statistical artifact, pay level was included in the model.

Industry dummies. Firms were included in the analysis only if there were at least two other firms with identical two-digit Standard Industrial Classification codes (Gerhart & Milkovich, 1990; Leonard, 1990).

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