



An Empirical Study of “Fringe Benefits” and Performance of the Korean Firms

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Abstract

This paper examines the effects of fringe benefits in the compensation package on performance of the Korean firms. Theoretically, fringe benefits have two implications in relation to employees: they are effective instruments that provide incentives; at the same time, some fringe benefits, especially the power-related benefits, are often used for exploitation of self-interests. Using a six-year panel data of the Korean manufacturing firms, we do a regression analysis and identify the links between fringe benefits and performance of the Korean firms. Our results suggest that, in general, these types of compensations do not promote good performance of firms. The results also imply that perhaps some designs in pay for performance in Korea are not efficient.

Keywords: Pay-performance, Fringe benefits, Incentive, Korea

1. Introduction

The Asian financial crisis in the late 1990s drew particular attention to corporate governance. It also called the need to design a good compensation structure for employees, as we witnessed problems of managerial slacks and moral hazard, which are typically found in the principal-agent relationship. We, therefore, review relevant literature and, by adopting our research setting as Republic of Korea, examine whether pay-performance relationship has functioned appropriately as expected in one of the East Asian countries which experienced collapse of firms caused by mismanagement during the financial crisis in the 1990s.

Notably, an agency problem, principal-agency problem in full expression, rises when an owner and a proxy who works for the owner have different interests. In management, agency problem emerges when managers do not behave in a way that maximizes the interest of the shareholders. To discuss more specifically, perspectives which address solutions to the agency problem have two strands in general: optimal contracting and managerial power approaches (Bebchuk & Fried, 2003). Under optimal contracting approach, well-structured compensation scheme provides managers with efficient incentives to maximize shareholder value (Jensen & Meckling, 1976; Jensen & Murphy, 1990). While a good design in financial compensation is a key solution in the optimal contracting view, the managerial power approach alternatively takes the compensation scheme as a problem itself. According to this approach, compensation is not regarded as a fundamental solution to agency problems, but rather the problem in itself. Managers are perceived to take advantage of compensation, treating it as a kind of power, and sometimes abuse it.

In fact, compensation is decided by both market forces and managerial influence. By managerial influence, managers can manipulate products of their managerial decisions running in a way they like. The managerial power approach argues that impacts of this kind of managerial influence are sizable and that optimal contracting alone cannot adequately explain compensation practices (Bebchuk & Fried, 2003). Rather, what is more important is identification of “some type of financial benefits” that both approaches critically handle. In optimal contracting, these pecuniary benefits – we

call them fringe benefits from now – are a part of incentive which is supposed to motivate managers. On the other hand, managerial power approach regards fringe benefits as governance tools that serve to satisfy managers' desire for power.

This paper overviews two opposite perspectives regarding impacts of the financial compensation offered to employees including managers, and understands the landscape of the relationship between managerial compensation and the agency problem. To be more specific, we pursue two research questions: firstly, are fringe benefits in the Korean firms positively associated with performance? And, secondly, which kind of fringe benefits contributes significantly to performance. In order to answer these questions, we collect human resource and financial data for the Korean *Chaebols*. The dataset consists of the large conglomerates that are public, operate in the manufacturing industries, and do not have a controlling shareholder. Our sample size consists of 264 observations that span from 1998 to 2003. This study is structured as follows: in section 2, we overview the agency perspectives that specifically discuss compensation problems, and propose hypotheses. Following the theoretical discussion in section 2, we present our empirical model in section 3, followed by section 4 which introduces our approach. In section 5, we provide the statistical results and conclude in section 6 with some remarks.

2. Theoretical perspectives: the agency problem

2.1 Overview of agency theory

Agency theory is concerned with solving two problems that can occur in the bilateral relationship between an employer (owner) and employees (agent). The first is the agency problem that arises when the desires or goals of the principal and agent conflict and it is difficult or expensive for the principal to verify what the agent is actually doing. The problem here is that the principal cannot verify that the agent has behaved appropriately. The second is the problem of risk sharing that arises when the principal and agent have different attitudes toward risk. In this study, we focus on the first problem.

Agency theory attempts to describe the relationship using the metaphor of a contract (Jensen & Meckling, 1976). Because the unit of analysis in the contract governing the relationship between the principal and the agent, the focus of the theory is on determining the most efficient contract governing the principal-agent relationship given assumptions about people (e.g., self-interest, bounded rationality, risk aversion), organizations (e.g., goal conflict among members), and information (e.g., information is a commodity which can be purchased). Agency theory assumes the opportunistic human nature and addresses conflicts rising when agents have goals different from owners.

Agents with self-interests can satisfy their goals by exploiting rents from the organization in several ways and the idea of fringe benefits is positioned as a centerpiece of the rent-extraction hypothesis. A fringe benefit is defined comprehensively: it usually refers to pecuniary package other than salary and bonus, as well as non-pecuniary merits. More specifically, pecuniary package includes pension plans, deferred compensation, post-retirement perks, price differentials between preferred stock and common stock, consulting contracts...etc. Non-monetary merits, in general, consist of vehicle provided by a firm, membership for social network using the position, professional job training, and so on. A significant characteristic of fringe benefits is that, in a narrow sense, they are less interlocking with individual performances in contrast to salary and bonus which tend to move directly with individual or team performances within an organization and, despite presence of firm-specific variations, schedule of the benefits is programmed.

In fact, the literature on investor protection and its role in the development of corporate governance (La Porta, Lopez-de-Silanes, Shleifer & Vishny, 1998) specifies that potential problems are not only the financial structures but also related to abuse of benefits that shareholders are not even aware of. One of fringe benefits that agents are likely to exploit is "private benefits" (Bebchuk & Fried, 2003). The common feature of private benefits is that they are enjoyed exclusively by the party in control. The theoretical literature often identifies private benefits as the "psychic" value because they are related to power (Harris & Raviv, 1988; Aghion & Bolton, 1992). Perquisites, for example, can be abused by managers (and other employees, too). The use of company money as a pay for perks is the most visible but not the most important way in which corporate resources can be used to the main advantage of the controlling party. Although it is apparently against the shareholders, it is not protected by the law and is rarely documented.

2.2 The Role of Fringe Benefits: Incentive or Moral Hazard

According to Dyck and Zingales (2001), one standard deviation increase in the size of the private benefits is associated with a 48 percent reduction in the ratio of external market capitalization of equity to GNP, a six percent reduction in the percentage of equity held by non-controlling shareholders, and a 35 percent increase in the number of privatized companies sold in private negotiation rather than through public offering. This evidence gives supports to the prominent role that private benefits have come to play in corporate finance. However, the existence of private benefits is not necessarily bad, since private benefits are another face of fringe benefits and fringe benefits frequently serve as a good instrument for motivating employees. Zingales (1995) argues that the level of private benefits has no efficiency consequence, but only distributional ones. There are more aspects related to private benefits but this study limits our research scope to pay-performance relationship.

Many recent agency theory-based research papers agree that compensation can be useful for aligning the actions of agents with desired organizational outcomes (Jensen & Murphy, 1990; Tosi & Gomez-Mejia, 1989). For example, Murphy (1985) studies the pay-performance relationship of 501 managers in 72 companies and finds that salary, bonus, and total compensation are positively related to total shareholder return and growth in firm sales. Abowd (1990) analyzes the incentive pay-firm performance relationship among 225 companies and finds that greater use of the compensation is positively related to total shareholder return and gross economic return. However, Bebchuk and Fried (2005) show that the flawed compensation has been widespread, persistent, and systemic. Furthermore, the problems have not resulted from temporary mistakes or lapses of judgment that boards can be expected to correct on their own, but have stemmed from structural defects in the underlying governance structure that enable executives to exert considerable influence over their boards.

In fact, the negative view is supported by the corporate governance scandals in the U.S. that began erupting in 2001. The wave of corporate scandals shook confidence in the performance of public company boards and drew attention to possible flaws in their executive compensation practices. Even before the corporate scandal alerted advanced economies, the managerial slack brought the financial crisis in Asia in the 1990s. Notably, one of the reasons for the Korean financial crisis was mismanagement of the corporate financial strategies due to the managerial slack. Banks collapsed because they failed in collecting fraudulent loans, which had been practiced within the loosely-monitored internal system. Top managers at Daewoo, previously one of the top five business groups in Korea, were accused of embezzlement. As a result, regardless of countries, there is now widespread recognition that employees, even the board members, do not necessarily serve shareholders' interests.

Principal-agent theory posits that the agent's rational self-interest and effort aversion create the potential for moral hazard. The agent may act to maximize his or her outcomes (e.g., compensation) without extending efforts toward achieving the principal's objectives (Eisenhardt, 1989). In spite of the importance in compensation structure, there are few theoretical or empirical consensus on the impact of different forms of compensation on managerial decision and, thus, on agency costs (Depken, Nguyen & Sarkar, 2005). The literature on agency theory generally confirms that cash compensation alone does not provide the necessary incentive to lower agency conflicts. Equity compensation such as stock options and restricted stocks are generally seen as more efficient solutions among internal mechanisms because both make congruent the interests of the agents and the shareholders toward a common financial benefit, i.e. increase in firm value. However, as seen from Enron, WorldCom, and other cases for overpaying executives given their contributions to the firms, the effectiveness of equity incentives is still questionable.

Ideally, principals can simply structure compensation contracts in favor of agents' preferences for fixed pay: a wage or salary (Baiman, 1990; Eisenhardt, 1989; Stiglitz, 1987). However, because factors such as low task programmability and information symmetries (Eisenhardt, 1989) make it more difficult to monitor agents' efforts, principals must rely more heavily on pay scheme to align agents' interests (Jensen & Murphy, 1990). While the existing studies tend to focus on the major compensation items such as salary or bonus, we expect that fringe benefits also affect firm performance.

3. Methodology

3.1 Data

Three archival data sources are combined for this study. Our dataset include an entire set of the Korean firms in the manufacturing industries, of which stocks are traded in the Korean stock market. The managerial compensation data and firm performance data are drawn from the online database provided by Korea Information Service (www.kisinfo.co.kr). The data contains corporate finance and pay policy data for the firms listed on the Korea stock market, both the primary market (Korean Stock Exchange) and the secondary market (KOSDAQ). More specifically, the dataset provides data for each account in the annual financial statement. It also includes a variety of information about compensation policies and corporate financial statistics.

Our data is supplemented by several references provided by Korea Financial Supervisory Board. We remove firms whose annual financial statements are not consolidated. We also search newspapers to ensure that the firms have not experienced severe fluctuation in financial conditions, because any financial instability is likely to affect managerial compensation, and we want to eliminate extraneous variations. Therefore, any firms previously under Chapter 11, or in the process of significant restructuring, are dropped off from the dataset. Finally, we also exclude firms with missing data. Our final data is a panel dataset that spans 6 years, from 1998 to 2003 and has 264 observations overall. We present a correlation matrix and sample characteristics in Table 1.

3.2 Measurements

3.2.1 Dependent variables

First, since the principal (an owner) of a firm is the shareholder of its common stock, we choose a performance measurement that reflects changes in the value of firms. We accordingly use return on sales (ROS), a performance

indicator frequently used in management research. Alternatively, we consider return on investment (ROI), however, given the turbulence in the Korean stock market during the late 1990s, we are afraid that external shocks cannot be controlled if we use ROI.

3.2.2 Independent variables

Our independent variables represent fringe benefits in a typical compensation package offered in Korea. First, we have a vector which consists of work-related fringe benefit variables. Each variable is controlled for the size. The vector consists of training (TRAIN), measured by the previous year's expenditure on employee training, divided by the previous year's sales revenue; project incentive (XPERK), measured by the previous year's expenditure on extra perks from project execution, divided by the previous year's sales revenue, and; offering stock option (PREFER), measured by an increase in the previous year's preferred stocks, divided by the previous year's sales revenue.

Our second matrix has elements of welfare-related fringe benefits: retirement benefits (RETIRE), measured by an increase in payment deferral of retirement benefits, divided by assets; housing support (HOUSE), measured by the previous year's expenditure on employee housing supports, divided by assets, and; socializing budgets (SOCIAL), a discretionary allowance offered to managers for building clientele relationship. We measure it with the previous year's expenditure on the socializing budget, divided by the previous year's sales. We use one-year time lag for every independent variable.

3.2.3 Control variables

A number of variables are assumed to affect managers' compensation in several ways and their effects should be controlled for in any study seeking to test hypotheses (Stroh, Brett, Baumann & Reilly, 1996). The existing studies have paid attention to industry (Mahoney, 1979; Gerhart & Milkovich, 1990) and size (Deckop, 1988) as organization-level variables. We agree that firm size possibly influence the link between fringe benefits and firm performance. Thus, we use the logarithm of sales revenue to control for firm size. To control for industry-related factors, we include a dummy variable for each two-digit Standard Industrial Classification (SIC) code in our regression equations. Finally, we include year dummy to control year-specific effects.

3.3 Models

We use fixed-effect model and specify it as:

$$Y_{it} = a_i + \beta X_{it-1} + \gamma W_{it-1} + \lambda T_{it-1} + \varepsilon_{it} \quad (1)$$

where $i=1, \dots, N$ and $t=1, \dots, T$. Y_{it} is the performance measurement for the j^{th} firm at time t , X_{it} is a $N \times M$ matrix of independent variables, β is a $1 \times N$ vector of constant parameters for work-related fringe benefits to be estimated, γ is $1 \times N$ vector constant parameters for welfare-related fringe benefit variables, λ is a $1 \times N$ vector constant parameters for control variables, and a_i is a $1 \times N$ vector of intercepts representing the effects of the variables specific to the i^{th} individual and invariant over time. The a_i for each firm i is obtained by including dummy variables which take the value 1 for the corresponding 1 and 0 otherwise. The error term ε_{it} represents the effects of the omitted variables that are both time and cross-sectional varying. We assume that the classical assumptions for OLS apply.

4. Findings

We provide our findings in Table 2. In model (1), we only include size as a control variable. We add year dummy in model (2) and industry dummy in model (3). Three models have significant F -statistics but their R -squares do not substantially differ. Throughout the three models, variables such as *INTERCEPT*, *TRAIN*, *RETIRE*, *PREFER*, and *SIZE* show consistently significant estimators. Among them, *TRAIN*, *RETIRE*, *PREFER* are our key hypothetical variables.

First, a negative sign on *TRAIN* suggests that investment in employee training is negatively related to firm performance. The interpretation, however, is not theoretically supported. We conjecture that the negative coefficient is driven by a high correlation between *TRAIN* and other variable such as *SOCIAL*. The two variables, *TRAIN* and *SOCIAL*, are conceptually independent and differently measured. Second, the positive sign on *RETIRE* indicates that retirement benefits promote firm performance. We interpret that employees in Korea welcome retirement benefits more than other fringe benefits. Third, a negative coefficient on *PREFER* means that offering stock option to employees is negatively associated with firm performance. At a glance, this result seems strange and theoretically unsupported; it needs good understanding of the Korean context for the period that data was being collected. Stock option is complementary with cash payout. In addition, election of stock option requires years to wait and, thus, offering stock option means deferred payment to employees, in replacement of quick cash pay. In theory, ownership sharing with employees is described as the best solution that makes interests of employees aligned with the organizational goal. However, given the turbulent Korean stock market in the late 1990s when the financial crisis occurred in Asia, as well as corporate restructuring

accompanied with the economic slow-down which subsequently prevailed from 1997, it seems that offering stock incentives did not achieve its original goal of motivating employees. In fact, Bebchuk and Fried (2003) also stress that it is practically difficult for stock incentives to make congruent behaviors of agents and an owner because offered ownership is too small.

Our results suggest that some fringe benefits are significantly associated with performance; some are positively related and others are negatively related. We find that there are more negative signs than positive signs on the fringe-benefit variables, which questions the compensation scheme designed by the Korean firms. Of course, there are several factors other than pay-performance relationship when a firm designs compensation plan for employees. Organizational value, belief, or institutional culture is also seriously considered. Therefore, the negative connections between some fringe benefits and performance does not necessarily mean that the Korean firms should remove those benefits immediately. However, in this study, we want to point out that certain types of fringe benefits do not help employees motivated for better performance, although it is apparently the most fundamental reason for paying employees.

5. Conclusion

We began with a research question, whether fringe benefits promote performance of firms. While fringe benefits have been less noted by scholars than salary or bonus, they are a substantial part of any pay package and sometimes seriously abused by ill-intentional employees. We investigated fringe benefits offered by 263 Korean *Chaebols* and examined their impacts on performance. An examination of fringe benefits tells that, in general, fringe benefits are not a good instrument to make employees motivated into better performance. Our findings reconsider effectiveness in the Korean firms' pay policy.

References

- Abowd, J. (1990). Does performance-based managerial compensation affect corporate performance? *Industrial and Labor Relations Review*, 43, 52-73.
- Aghion, P. & Bolton, P. (1992). An incomplete contract approach to financial contracting. *Review of Economic Studies*, 59, 473-494.
- Baiman, S. (1990). Agency research in managerial accounting: A second look. *Accounting, Organization, and Society*, 15, 341-371.
- Bebchuk, L. & Friedman, J. (2003). Executive compensation as an agency problem. *Journal of Economic Perspective*, 17, 71-92.
- Bebchuk, L. & Friedman, J. (2005). Pay without performance: An overview of the issues. *Journal of Corporation Law*, 30, 647-673.
- Deckop, J. (1988). Determinants of chief executive officer compensation. *Industrial and Labor Relation Review*, 41, 215-226.
- Depkin, C., Nguyen, G., & Sarkar, S. (2006). *Agency costs, executive compensation, bonding and monitoring: A stochastic frontier approach*. Paper presented at annual meeting of American Economic Association (AEA), Boston, MA.
- Dyck, A. & Zingales, L. (2001). *Private benefits of control: An international comparison* (working paper #W8711). Cambridge: NBER.
- Eisenhardt, K. (1989). Agency theory: An assessment and review. *Academy of Management Review*, 14, 57-74.
- Gerhart, B. & Milkovich, G. (1990). Organizational differences in managerial compensation and financial performance. *Academy of Management Journal*, 33, 663-691.
- Harris, M. & Raviv, A. (1979). Optimal incentive contracts with imperfect information. *Journal of Economic Theory*, 20, 231-259.
- Jensen, M. & Meckling, W. (1976). Theory of firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-360.
- Jensen, M. & Murphy, K. (1990). Performance pay and top management incentive. *Journal of Political Economy*, 98, 225-263.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1998). Law and finance. *Journal of Political Economy*, 106, 1113-1155.
- Mahoney, T. (1979). *Compensation and reward perspective*. Homewood: Irwin.
- Murphy, K. (1985). Corporate performance and managerial remuneration: An empirical review. *Journal of Accounting and Economics*, 7, 11-42.

Stiglitz, J. (1987). The design of labor contracts: The economics of incentives and risk-sharing. In H. Nalbatian (Ed.), *Incentive, cooperation, and risk sharing* (pp. 47-68). Totowa: Rowan and Littlefield.

Stroh, L., Brett, J., Baumann, J., & Reilly, A. (1996). Agency theory and variable pay compensation strategies. *Academy of Management Journal*, 39, 751-767.

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

Zingales, L. (1995). Insider ownership and the decision to go public. *Review of Economic Studies*, 62, 425-48.

Table 1. Correlation matrix (N=263)

	Mean (S.D.)	ROS	TRAIN	RETIRE	HOUSE	SOCIAL	XPERK	PREFER	SIZE
ROS		1.0000							
TRAIN	0.7905 (3.9230)	-0.2161	1.0000						
RETIRE	0.0044 (0.0054)	0.0485	0.0782	1.0000					
HOUSE	0.0000 (0.0001)	-0.0108	-0.0068	0.1654	1.0000				
SOCIAL	0.9965 (1.8932)	-0.2221	0.8157	-0.0101	-0.0101	1.0000			
XPERK	0.0001 (0.0003)	-0.0188	-0.0434	-0.0205	-0.0205	-0.0812	1.0000		
PREFER	0.5762 (1.6568)	-0.1543	-0.0422	-0.0183	-0.0183	-0.0031	-0.0586	1.0000	
SIZE	19.3297 (1.6436)	0.0559	0.3429	-0.0195	-0.0195	0.2580	-0.2467	0.1899	1.0000

Description for the above table.

Table 2. Regression results

Variable	Model (1)	Model (2)	Model (3)
INTERCEPT	-38.6102 [†] (11.8799)	-33.2643 [†] (12.7665)	-35.3021 [†] (12.7891)
TRAIN	-0.7066 ^{††} (0.3828)	-1.1473 [†] (0.2349)	-1.1330 [†] (0.2354)
RETIRE	391.3685 [‡] (169.5616)	354.5180 [‡] (170.3667)	371.8861 [‡] (170.3260)
HOUSE	-3733.4211 (6018.4510)	-2915.0004 (6116.4200)	-3757.9249 (6058.5372)
SOCIAL	-1.1476 (0.7807)	-109.0015 (80.6685)	-107.1883 (81.2240)
XPERK	459.6452 (2212.8300)	41.4461 (2423.7178)	-5.9082 (2428.3051)
PREFER	-1.7136 [†] (0.5168)	-1.7728 [†] (0.5215)	-1.7218 [†] (0.5265)
SIZE	2.0930 [†] (0.6022)	1.8784 [†] (0.6320)	1.8538 [†] (0.6324)
Year dummy	No	Yes	No
Industry dummy	No	No	Yes
R-squares	0.1273	0.1331	0.1313
F-statistics	<.0001	<.0001	0.0002

[†] statistically significant for the 0.01 level; [‡] statistically significant for the 0.5 level; ^{††} statistically significant for the 0.1 level.

Description for the above Table.