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How and What You Pay Matters: The Relative Effectiveness of Merit Pay, Bonus, and Long-Term Incentives on Future Job Performance

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Abstract

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Keywords

pay-for-performance plans, incentive, job performance, merit pay, bonuses, long-term incentives

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**HOW AND WHAT YOU PAY MATTERS: THE RELATIVE EFFECTIVENESS OF
MERIT PAY, BONUSES, AND LONG-TERM INCENTIVES ON FUTURE JOB
PERFORMANCE**

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ABSTRACT

Companies regularly use multiple types of pay-for-performance plans to motivate and sustain high performance levels. Although research generally confirms that pay-for-performance plans can influence these outcomes, it is unclear how effective different pay plans are relative to each other. The current study examines how three different forms of pay-for-performance plans—merit pay, individual-based annual bonuses, and long-term incentive plans—influence employee future performance when they operate simultaneously. The results of this study suggest that the effects of pay-for-performance plans on employee future performance can be explained by the strength of the link between pay and performance for each plan and the financial nature of the awards from each plan.

Keywords

Pay-for-Performance plans, Incentive, Job Performance, Merit pay, Bonuses, Long-term Incentives

INTRODUCTION

Pay-for-performance plans (PFP) are essentially ubiquitous. Recent compensation surveys have shown that nearly all organizations use merit pay¹, bonuses are increasingly common at all organizational levels, and even equity-based plans are finding their way to more employees across organizational levels². Many organizations (e.g., Pratt & Whitney, Lincoln Electric, and Motorola) end up using a variety of rewards programs to reward employees for past performance, and to encourage (or maintain) high performance in the future³. Obviously, these PFP plans come at a price. Companies are spending millions of dollars on PFP plans, and it only looks like this investment is increasing. With the abundance of PFP plan types, and considering the substantial investment required to effectively implement a PFP plan, companies need to know not just if PFP compensation brings about positive effects on employee motivation, but to what extent they influence critical employment outcomes.

While previous research has found in general that PFP plans do help achieve desired results⁴, the relative effectiveness of various PFP forms has not been clearly addressed. While there are certain financial differences, in terms of the long-term and short-term costs of various forms of PFP plans, it is not clear how effective one type of plan is compared to another. Many academics and practitioners will quickly tell you that *how* you pay matters, as much or more than *what* you pay. But when it comes to knowing how much of a difference how you pay matters, there isn't much to go on. In short, it would be valuable to know how much "bang for the buck" one gets from various PFP plans.

PFP plans differ in both form and cost. Merit plans are often perceived as expensive, as they entail permanent increases in base pay and thus lead to higher fixed labor costs.⁵ While merit pay is still the most common form of PFP, companies have been devoting significantly

fewer resources to merit pay budgets: from highs sometimes near 20% in the 1980s to typical levels between 2 and 3 percent today.⁶ As an alternative (or at least a supplement) to merit pay plans, end-of-the year lump-sum bonuses are becoming more common.⁷ Because this type of rewards plan is a one-time cash payment for individual performance, and it has to be “re-earned” each year,⁸ it doesn’t increase fixed costs. As such, companies have been devoting more resources towards individual-based annual bonuses to create a PFP link.⁹ Long-term incentives are also becoming more common, even at lower levels in organizations. Not only can they be used to reward individual performance, they also tie employees’ interests in with that of the company. Furthermore, they can help retain employees, as time must often pass before the rewards vest and the employees can “cash in” on their rewards.¹⁰

Of course, employees are not fools. If faced with the choice of a 5% salary raise or a 5% bonus, it is hard to imagine anyone would prefer the bonus. The permanent increase in pay has a much higher lifetime value than the one-time cash payment. Likewise, if faced with the choice of getting \$1000 now or \$1000 after a five-year wait, it is a simple economic prediction to assert most people want the money now rather than later. Thus, while companies may be de-emphasizing merit pay plans and using other, less expensive forms of PFP, the power of these plans to motivate and sustain higher performance levels is unclear. Unfortunately, there is very limited research trying comparing the simultaneous effects of multiple PFP plans.

While we are strong advocates for using research to drive an evidence-based approach to management, it is unfair to criticize organizational practices if researchers are not addressing the subjects for which practice needs help. Our goal here is to consider the different potential effects of these three forms of PFP—merit pay, bonuses, and long-term incentives—in terms of their effect on future employee performance levels.

MOTIVATING EMPLOYEES WITH PAY-FOR-PERFORMANCE PLANS

In general, it is believed that employees are motivated to perform better when offered something they want. Theoretically and practically, it is thought that affecting motivation is the most effective method of influencing individual performance.¹¹ Individuals become motivated when there are needs or desires to fulfill and when there are specific goals to achieve.¹²

Expectancy theory¹³ in particular speaks to the potential effects of PFP on employee performance. The theory suggests that an individual employee makes rational decisions based on (1) his or her expectation that increased effort will lead to certain outcomes, and (2) how much the individual values the outcome. If both factors are present, then individuals will be predicted to be highly motivated. If we can therefore approximate how well a given pay plan satisfies these two components, we should be able to predict (at least in part) how effectively the pay plan motivates higher job performance. Because PFP plans (e.g., merit pay, bonuses, and long-term incentives) have different characteristics, the theory can help describe how the characteristics of these plans influence employee performance levels. We predict that potentially different effects from different PFP plans can be explained based on (1) the link between pay and performance under each plan, and (2) the nature of the awards provided by each plan.

Characteristics of PFP Plans: The Strength of the Link between Pay and Performance

The main premise of PFP plans is that employees will be more motivated to perform at a high level when there is a stronger link between pay and performance.¹⁴ A key characteristic of a PFP plan is therefore the magnitude of its pay-to-performance relationship. For example, if a one point improvement on a performance scale for a given individual is associated with a reward that is notably larger than the reward associated with comparable improvement in performance

for a second individual, then (on average) the former individual will have a stronger incentive to achieve higher future job performance than the latter.

While all PFP plans should, essentially by definition, have some degree of connection between pay and performance, this is not always the case when such plans are implemented. One major critique of merit plans, for example, is that they often do not provide a strong link, and sometimes any link, between pay and performance.¹⁵

The degree of pay-for-performance for any given pay form in general varies depending on different pay policies and practices across organizations. In other words, it is not simply that pay-for-performance should be associated with greater future job performance, but the degree of pay-for-performance should influence future job performance levels. The stronger the PFP link, the greater should be future employee performance.

For the purpose of comparing PFP plans, even though people likely differ to some extent regarding their perceptions of pay, the characteristics of different plans should have some consistent effects across employees. As a result, regardless of how a given person is motivated by money, all else being equal, a stronger link between pay and performance should be more motivating than a weaker link.

Characteristics of PFP Plans: The Value of Different Types of Rewards

Shakespeare's Juliet famously asked, "What's in a name?" For pay for performance, the answer is, "it depends." When it comes to the relationship between pay and performance, the name of the plan type conveys no meaning. The link can be weak to strong, and the type of plan does not necessarily influence this. But when considering the type of reward that comes from a PFP plan, not all outcomes smell equally sweet.

Merit pay leads to permanent increases in base pay, whereas both end-of-the-year bonuses and long term incentives lead to one-time payments. Because the present value of a \$1 raise (permanent increase) is greater than the present value of a \$1 bonus (a one-time payment), on a dollar per dollar basis, an equal increase in base pay is worth more than the one-time payment associated with bonuses or long-term incentives.

The characteristics of long-term incentives also provide some insights into their potential effectiveness relative to bonuses. Most notably, there are often restrictions associated with long-term incentive payments. As a result, in many situations, gaining a long-term incentive does not translate into a form of pay with immediate spendable value. The vesting or other restrictions make the value of a long-term incentive smaller than a comparably sized cash award. Therefore, from an economic perspective, the liquidity of cash bonuses causes such rewards, on a dollar-per-dollar basis, to have a greater present value than a comparably sized stock award. That is, a \$1 award with immediate liquidity (i.e., a bonus) has more value than a \$1 award with delayed liquidity (i.e., a long-term incentive). This gives bonuses, on a dollar-per-dollar basis, more value than long-term incentives.

Summary of What We Know

In sum, the strength of the PFP link and the value of a reward work together to influence the motivation of employees. In all cases, the degree of PFP should be positively related to future employee performance; but the strength of this effect will depend on the nature of the reward. Because merit pay entails a permanent raise, we predict it will, on a dollar-per-dollar basis, have a stronger effect on future employee performance than either bonuses or long-term incentives. Similarly, because bonuses are immediately liquid while long-term incentives have time-related restrictions, the effect of bonuses should be greater than that of long-term incentives. To test

these propositions, we examined a company for which employees were eligible for all three of these forms of pay.

OUR INVESTIGATION

Our Sample

We examined the data contained in the human resource information system from a service-related business. The company provides broad-based business services in every segment of the travel industry. The company has positions in account sales and service, accounting, customer training and support, finance, human resources, legal, marketing and communications, and product and technology development. For the analyses, data from the years 2003 and 2004 were used. Although the company had employees in other countries, this study focused on employees based in the United States because they are compensated under the same rewards systems.

A sample of 739 employees **was selected because there was complete** data on performance ratings, salary, organization tenure, gender, race, and percentage of three financial rewards (merit pay, bonuses, and long-term incentives) ~~was used~~. All employees in the sample were eligible for the three rewards, although they did not necessarily receive them. Employee job performance was assessed annually by the supervisor using a four-point scale (1 = below expectations; 2 = meets expectations; 3 = exceeds expectations; 4 = far exceeds expectations). Note that while some have voiced extensive criticisms of performance ratings,¹⁶ we used performance rating to estimate the relationship between pay and performance because (1) this is the official metric employees were provided regarding their performance levels, and (2) the company's policy was such that managers were supposed to determine awards based on the

results of the performance appraisal. The characteristics of the sample are summarized in Table 1.

The amount of all three rewards were determined by the employee's manager, but based on company policy, and purportedly driven by the performance appraisal rating. For merit pay, a merit grid was constructed, which provided a specified range of allowable raises for each performance category. For the individual year-end bonus, employees had a target bonus. Managers determined the actual level of the bonus based on this target and the appraisal rating, but again with some discretion. Similarly, long-term incentives were also rewarded based on individual targets and performance ratings, but again with some managerial discretion. In short, the company employed compensation policy to drive how pay was used to award performance on an annual basis, but the company also gave managers some discretion to alter award amounts based on individual circumstances.

What We Did and What We Found

To examine the effects of the three PFP plans (merit pay, individual-based annual bonuses, and long-term incentives), we followed the two-step process used in prior research that has investigated the impact of such plans.¹⁷ The first step involved estimating the strength of the PFP relationship for each plan type. For our data, this meant computing a metric that captures how strongly 2003 performance was related to the resultant 2003 rewards. The second step then involved examining the relationship between this PFP metric and subsequent (i.e., 2004) job performance ratings.

Step 1. We start by estimating what determined merit pay, bonuses, and long-term incentives in our sample organization. We considered the effects of organization tenure, gender, salary, employee performance, and the interactions of all of these variables on the resultant

(same year) financial rewards (i.e., 2003) to see how strongly employee job performance and the three rewards were associated. For all of the analyses, we predicted the amount of pay expressed as a percent of 2003 salary. This allowed us to examine the effect of, for example, a 1% raise versus 1% bonus, versus 1% long-term incentive.

As noted above, company policy provided guidance with regard to the link between pay and performance, but managers still had some discretion in the allocation of awards. As such, the amounts of rewards were clearly related to performance, but they were not perfectly determined by it. For merit pay, nearly 50% of the variance in rewards could be explained by individual characteristics (including tenure, the performance rating, and various interactions). For both bonuses and long-term incentives, roughly 75% of the variance in awards was determined by these same characteristics. It thus appears that pay was related to performance for all three types of awards, but managers used more discretion when awarding raises than when awarding either bonuses or long-term incentives. From these analyses, we were able to create a metric of how strongly pay was tied to performance for each individual.¹⁸

Step 2. Based on the results of Step 1, we now had, for each individual, three metrics representing the strength of the relationship between performance and pay for merit pay, individual-based annual bonuses, and long-term incentives. We then tested if the performance-related rewards systems motivated employees to achieve high performance.

We performed an analysis, predicting 2004 job performance ratings, based on 2003 performance, individual characteristics (gender and tenure), salary, and the three PFP metrics computed from the previous step. Additional analyses were performed to determine if the effects associated with each of the three PFP metrics differed from each other. Recall that our prediction is that all three PFP metrics will be related to future performance, but that the effect

for merit will be greater than the effect for bonuses, which in turn will be greater than the effect for long-term incentives.

In short, our analyses confirmed our predictions, and more generally confirmed the theory that both (a) the degree to which the reward links pay and performance and (b) the financial characteristics of the reward influence the effectiveness of a PFP plan. Consequently, all PFP plans are not equal. The effects of PFP for all three plan types were positive. Furthermore, the size of these effects differed. Merit pay had the strongest effect. The effect of providing a 1% raise was 27% stronger than the effect of a 1% bonus, and the effect of the 1% merit raise was over 10 times stronger than the effect of 1% in long-term incentives. Likewise, the effect of a 1% bonus was over 8.5 times stronger than the effects of 1% in long-term incentives. Put another way, a 2.07% raise (the average merit increase expected for 2012 in the United States) has the same expected effect as a 2.62% bonus, or being granted 22.34% in long-term incentives.

CONCLUSION

As compensation packages become more complex, and with individuals often being incentivized by multiple PFP systems, compensation research needs to examine the real impact of various types of pay plans. This paper presents a test of the relative effectiveness of three increasingly common PFP plans for influencing employees' future performance levels. Our predictions, based on expectancy theory, were supported, and thus uphold our overall prediction that the structure and form of PFP plans will have positive, but differing effects on future performance levels.

While there has been abundant previous research considering PFP plans in general, there has been little work specifically differentiating the type of effects we should expect from different PFP forms. Understanding how the characteristics of compensation plans affect future

performance is crucial for organizations to design effective performance management systems. This study makes an important contribution to our understanding of PFP plans, not just by examining the relationships between PFP plans and future performance, but also by digging into the characteristics of these plans and contrasting the relative effectiveness of these plans.

Expectancy theory suggests that a compensation plan with a greater link between employee performance and rewards should motivate employees to perform better. This confirms conventional wisdom that, in general, *how* you pay matters. But *how* you pay is not the complete story. Managers should not deceive themselves into thinking that employees don't really care about *how much* they get, and instead simply only want a fair pay system. Our results show that employees are not so foolish. As a result, a permanent increase in pay leads to more performance gains than a one-time payment, and both forms of immediate payment affect more results than deferred compensation. Different types of pay plans provide different types of rewards, and employees appear to respond differently to these awards based on their value.

Our findings indicate that by considering (1) the degree to which pay and performance are links, and (2) the value of the award provided by the PFP plan, it is possible to differentiate between the types of effects we may expect from each. This study was able to look at the different effects associated with the particular components of the compensation system that simultaneously affect employees. As a result, this study draws on the generalizations of expectancy theory and the specific characteristics of three different financial rewards, and successfully predicts employees' future performance by combining them. Yet, despite these contributions, compensation research still lags far behind compensation practice.

Organizations are often faced with the very real and practical need to design PFP plans, and the lack of research-based guidance makes it difficult for both practitioners and academics to

yield specific suggestions. To help fill the critical gap, while companies are moving ahead with the design of various PFP plans in order to link employee rewards with desired individual and organizational level outcomes, more research is needed to fully understand how such plans motivate employee behaviors.

For practice, our results provide insights for practitioners when considering the design of their compensation systems by offering information on the relative effectiveness of three PFP tools. Armed with knowledge of the relative effectiveness of these tools, practitioners may make more informed decisions about how many resources to devote to each form of PFP. So, for example, while the effect of merit pay was stronger than the effect for bonuses, managers can consider whether that larger effect is worth the greater cost associated with permanently increasing base pay. Similarly, if a company is considering placing a greater emphasis on long-term incentives, they can make such a decision with a better understanding of how effective such an investment would be relative to providing other forms of rewards.

Our study has the practical application that it provides a theoretically-driven rationale to assist in the design of PFP systems, highlighting the need for organizations to specifically consider (and empirically examine) the strength of the relationship that they ultimately create between pay and performance for each form of compensation they provide to their employees. PFP plans can fail when the pay plan does not actually link to employee job performance. Furthermore, it suggests that managers can apply various types of pay plans, each with different degrees of the return they provide on their investment, to motivate their employees in appropriate ways by considering the unique characteristics of each pay plan.

Yet more work is still needed. While this is perhaps the first study to consider the effects of three PFP plans simultaneously, much more research is needed to “catch up” with practice.

There are still many other PFP forms that other organizations use to help motivate and reward their employees. In particular, many companies supplement individual-level PFP with group-level plans, including gain-sharing and profit-sharing, to reward team and unit performance. Still others combine individual and group-level performance, such as through a balanced scorecard, to tie rewards to a combination of outcomes. All of these compensation plans share the goal of trying to improve individual and ultimately organizational performance. Our paper indicates that we can gain insights into the effectiveness of any sort of plan by considering how well it links pay to performance, and by considering the value of the rewards from such plans. Nonetheless, more research is needed—and perhaps more importantly, more industry-academic cooperation such as the efforts that led to this study—to help managers take an evidence-based approach to the design of compensation systems.

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TABLE 1
Summary of Sample

Characteristics	Data	
Gender	Female: 47 %, Male: 53 %	
Race	89% White, 4% Asian, 4% African American, 3% Other	
	Mean	Range
2004 performance	2.30	4-point scale
2003 performance	2.43	4-point scale
2003 salary	\$78,415	\$34,100- \$244,400
Tenure	12.02 years	3 – 45
Merit pay %	2.09%	0% - 6%
Bonus pay %	5.48%	0% - 38.4%
Long term incentive plan %	2.80%	0% - 123%

Sample is based on 739 employees.