

Designing Effective Pay-for-performance Systems for Employees and Suppliers: Part IV – Balancing Risks and Incentives

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This month, we will address the question of whether it is fair or economically reasonable to condition an employee's pay on his performance even if performance is not determined solely by actions that he can control. In other words, what happens if performance outcomes are not purely a function of an employee's effort, but are also affected by factors beyond the control of the employee? For example, when growing tomatoes, many factors can affect the amount of sugar in the tomatoes, including temperature, rainfall, soil, etc. In baseball, a batter's batting average depends not only on his own efforts, but on the types of pitcher he faces, on injuries, on the type of ballpark he plays in, etc. Would it still be fair to make the employee's pay depend on her performance? And if so, how should the manager design such an incentive plan without alienating employees or causing them to quit? In practice, very few growers and very few baseball players will argue that incentive pay would be unfair to them even when they are not in complete control. Why?

Economists offer a simple explanation: incentive plans are well functioning if they properly balance the tradeoff between risks and incentives. What do I mean by this? To illustrate this principle, suppose that a food processor contracts with a farmer to produce an agricultural commodity. The processor may want a pricing schedule that is highly dependent on quality so that the grower is rewarded for "good" quality and punished for "bad" quality, but if payments are too dependent on quality, which is often subject to factors beyond the grower's control (e.g. bad weather), then the grower may be reluctant to accept the contract unless the processor offers a "risk premium" which raises the average payoff from the contract. Because stronger incentives (more payment variability) will imply greater risk to the grower, the processor must face the fundamental tradeoff between incentive provision and risk premium payouts. That is, the cost of "stronger" incentives is a higher risk premium and the contractor should find the right balance.

Risk premiums are common in everyday life. For example, the reason why we are willing to hold risky stocks rather than stick with simple savings accounts for our investments is because the expected payoffs of stocks over the long term are higher than the expected payoffs from a savings account. The difference in expected payoffs represents the "risk premium" that we get paid for holding the riskier investment. It is essentially the price of risk bearing. Insurance companies make billions of dollars for bearing people's risks. Thus, when an employer wants the employee to bear more risk, which is precisely what happens when the employee is placed on a pay-for-performance plan, then she may have to pay the employee a higher *expected* payment to take on this additional risk.

In recent years, as employees have been asked to bear more risk of the firm (e.g. placed on pay-for-performance plans), some human resources professionals have suggested that this has eroded employee loyalty (see Conlon and Parks). A possible explanation for this is that many employers do not properly compensate employees for bearing the additional risk. Placing employees on pay-for-performance plans when their performance is not entirely determined by their own actions is akin to asking the employee to provide the employer with free insurance. Thus, it is no surprise that many employees will quit when they are placed on pay-for-performance plans and are not compensated accordingly.

In general, organizations that are large and well diversified will tend to be better positioned to accept more risk so might be “risk-neutral” with respect to any one operation. On the other hand, smaller operations or individuals will tend to be more risk averse as there is not much diversification potential. For example, the major source of income for most workers is their labor income, and it is difficult to diversify this. Hence, employees tend to be more risk averse than large businesses that are well diversified. Beyond the ability to diversify, certain individuals and companies simply have low risk tolerance in which case a high risk premium would have to be paid to get them to accept an incentive contract. This would explain why many people do not accept sales positions where income fluctuates heavily with sales.

What key principles apply when designing pay-for-performance plans in environments where performance outcomes are risky? Consider the following:

1. Incentives should be “high-powered” (large bonus for high performance or large penalties for bad performance) when the employee has a high risk tolerance. This is because you do not need to pay a high risk premium to risk tolerant individuals and can therefore make their income more variable. Finance professionals have devised various ways of gauging people’s risk tolerances. For examples, see:

http://www.investorplace.com/free/rb_free_032A.php

[http://www.johnhancocknewyork.com/pdf/JHTF_RiskQuest_NY.pdf#search='what%20is%20your%20risk%20tolerance?'](http://www.johnhancocknewyork.com/pdf/JHTF_RiskQuest_NY.pdf#search='what%20is%20your%20risk%20tolerance?)

2. Incentives should be muted or moderated when your employee has low risk tolerance. In this case, it will be costly for you to provide incentives because the employee will likely demand a high risk premium to stay and be exposed to increased wage fluctuations. For instance, when your employees depend on a stable income to meet bills and obligations, you may lose many of them if you switch to pay-for-performance unless you raise *average pay* significantly. When employees are highly risk averse, the risk premiums may be too expensive to justify a pay-for-performance scheme.

3. If employees have a high degree of control over outcomes (i.e. random factors less important so risk is lower), incentives should be higher powered. For example, for windshield installer where actions more directly translate into output, strong incentives

are desirable because there is very little risk created by factors beyond the employees control.

4. If employees have a low degree of control over outcomes, incentives should be moderated. For example, incentives based on profit sharing should be muted because there are many factors beyond the employee's control, including demand fluctuations, economic cycles, decisions of upper level management, and decisions of other employees can affect profits. Nonetheless, profit sharing plans can have positive effects in that they can create an "ownership" culture which can improve morale. Secondly, they can be combined with other incentive schemes to optimize risk sharing. For instance, individual bonus payments can be withheld during downtimes to help the company weather difficult periods, but bonus eligibility can kick in when revenues exceed some minimal threshold. However, as a pure incentive device, profit sharing plans are not likely to be effective.

References

Conlon, E.J. and J.M. Parks. "Effects of Monitoring and Tradition on Compensation Arrangements: An Experiment with Principal-Agent Dyads." *Academy of Management Journal* 33(1990): 603-622.