

# PAY FOR PERFORMANCE: When Does it Fail?



*The consensus in social psychology is that monetary incentives for performance have a detrimental impact on individual performance. Yes, under certain specific and limited conditions, rewards can reduce performance. Yet pay for performance schemes are ubiquitous. How can we resolve this divergence between theoretical recommendations and observed practices? Nirmalya Kumar and Madan Pillutla recommend solving the problem by designing smarter incentives that avoid these detrimental effects.*

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In his classic 1993 *Harvard Business Review* article, Alfie Kohn argued:

“Certainly, the vast majority of U.S. corporations use some sort of program intended to motivate employees by tying compensation to one index of performance or another. But more striking is the rarely examined belief that people will do a better job if they have been promised some sort of incentive. This assumption and the practices associated with it are pervasive, but a growing collection of evidence supports an opposing view.”<sup>1</sup>

Citing a body of psychological research, Kohn reasoned that incentives which rely on increasing extrinsic motivation unfortunately lead to lower intrinsic motivation and are therefore doomed to fail. He ended his article by concluding “bribes in the workplace simply can’t work.”

Over the years, Alfie Kohn’s perspective has been reiterated by others, most recently by Daniel Pink. With over 25 million views, Pink’s TED Talk, “The Puzzle of Motivation” is among the ten most popular TED Talks of all time. Based on experiments conducted by psychologists over the past two decades, Pink concludes that, except when applied to the simplest tasks, monetary incentives, or what he calls “if, then rewards” fail to improve perfor-

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mance. This view reflects the current consensus in the social psychology literature. As Pfeffer observes: “literally hundreds of studies and scores of systematic reviews on incentive studies consistently document the ineffectiveness of external rewards.”

Other scholars acknowledge that rewards may work, but only for those with low incomes. This view argues that, above a certain earning level, offering people incentives in the form of bonuses and higher pay is ineffective because it does not increase their happiness. Yet despite the prevalence of these views, pay for performance, in the form of bonuses, rewards, and incentives, is still ubiquitous in organizations. Even the CEOs of global companies and private equity managers receive a substantial portion of their earnings in the form of compensation for producing specific results. Making variable pay an integral and vital component of the design of wage systems is generally considered best practice. How, then, can we reconcile the deleterious effects of incentives documented in academic research with their popularity in practice? We have drawn upon our review of a considerable body of academic literature over the past two decades to demonstrate that the negative effects of pay for performance have been exaggerated. Monetary incentives can and have been shown to have negative effects, but these arise only under specific conditions which, for the most part, are not common in organizations. When designing their reward systems, managers need to understand the limiting conditions under which incentives work. By describing the circumstances in which incentives have been shown not to work, we will demonstrate that most of these circumstances are either inoperable in organizations or can be avoided by using our design recommendations.

The case against incentives is generally made on the basis of two motivational processes that are often conflated into one. First, that pay for performance does increase the worker’s motivation to do the task, but that, paradoxically, this over-motivation can actually decrease performance. Second, that there are circumstances in which offering pay for performance will counterintuitively cause the worker to be under-motivated to perform the tasks in question. There is some empirical evidence supporting the validity of these two motivational processes. Table 1 traces the overall framework for our article and the organization of our arguments.

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Before we examine the academic research that documents these two detrimental effects of pay for performance, it is important to note a general factor which limits most laboratory social psychology studies on this subject. While working in a laboratory does enhance internal validity by randomly assigning subjects to treatment or control conditions, it ignores the beneficial sorting effect which incentives have on performance. Lazear, for example, reported that the increase in the productivity of a company that switched from salaries to individual incentives was produced in equal parts by existing workers increasing their productivity (incentive effect) and by less productive workers quitting and being replaced by more

**Table 1: Motivational Processes Underlying Detrimental Effects of Incentives**

	Impact on Motivation	Subprocesses	Description	Recommendation	
Incentives (Pay for Performance)	Over-motivation (presence of incentives increases motivation to a level that reduces performance)	Distraction	Thoughts of obtaining rewards reduce cognitive resources available for performance	Allow preparation time	
		Overthinking	Greater conscious monitoring of steps disrupts automatic performance of practiced tasks by experts	Reduce process accountability for experts so they can freely engage in more automatic processes	
	Under-motivation (presence of incentives reduces motivation to perform)	Undermining nobility	Lack of signaling: Receiving rewards reduces ability to demonstrate sacrifice associated with "good" behavior	Transformation of frame: Putting a "price" on activity changes obligatory communal behaviors (ought to do) to market transactions (is it worth doing)	Reward overall, rather than individual behaviors When rewarding, small, non monetary (recognition) rewards are preferred
			Rewards increase saliency of external attributions for engaging in activity (extrinsic motivation) which reduces intrinsic motivation (doing an activity for its own sake)		
		Undermining intrinsic motivation			

productive ones (sorting effect).<sup>2</sup> The introduction, or use, of pay for performance schemes thus results in a different (more motivated, more productive) pool of employees, self-selecting themselves into an organization. Because we have here concerned ourselves only with the incentive effects and ignored the sorting effects, the detrimental influence of pay for performance in the many studies mentioned below is actually overstated when applied to practice.

### Increased motivation leads to lower performance

Sometimes, the increased motivation to succeed which is inspired by higher incentives can have a detrimental effect on performance. Often referred to as "choking under pressure," some workers have been found to respond to incentives by performing worse than expected, given their skill and historical performance. Scholars offer two explanations for the paradoxical

negative effects of this over-motivation.

### Distraction

Proponents of distraction theory argue that the pressure induced by potential rewards fills our minds with irrelevant thoughts about the situation and the importance of earning the rewards. Our concerns about performance and the effects of earning or failing to earn the rewards compete for our attention, which was once focused solely on the task at hand.

A typical study of distraction theory asked participants to solve two types of math problems, with or without a monetary incentive.<sup>3</sup> Subjects were given a series of novel math problems that either required the use of working memory or that were heavily practiced and could therefore be retrieved from long term memory.<sup>4</sup> One set of subjects was given no incentive while the other was offered five dollars for solving the

problems. Researchers found that the monetary incentive led to a deterioration in performance on working memory problems but not on long term memory ones. These results, as well as those from other studies, suggest that, because high incentives draw attention away from the task, jobs that require extensive use of working memory will tend to be the ones negatively affected by the offer of monetary rewards.

Almost all the empirical evidence in support of distraction theory is laboratory based. These studies have in common the use of discrete performance events with no opportunity to prepare differently after the incentives are announced. The findings can therefore be applied to organizational settings only to a limited extent.

While they might apply to relatively brief and clearly defined tasks (e.g., making an advertising pitch or a sales call to an important client), even here large incentives might

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cause the worker to prepare better, overcoming any potential distraction. Offering someone a million dollars to do well immediately prior to an advertising pitch might have unfavorable effects, but offering that same million three months prior would probably induce the worker to devote the intervening months to preparation and would therefore lead to better performance. And this latter scenario is far more characteristic of organizations.

### **Overthinking**

Scholars of explicit monitoring theories propose that the pressure of high incentives increases anxiety and self-consciousness which, in turn, drive people to pay more attention to specific skill processes. Workers try harder to exert conscious control over the specific steps of what they need to accomplish in the hope that being scrupulously careful will increase their chances of success. However, researchers believe that attention to performance at such a minute level actually disrupts the automatic processes that would otherwise not require working memory.

The most commonly cited evidence for the detrimental effects of explicit monitoring is drawn from empirical studies conducted in the sports arena. For example, psychologist Rob Gray offered accomplished players high or low incentives to bat in a baseball simulator.<sup>5</sup> Batters in the high reward group were told, after they had completed a first set of trials, that they and a randomly assigned partner would each receive twenty dollars if they increased their performance by 15 percent in the next round. They were then told that the partner had already achieved the increase and that it was up to them to ensure that they both earned their reward. Batters in the low reward group were not promised anything. Researchers found an increase in batting errors

and movement variability among the high reward group.

What is more interesting, though, is that the high reward group's batting failure was accompanied by improved judgment (as assessed through verbal statements made during batting) about the direction in which they were moving the bat.

Further research suggests that it is not the incentives per se that cause the overthinking which undermines performance, instead it is the accompanying pressure to monitor and report, referred to in the literature as procedural accountability. So the procedural accountability which often accompanies higher rewards is what drives overthinking, which does lead to more accurate judgment, but unfortunately also disrupts routine skills.

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One simple way to reduce the detrimental impact of rewards on experts, then, would be to separate large performance-based rewards from procedural accountability. This suggestion might not appeal to the many who view systematic organizational failures as arising from a lack of accountability for leaders. However, procedural accountability only damages the performance of experts and then only when they perform tasks for which their automatic responses tend to be correct. As the Nobel laureate Daniel Kahneman points out, workers apply such expertise only in performing tasks that are regular enough to be predictable, produce

high quality and speedy feedback, and are performed repeatedly over a prolonged period, so that they become routine. These conditions occur in a limited number of jobs in a given organization (e.g., anesthesiologists, loan officers, software testers). Within this limited set of jobs, separating procedural accountability from performance-based rewards can overcome the negative effects of incentives.

### **Higher incentives reduce motivation to perform**

The explanation given more frequently by those who argue against pay for performance is that incentives ironically lower motivation to perform. In this scenario, the offer of rewards emphasizes the person's monetary motivation, crowding out what academics consider to be "good motivations." Two types of good motivation have been extensively researched in the context of the negative effects of incentives. For the most part, economists have focused on how incentives reduce workers' motivation by undermining their sense of nobility. Meanwhile, social psychologists have concentrated on the detriment to intrinsic motivation.

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### **Undermining nobility**

People engage in a great many tasks because they see them as part of their duty or because they feel it demonstrates goodness of heart. Examples include arriving on time and helping other people as well as going beyond their specific job requirements to benefit the

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organization. Paying people specifically for these actions tends to cheapen the good deed because it undermines how the activity is viewed, either by the actor or by her peers. People will thus perform the activity less in the face of monetary incentives.

## Signalling

People improve their reputations by performing good acts such as donating blood or volunteering for community projects. Their motivation to do good appears to depend upon the degree of personal sacrifice required. This sacrifice can be viewed as the act's opportunity cost—the cost, to the individual, of other opportunities for personal benefit which they have given up in order to undertake this activity.

Perhaps the most recognized example of how incentives undermine noble motives is Titmuss' comparison of blood donation in the UK and US.<sup>6</sup> His central finding was that, in the UK, where donors are not paid, both the quality and quantity of blood for transfusion were higher than in the US, where donors were paid. While it is not surprising that paying for blood drives down the quality, since it gives people an incentive to lie about whether they are sick, it is remarkable that the quantity per capita also goes down. Although Titmuss' work has drawn considerable criticism over the years, primarily over the quality of his data, the idea that paying people for something they would have given willingly might undermine their motivation to give has survived the test of time. And Titmuss' blood donation case is one of the examples used by Nobel laureate Jean Tirole in his threshold model for prosocial behavior.

Signalling nobility of character is a very important aspect of the threshold model. If the opportunity cost of noble behavior is too little, or is seen by others as too little, the

individual's motivation to perform the activity decreases correspondingly. For an activity to feel really worthwhile, people need to feel (and show) that they have incurred a significant cost. On the other hand, if the cost is too much, people will lose motivation. So there is a specific threshold at which people will perform a noble act; if the cost falls below or above a certain amount they will be less likely to participate. Paying for performance, then, may lower the opportunity costs to below the threshold and remove the opportunity to signal sacrifice, bringing about lower performance.

Recent research using large-scale field experiments shows that offering lottery tickets, gift cards, or noncash incentives such as T-shirts has a neutral or positive effect on the number of blood donors, particularly those who donate infrequently. Studies in domains other than blood donation support the conclusion that non-monetary incentives such as a 'star performer' award do not undermine participation the way monetary awards do and can actually increase noble behaviour. The motivating effect of these incentives is increased by making them public (as through award ceremonies).

However, the research that documents the undermining effects of monetary incentives is usually conducted with participants for whom the noble or pro-social task is not their main occupation. Non-financial rewards may be more effective in these cases because participants' financial needs are being met elsewhere. We would therefore not expect financial reward to have the same undermining effect on people whose main job is the performance of these noble actions (like those employed in the charitable sector). For these individuals, pay for performance might still increase

their performance of the noble behavior.

## Transformation of frame

Paying for the performance of a task can transform an activity from a non-market based communal exchange (like helping out a colleague who is having trouble with a task or assuming their responsibilities when they are ill) to a market transaction. It puts a price on doing a previously voluntary activity, transforming how people view it. Faced with an incentive, people start to evaluate whether it is worth engaging in the activity for the amount in question.

To demonstrate this phenomenon, the economists Gneezy and Rustichini conducted an experiment using ten day care centers. They randomly chose six of the centers and introduced a small fine for parents who were more than ten minutes late to pick up their children. In day cares where the fine was introduced, parents immediately started arriving late, with tardiness eventually leveling out at about twice the pre-fine rate. Introducing a fine actually caused twice as many parents to be late! Tardiness was unchanged in the four day care centers with no fines. The fine had transformed how parents felt about their obligation towards the day care center workers. Instead of viewing it as their duty to pick up children on time and let the workers go home, parents now felt that their decision to arrive on time was an economic one in which they could pay for the privilege of being late.

The danger of undermining the sense of nobility is of interest to organizations because it suggests that managers should be careful with how they offer incentives for the many behaviours they expect from workers outside their core job. While firms may wish to reward those who take on more of these organizational citizenship behaviours, they should

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avoid making that reward too transactional. A yearly 360-degree evaluation of helpfulness will probably produce better results than paying employees for each individual act. The latter method may lead them to start putting a price on each act, and then evaluating whether that price is worth their effort. Publicly

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**By making the rewards a product of peer nomination, Google converts a cash payment into a symbol of appreciation. As a result, people are less likely to see the reward as cheapening their noble behavior.**

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giving people gifts or other non-cash awards is another way to avoid this pitfall.

Google appears to have discovered a way to pay people for being helpful without making it transactional. The company invites employees to nominate colleagues who have been helpful to receive small cash rewards. By making the rewards a product of peer nomination, Google converts a cash payment into a

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**This emphasis on incentives causes people to feel a loss of autonomy. In the face of the extrinsic motivation of an incentive system people tend to lose their mastery orientation, the intrinsic motivation that drives the individual's search for excellence.**

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symbol of appreciation. As a result, people are less likely to see the reward as cheapening their noble behavior.

### ***Undermining intrinsic motivation***

The most frequent argument against pay for performance, though, is actually not one of those we have presented above. Instead, the primary point of Kohn's paper and the consensus among social psychologists, is that it promotes extrinsic motivation and reduces intrinsic motivation. Emphasizing incentives causes people to feel a loss of autonomy. In the face of the extrinsic motivation of an incentive system people tend to lose their mastery orientation, the intrinsic motivation that drives the individual's search for excellence.

To understand this effect, and how organizations can guard against it, it is important to understand the difference between extrinsic and intrinsic motivation. Extrinsic motivation refers to behavior that is driven by external rewards such as money, fame, grades, and praise. Intrinsic motivation stems from an internal drive which allows intrinsically motivated individuals to experience personal enjoyment or satisfaction while performing certain activities. The activity provides its own inherent reward, so motivation for these activities is not dependent on external rewards.

### **The evidence for the undermining of intrinsic motivation**

The evidence for how pay for performance can undermine intrinsic motivation is rooted in a body of literature led by Deci & Ryan.<sup>7</sup> These studies found that tangible rewards, especially monetary ones, tend to undermine participants' intrinsic motivation. There are usually three phases to an experiment of this kind. In the first, subjects are given an interesting task (often a puzzle) and asked to work on it without payment. The experimenter then leaves

the room and monitors whether and for how long they continue to work. This observation measures intrinsic motivation. In the second phase, participants are offered a payment to do a similar task. In the third and final phase, they are again asked to work on the interesting task without payment. Researchers found that, when not directly observed, participants engage less with the interesting task in the third phase than in the first phase. Scholars view this waning interest as indicative of a decrease in intrinsic motivation because the reward has been withdrawn. However, as the reader can likely surmise, despite the common conclusion that these studies constitute evidence of the detrimental effects of pay for performance, the broad inferences drawn from them are problematic. The undermining effect of rewards could be purely transitory. People may have a natural level of engagement in the task which is based on their intrinsic motivation. When the rewards increase their engagement, this level is exceeded such that when the reward is withdrawn, their engagement may be temporarily reduced while they recover from the excess engagement. In this case, they will revert back to normal in the long run. Furthermore, the undermining effect has been traced primarily with regard to interesting tasks, which might not constitute the majority of jobs in an organizations.

### **Using incentives without undermining intrinsic motivation**

According to social psychologists, in order to understand the undermining effects of rewards, we must consider how the recipients are likely to interpret them. Specifically, the effects of a reward depend on how it affects the recipient's perceptions of autonomy and competence. When monetary incentives interfere with an individual's sense of autonomy or competence,

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they tend to decrease intrinsic motivation.

Different kinds of incentives influence our sense of autonomy and competence in different ways and therefore have different effects on intrinsic motivation. In general terms, we can sort rewards into two types.

*Task contingent rewards* are those that are given simply for engaging in or completing a task (e.g., a salesperson filling out sales call reports). Since the recipient is required to work on or complete the task in order to receive these rewards, they could be perceived as controlling. This sense thwarts the worker's need for autonomy while providing minimal information about their competence. Because the loss of autonomy is accompanied by no corresponding increase in feelings of competence or mastery, task contingent rewards can reduce intrinsic motivation.

However, these negative effects do not make task contingent rewards inherently unsuitable for organizations. Organizations are rife with uninteresting and repetitive tasks in which a known process exists to create a desired outcome (e.g., production lines). These tasks carry little intrinsic motivation in any case, so the detrimental effects of incentives are less relevant. The extrinsic motivation engendered by incentives should help employees to engage more intensively with such an activity than they would otherwise.

*Performance contingent rewards*, by contrast, are those which are earned by performing a task *well* (e.g., a commission on sales or a profit linked bonus). These rewards certainly increase extrinsic motivation, but it is vital to ensure that the increase does not come at the cost of intrinsic motivation. Because most managerial performance in organizations requires teamwork, creativity, solving novel problems,

learning, and judgment, for all of which intrinsic motivation is crucial, any pay for performance system that undermines intrinsic motivation is inherently counterproductive. The wise solution in this context is carefully designed performance contingent rewards that enhance feelings of competence and do not undermine autonomy.

Performance contingent rewards which reinforce a sense of competence can help offset any undermining of autonomy. Likewise, if the person delivering the rewards has an appropriate interpersonal style, she can help to reduce the feeling that autonomy is being lost. From these principles we have devised five recommendations about designing and delivering performance-based rewards without undermining intrinsic motivation.

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### Make sure that monetary incentives are accompanied by positive feedback and encouragement so that they don't lead to a sense of lost autonomy.

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1. Make sure that monetary incentives are accompanied by positive feedback and encouragement so that they don't lead to a sense of lost autonomy. Using a coercive interpersonal style, for example making threats, will be seen as controlling and will therefore undermine intrinsic motivation. Offer performance-based incentives only for achievements beyond the minimum standard required for continued employment. Workers should be able to decide whether they want to earn a bonus without worrying about being fired. This freedom ensures

that they do not feel a loss of autonomy.

2. Incentives which depend on undefined performance standards or achievements which clearly rely on luck do not offer any feedback about the recipient's competence and therefore do not compensate for any perceived loss of autonomy. Incentives should be based on specific standards which employees can understand and achieve through effort and skill.
3. Incentives which are accompanied by information about the recipient's performance relative to others will increase their sense of competence and correspondingly increase their intrinsic motivation.
4. Do not offer performance-based incentives for trivial accomplishments which have little to do with competence.

### Conclusion

Designing compensation systems is a complex but critical skill in running an effective organization. We have not attempted to cover the entire landscape of compensation, but rather to debunk the common belief that performance incentives have a negative effect. This broad, overarching conclusion which some authors have drawn is based on relatively narrow and specific studies. To make the blanket statement that "bribes in the workplace simply can't work" or "if-then rewards never improve performance" is just not true.

We acknowledge that under specific conditions offering incentives can cause employees to choke because they are distracted or overthinking. And, in certain limited situations, rewards can reduce performance by removing the sense of nobility or undermining intrinsic motivation. However, as Table 1 shows, thoughtful intervention can reduce or prevent these detrimental effects in organizational contexts. In short, not only is pay for performance

an essential component in an effective manager's toolkit, but by adopting these recommendations managers can learn to design smarter incentives. ■



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## Endnotes

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4. Theorists see long term memory as the enduring stock of knowledge and skills, while working memory is limited to the very small proportion that is actively in use at any given time.
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