Sticks and carrots: the effectiveness of penalties versus bonuses

Should organisations penalise employees who underperform or should they limit themselves to rewarding good performance? This is not a trivial question since financial incentives are an important part of employers' toolkit. ***Wim van der Stede*** *and colleagues have uncovered evidence that when an employee is penalised their performance improves the following month. However, he also finds diminishing sensitivity for both penalties and bonuses as the amounts increase. This occurs faster for penalties, creating a tipping point when bonuses become more effective.*

When it comes to financial incentives, a common assumption is that bonuses work better than penalties, and, in fact, penalties are rarely observed in practice in organisations. The general position is that employees should not be "made to pay" for poor performance; instead, they should just "not earn a reward" that they would or could have earned if their performance had been better. Also, practically, firms cannot easily or legally ask their employees to ''pay them'', except perhaps as "clawbacks" of fraudulently "earned" (but clearly not deserved) bonuses as a result of having "cooked the books" or other types of cheating.

But those are not the "penalties" I have in mind when referring to incentives. In terms of incentives, if there are any penalties, they are typically not "paid" but "deducted" from earned bonuses (or other amounts beyond base pay that are "banked" and the balance of which can go up as well as down). Thus, penalties in bonus (malus) schemes come as reductions of pay instead of payments *per se*.

And then there is the behavioural side, of course. Even though bonuses are more prevalent than penalties at work, if there are any penalties at all, as individuals we are all too familiar with a mix of rewards and punishments, not least when growing up. (Remember those occasions where you turned up home with a "bad" school report?) And the behavioural literature (in economics, education, and many other fields) show that punishments can (though not unconditionally) produce productive behavioural responses, be it corrective actions, greater effort, or improved subsequent performance. Thus, theoretically speaking, both positive and negative reinforcement mechanisms can be effective and "motivate" behavioural change (or better performance, say). That said, the balance of evidence would also suggest that whereas humans respond to the prospect of reward as well as to the fear of punishment, all else equal, it is probably safest to opt for the motivation derived from the prospect of rewards, which is a positive experience, instead of that from penalties, a negative experience.

But what is a "penalty" anyway? At work, it is often perceived to exist already when "not earning" a bonus. If bonuses were "earnable" and especially when they were expected, then missing out on earning one is already bad enough, isn't it? So, you don't strictly have to "take money" away from employees for them to feel penalised. Think of it as "implicit" penalties. So, in organisations, the effective design of incentive systems that include explicit penalties is poorly understood, not least because they are rare and shunned, but also complicated, not only behaviourally (do penalties work?), situationally (if so, under which circumstances?), and practically—that is, even when feasible, which effects do they have on, say, employee relations?

In research from 2020, my co-authors and I set out to examine these questions using a unique dataset from 543 production line workers in an electronic chip manufacturing plant in China containing their performance data as well monthly earnings over a period of around two years. Unusually, total remuneration included both bonuses for good performance (number of tasks completed above a set target) and penalties for slow speeds and poor-quality work. (And as mentioned above, "penalties" here also came as "deductions"—i.e., China's labour law stipulates that pay cannot fall below base salary and, thus, penalties can only be deducted from workers' overtime pay and bonuses.)

In brief, we found that the effect of a penalty in one month is initially more significant for the employees' performance in the next month. That is, while both bonuses and penalties led to an increase in productivity, for each RMB1 of penalty a worker received, they increased their work rate by over half again as much as for the same amount of bonus.

There is, however, a diminishing sensitivity for both penalties and bonuses as the amounts increase, but this occurs faster for penalties, creating a tipping point when bonuses become more effective. Specifically, in this dataset, when a bonus reaches about 12 per cent of a worker's base salary, they have a greater effect on performance than penalties of the same amount.

That's the first catch. Even though we observe a stronger initial effect on subsequent effort and performance for penalties than for bonuses, the marginal sensitivity of penalties diminishes faster than that of bonuses causing the marginal effect of a bonus to eventually exceed that of a penalty as their value increases. Thus, to put bluntly, this is one of those cases where when something is good, it should not be inferred that (ever) more of it is good too!

But even within the "good" range, there is a second catch. That is, whereas penalties can be an effective means to improve subsequent performance within a certain range, there are nonetheless several reasons why employers should be wary of imposing penalties. Indeed, we also found that penalties had an effect on employee turnover, with high-skilled workers especially more likely to leave after having received a penalty. Thus, clearly, whereas penalties may be an effective stimulus for immediate productivity improvements up to a point, employees don't like them. And those a firm least wants to lose may respond to them most adversely and quit.

Overall, then, we show that in a given context (in this case, manufacturing-type work) and up to a certain point, penalties can operate as an "incentive". However, using penalties can also have longer-term "unintended consequences" for motivation, employee retention, and the quality of the workforce. Thus, there are important trade-offs to be navigated when designing effective incentive systems. Poor calibration of these trade-offs produces unintended consequences. But firms also do not want to let low efficiency and poor-quality work to persist. How then to "optimally" motivate employees remains a tall order, but one that no organisation can afford to ignore.

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Notes:

- *This blog post is based on "An Empirical Analysis of Employee Responses to Bonuses and Penalties", with Anne Wu, and Steve Yu-Ching Wu, in The Accounting Review (2020).*
- *The post expresses the views of its author(s), not the position of LSE Business Review or the London School of Economics.*
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Date originally posted: 2021-09-02

Permalink: https://blogs.lse.ac.uk/businessreview/2021/09/02/sticks-and-carrots-the-effectiveness-of-penalties-versus-bonuses/

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