

Mental Accounting Theory and the Efficacy of Non-Cash Rewards

In 1999, behavioral economist Richard Thaler published his groundbreaking **mental accounting theory**. In it, Thaler describes how people tend to code and organize their money and expenses, in effect, putting different value on the same amounts of money depending on how they classify it (e.g. ‘fun’ money versus money to pay the bills). Thaler’s work has, for example, helped economists and psychologists understand why people are often willing to pay higher prices for items when using their credit cards than with cash. In the field of rewards and recognition, mental accounting theory has been used to better understand the effectiveness of cash versus non-cash (tangible) rewards, but it has rarely, if ever, been applied to different types of tangible (non-cash) rewards.

As most of our readers are aware, well over 80% of US organizations use non-cash, tangible incentives (e.g., merchandise, gift cards, travel, etc.) to motivate and reward their employees. **Firms use tangible rewards because they may leave a more lasting impression than cash rewards.** Extensive past research suggests that when people receive a cash reward, they tend to treat it like salary and use it for forgettable things – paying the electric bill for example. Tangible rewards, like TVs, spa treatments, travel, and some gift cards, on the other hand, stand apart from salary; perhaps especially when they address what an employee wants as opposed to what they may need.

By giving employees rewards that don’t get lumped into salary, past research suggests those rewards become more memorable and desirable, motivating employees to work harder, thereby improving performance. And, unlike cash, they avoid creating an expectation of further reward. Over the past few years, a group of researchers, including Adam Presslee, Willie Choi, Alan Webb, Timothy Mitchell, and Axel Schulz have put these claims to more rigorous testing than ever before.

About three years ago, Presslee and Choi conducted a series of lab experiments designed to test three arguments that are often referenced in support of the use of non-cash rewards:

1. Reward recipients mentally account for (i.e., classify) cash rewards as part of their fixed salary, and non-cash rewards as something separate.
2. They classify cash rewards as money to be spent on functional goods and services, and certain non-cash rewards as a windfall to be used for fun, indulgent, or exciting things.
3. Cash rewards create an expectation of further reward.

Importantly, they investigated whether these conditions lead to greater goal commitment and effort at work. If the three conditions above hold true, then reward recipients should value tangible rewards more than cash and be willing to work harder to achieve goals associated with earning them.

Four experiments with more than 320 participants in total were performed. Subjects were paid to perform simple computer-based tasks over a series of twelve two-minute rounds. Participants were (randomly) given the chance to earn an additional cash or non-cash reward if they achieved a difficult but attainable goal. The researchers carefully manipulated the conditions for each of two groups across the four experiments to test the three arguments described above.

In the initial experiment, cash reward group participants were told that for each round in which they met or exceeded their goal, they would get \$30 instead of \$20, this created an “expected” condition. Participants in the non-cash group were told only after the eighth round that they could earn a \$10 AMC movie gift card (in addition to the \$20) in each remaining round (4) on condition they met or exceeded the same performance goal as in the cash group. This created an unexpected “windfall” condition.

Note that cash-motivated participants were not told they would receive “\$20 + \$10.” The researchers deliberately framed the reward as part of fixed pay to better approximate the way cash rewards are often delivered in organizations (as a lump sum). Finally, cash reward participants were asked to imagine spending their money (base and reward) on things like groceries and utility bills. Non-cash reward participants were reminded of the fun nature of their reward (e.g., movies and concession stand items).

OUTCOMES	ACTIONABLE TAKEAWAYS
<ul style="list-style-type: none"> The non-cash reward group outperformed the cash reward group. Significantly more of those in the non-cash group met their goals than in the cash group. The researchers conclude that <i>“goal-based tangible [i.e., non-cash] rewards will lead to greater effort than goal-based cash rewards.”</i> Participants perceived cash rewards (\$10 bonuses for goal attainment) as significantly less distinguishable from their standard payment (\$20 per round) than the \$10 AMC movie gift cards. The researchers found that the more distinguishable the reward from the standard payment (i.e., more separation in mental accounting), the greater the goal attainment. Non-cash (tangible) reward participants were significantly more committed to attaining their reward goals than those in the cash group. The researchers found that the greater the goal commitment, the greater the goal attainment. In the final experiment, one group was offered the AMC gift card for goal attainment in each of the twelve rounds (the expected group), the other was offered the same gift card only after round eight (the unexpected group). Goal attainment was significantly better in the unexpected group. 	<ul style="list-style-type: none"> Non-cash rewards prove more motivating, on the whole, than cash rewards in these experiments. They drive greater goal commitment, greater effort, and greater performance. The researchers conclude: <i>“The results of our main experiment support claims around the motivational benefits of tangible rewards, and thus suggest compensation system designers may want to consider the use of performance-contingent tangible rewards to increase employee motivation.”</i> This research confirms that managers should frame rewards as separately as possible from fixed pay, they should emphasize fun/luxury non-cash rewards over functional cash rewards, and they should avoid creating the expectation of a reward to the extent possible. In the words of the researchers: <i>“Collectively, these results suggest a multitude of differences between cash and tangible rewards may be necessary in order to get the motivational benefits from using tangible rewards.”</i>

Questions Raised

These experiments suggest that luxury or hedonic non-cash (tangible) rewards outperform equivalent cash rewards but leave unanswered **the question as to whether tangible hedonic rewards outperform tangible utilitarian rewards**. Thus, in 2020, Presslee collaborated with colleagues at the University of Waterloo, the University of Massachusetts, and La Trobe University in Australia to seek answers to this question.

New Studies (2020)

The researchers predicted that participants in their experiments would keep hedonic and utilitarian rewards separate in their minds (i.e., different mental accounting). They hypothesized that mental accounts in which utilitarian rewards are kept, are the same as where salary is kept, and that hedonic tangible rewards generate greater effort than utilitarian tangible rewards.

Experiments were performed to test these hypotheses. In the first, 53 students rated a variety of reward types “fun and exciting” (hedonic) or “necessary and helpful” (utilitarian). The researchers found that **participants mentally classified hedonic tangible rewards separate from utilitarian** and that utilitarian rewards were, as predicted, classified with salary.

In the second experiment, students performed simple tasks for small piece rate rewards. The rewards were gift cards, either for hedonic or utilitarian use. Beforehand, participants rated their perception of the hedonic uses as hedonic and utilitarian as utilitarian (-3 to +3). An AMC movie gift card scored highest on the hedonic scale, and a grocery gift card highest on the utilitarian scale. Importantly, participants were given pictures and descriptions of both gift cards. Participants rated the attractiveness of both cards roughly similar.

The participants were placed into a hedonic gift card or a utilitarian gift card condition randomly. The more work the 68 participants in the study performed, the more value they accumulated on their gift card. Three rounds of experiments were conducted. In all three, participants in the hedonic condition significantly outperformed those in the utilitarian condition.

The authors concluded: *“As predicted, we find that individuals categorize hedonic rewards separately from utilitarian rewards and this categorization process is significantly influenced by perceptions of tangible reward characteristics. In particular, supplementary data shows that the distinctiveness of hedonic rewards relative to utilitarian rewards is a defining characteristic. Moreover, controlling for other reward characteristics that may affect effort choices, we show that as predicted, **individuals eligible to receive hedonic rewards significantly outperformed those eligible for utilitarian rewards.**”*

Echoing the findings of the IRF’s 2017 [biometric-based research](#), in which participants attached to various biometric sensors revealed conscious and subconscious preferences, this study suggests that the more salient (i.e., attractive, clear and distinct) you can make hedonic tangible rewards in people’s minds, the more likely they will mentally account for them different than salary. Presslee et al remark: *“Our results, in combination with Choi and Presslee (2021), suggest that organizations seeking to use hedonic rewards could benefit from **emphasizing to employees the fun and exciting uses to which those rewards can be put.** Such emphasis could come in a variety of forms including provision of pictures of potential rewards to employees, or by providing vivid descriptions of how the reward can be used.”*

When people hold tangible rewards separate from salary, these findings suggest that they increase effort and achieve significantly greater performance than those who place tangible rewards in the same mental account as salary.