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Most of us are paid regularly throughout our working lives. Monetary rewards are central to the employment relationship, and the typical employee has experience with the pay programs of several, perhaps many, different organizations. Managers and employees form strong, emotional views about pay, and they are rarely shy about expressing these views. Frustrated compensation managers have a saying: "Everyone gets paid, so everyone thinks they are an expert on pay."

Apparently, this expression does not apply to experts on lean systems. Authors on lean mostly ignore the topic of monetary rewards. The 18 books on lean systems in my personal collection devote less than 18 pages to the topic of compensation. Some lean authors are negative about the use of incentives. For example, Deming famously listed merit pay and management by objectives among the "seven deadly diseases" on the grounds that they encouraged short-term thinking and unhelpful competition. Other authors prefer some reward systems to others. Womack and Jones in Lean Thinking (2003) offer a few paragraphs about compensation, arguing for simple salary systems and substantial bonuses (perhaps 20 percent of salary) for organization-wide performance but not small group performance. Liker's book The Toyota Way (2004) offers only a few sentences about compensation, noting the heavy use of company profit sharing in Toyota Japan versus an individual incentive system in one American unit. Overall, I am struck by how little attention lean authors have given to compensation, despite the importance of pay to both employees and organizations.

I argue here that the lack of attention to rewards in the lean systems literature is a mistake. Decades of academic research confirm that pay exerts powerful effects on employee attitudes and behavior. Rewards help increase employee attraction, retention, development, and performance, and help shape employee understanding of the organization's needs. Lean systems represent a fundamental organizational transformation, one that requires dramatic changes in employee attitudes, skills, and behavior. Ignoring the leverage provided by reward systems is unwise. Worse, if reward systems do not support lean, they may work at cross-purposes with lean. It would be far better to address this critical set of human resource practices and use them to advantage.

I build the case for using monetary rewards in lean systems in several steps here. First, I review evidence bearing on whether monetary reward systems actually are effective in shaping employee behavior. Second, I consider different types of monetary rewards and the goals of each, and how each type of monetary reward can be used to reinforce lean systems. Finally, I offer some cautions for the use of rewards in lean systems.

Does Money Motivate?

Lean requires a great deal of employees, including new knowledge and skills and new behaviors. Employees must understand quality principles and tools, standardized work requirements, skills for multiple jobs, support skills (set-up, inspection, and maintenance as well as operations), team skills, problem solving techniques, and in some cases a vocabulary of Japanese terms. New behaviors required in lean include a customer orientation, following standardized work requirements, focusing on continuous improvement, making suggestions, performance monitoring, problem solving, teamwork, and training others. This is a tall order. Can monetary rewards motivate employees to develop new skills and knowledge and to adopt new behaviors?

Many managers believe that money does not motivate employees. They may even believe that the research record supports this position. They would be wrong. Hundreds of academic studies of organizational rewards have been conducted in the recent decades, and the evidence is clear. Money motivates, and it motivates strongly. There have been six major reviews of academic research on rewards in the past 20 years. Every review reached the same conclusion: monetary rewards increase performance, and the effects are strong

The myth that money does not motivate comes from popular authors with little academic credibility. Fred Herzberg, the author of a 1968 article that is one of the most reprinted Harvard Business Review articles of all time, argued that extrinsic rewards such as money are “hygiene” factors that can make employees unhappy but cannot motivate. He argued that only intrinsic rewards, which come from the experience of performing work, truly motivate. This position has little support among academic rewards researchers today. No study using Herzberg's framework has been published in major academic journal in decades. The research evidence of the past 45 years makes it clear that intrinsic rewards motivate, extrinsic rewards motivate, and the combination of both is more powerful than either alone.

More recently, the authors of two management best sellers have received tremendous attention for their claims that incentive plans typically fail. Daniel Pink (<u>Drive</u>, 2009), said that "pay for performance schemes . . . usually don't work and often do harm." Alfie Kohn (<u>Punished by Rewards</u>, 1993) stated, "The bottom line is that any approach that offers a reward for better performance is destined to be ineffective." Both authors argued that extrinsic rewards undermine intrinsic rewards to such a degree that they become ineffective, citing the work of Edward Deci and other laboratory researchers.

Despite their popular success, neither author was an academic researcher. Pink was a political speechwriter (for Al Gore) turned author, and Kohn was a secondary school teacher. They greatly overstate the findings of researchers supporting their position; even the researchers they quote concede that monetary rewards motivate. The research record supports the conclusion that negative effects of incentives on intrinsic motivation can be manufactured in the laboratory, but even these effects disappear in real-world conditions. A review of 43 field studies found that incentives actually tend to increase intrinsic motivation.

If monetary rewards can be powerful motivators of behavior, what types of rewards are best used for what purposes?

Reward Options

There are several types of compensation systems. Here we consider their relevance to lean.

- Traditional salary systems can be helpful in encouraging the development of lean knowledge and skills by incorporating these into job descriptions and progression systems. However, they are useful mostly to the extent that employees are interested in long-term career advancement.
- Skill-based rewards employees for the range of skills in their repertoire, rather for the job they are currently performing. Employees may be rewarded for learning all the jobs in their work group or their production area. These plans tie pay increases to passing formal tests of knowledge and skill, making them very useful in lean systems. Although most pay for skills systems are salary systems, it is also possible to pay bonuses rather than base pay increases for passing tests of knowledge and skill. Lean systems often incorporate operations, lean, and team skills into compensable blocks of skill. For example, a high level employee such a system may be required to earn a black belt or to lead a successful Kaizen event.
- Unit performance incentives such as goal sharing or gain sharing can be very effective at motivating increased performance. Examples would include plant-wide plans in manufacturing plants and the equivalent in the service sector that use operational metrics as the basis for bonus payouts. Employees earn bonuses by cooperating in improving the overall production system, encouraging employee suggestions for improvement, and facilitating problem solving, all of which are consistent with lean goals and techniques.
- Profit sharing encourages identification with the company, and bonuses automatically are tied to the company's ability to afford them. It is consistent with lean in that it encourages attention to the entire corporate system. Profit sharing at the corporate level is very common in Japan, where annual profit sharing bonuses may represent 25-35% of base pay in an average year. However, profit sharing plans may have weak motivational effects because it is usually difficult for front-line employees to see how they can affect corporate profitability.
- Individual incentives such as piece rates and some small group incentives typically are not suitable to lean systems. Their motivational effects may be very strong due to a clear line of

sight but they have serious problems. They encourage suboptimization rather than system-wide improvement, encourage the development of WIP inventory, and make smooth production flow difficult because they encourage employees to look out for themselves.

- Recognition systems are favored by many managers in lean systems. Some research indicates that recognition systems motivate performance, although perhaps not as well as cash incentives; however, their low cost makes them potentially cost-effective. It is important that the recognition plan not become a benefit to which employees are entitled periodically, rather than an incentive for performance or behavior. Most recognition plans probably suffer from this problem at least to some degree.

Clearly, then, different types of monetary rewards have value for different purposes, as indicated in Table 1. No reward is equally valuable for attracting and retaining talent, motivating development, and motivating performance. Often, a combination of plans (such as skill-based, unit-wide incentives, and recognition covers the bases well.

Table 1

Goals of Different Components of Compensation Plans

	Attraction and Retention	Motivate Development	Motivate Performance
Base Pay			
- Traditional salary system	✔	✔	
- Skill-based pay	✔	✔✔	
Performance Incentives			
- Individual incentives	✔		✔✔
- Unit-wide incentives	✔		✔✔
- Corporate profit sharing	✔		✔
Recognition			✔

Cautions in Designing Monetary Rewards

There are many ways that monetary rewards can become dysfunctional. Here we will consider several problems that seem to appear most of in rewards in lean systems.

Probably the most important thing to remember in reward system design is that we tend to get exactly the behavior that we reward. For example, some suggestion systems reward employees for simply making improvement suggestions. These systems tend to result in more suggestions, but not necessarily performance improvement. More generally, if the organization does not reward lean outcomes such as quality and continuous improvement, management should not be surprised to find that it gets other types of behaviors and performance that it does reward. The point seems obvious, but managers seemingly relearn this lesson repeatedly.

Second, it is possible to make serious errors in the choice of metrics for performance incentives. Lean writings have a good deal to say about good operations metrics, and those discussions often are highly relevant to metrics used in incentive plans. Good metrics, for example, are relatively simple, comprehensive, have a stable history that makes it possible to develop good performance baselines, are familiar to and understood by the workforce, and are under the control of employees. It is not difficult to come up with metrics that can be used in incentive plans, but it can take considerable work to come up with a limited number of metrics with the characteristics that motivate performance.

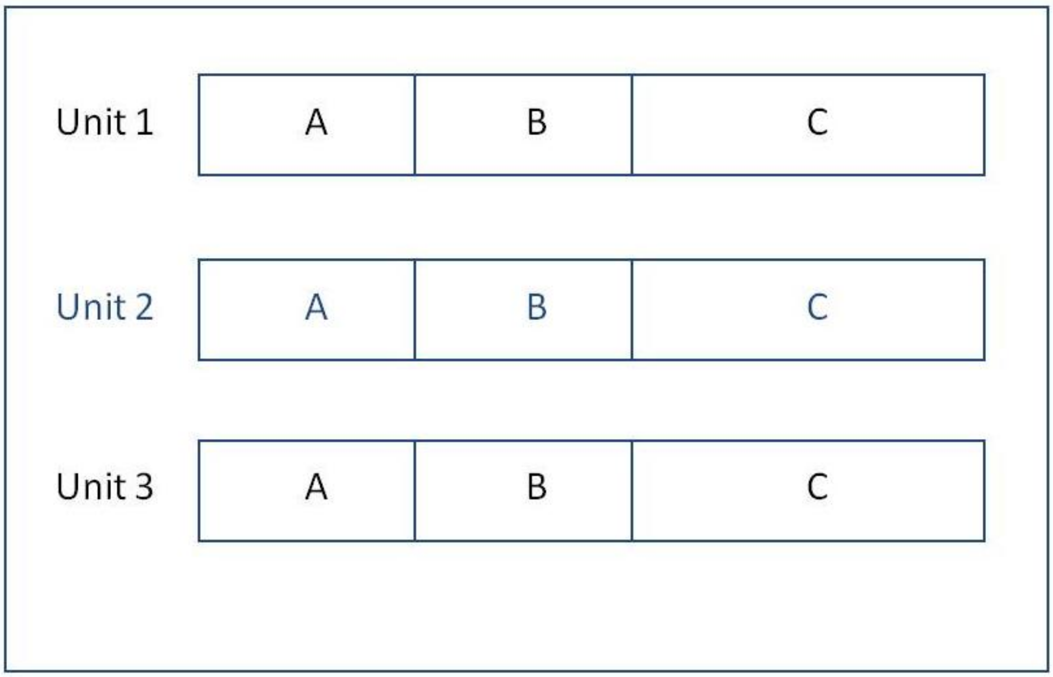
An important lesson from research and experience is that successful plans have a limited number of metrics – usually three to five. This helps cover enough types of performance to ensure that employees do not suboptimize on one type of performance (such as productivity at the expense of quality or delivery), while keeping the incentive formula simple enough so that employees understand it. I was asked recently to return to a pharmaceutical plant that I had worked with 12 years previously to help diagnose why the plant-wide incentive plan was no longer effective. It did not take long to determine the reason. The incentive formula had expanded over the years from four to 25 metrics. Almost no one in either the management or employee ranks could explain the plan. It had ceased to motivate anyone.

A third common problem in reward systems is failing to offer clear alignment with the organization design. In many cases this is because management has not clearly decided what organization design it wants. We will illustrate the potential problem with an example. Figure 1 is a schematic that is representative of many production and service delivery processes. Let us assume that Units 1-3 are production lines with parallel operations producing different products. Subunits A – C are departments, such as machining, component preparation, and assembly. The organization is adopting lean, and wants to improve quality and productivity using lean tools. As part of the overall set of changes, management wants to increase employee flexibility through cross training, and to motivate the development, behaviors, and performance called for in the new system with skill-based pay and an incentive plan.

Does management only want employees to learn the positions within A, B, or C on one line, or does it want more? Learning positions in A, B, and C in one Unit might increase employee understanding of the entire production process and generate new insights on improving the process, and increase a sense of teamwork. However, this can be expensive because of the amount of training and extra pay required. Perhaps employees in A in Unit 1 would be expected to fill in as necessary in A for Units 2 and 3, and so on for B and C. This is a less expensive option that may make it easy to fill in permanently or temporarily open positions across the Units, and to better handle peaks and valleys in demand from one line to another. However, this option would reduce identification with the Unit as the team and would not give employees broader perspective on the production or service delivery process. Is the team that management wishes to reinforce the Unit or the department or both? Skill-based pay cannot be designed until this question is answered definitively. Also, it is impossible to say what level of performance (Unit, department, or the entire organization) the performance incentives should reinforce. I have seen several organizations in which management has derailed pay for skills or incentive plans because it lurched from one choice to the other, leaving employees confused and unmotivated.

Figure 1

Aligning Rewards and Organization Design



Perhaps the most important lesson about rewards is that success usually depends more on implementation (communication, training, employee involvement, and renewal) than on design. Design usually gets most of the attention because it is more interesting than the hard work of implementation. However, good implementation can often save a weak design. By contrast, the best designs invariably fail if implementation is poor. Management would be wise to allocate more than half of its planning and preparation to implementation, not make implementation an afterthought.

Turning the Tables: Applying Lean Principles to the Rewards Department

There is a huge, unrealized opportunity to apply lean principles to the design of compensation and benefits. Most reward programs are the antithesis of lean, with excessive numbers of job titles and grades, complex progression paths, and benefits and incentive plans so complex that most employees do not understand them. Applying lean principles to compensation and benefits could eliminate waste of many kinds. The cost savings could be impressive. Equally as important, the result could be simpler, clearer, and more user-friendly reward plans.

Conclusion

I have argued that monetary rewards are not only compatible with lean systems, they are important to the success of lean. Employees take pay seriously, and they notice whether management "puts its money where its mouth is" in espousing lean principles. Ultimately, the most important question is not whether pay should be used to support lean, but how to design pay practices to support lean principles effectively.