SATM
Innovation & Technology Management News
Alliance for Technology Management
A Business Resource at STEVENS Institute of Technology
Summer 2002
Volume 6, Issue 2

Pay and Innovation: How Leading Organizations Reward Their Innovators

Jack McGourty and Richard R. Reilly

Our feature article reports the results of Alliance research on the relationship between innovation and pay. The findings are put in the context of the Alliance Innovation Model. Also featured is an article on the role of the Project Management Office and a description of some current research on project management

Larry Gastwirt
Director

Can you actually pay people to become more innovative? Surprise to many, the simple answer is yes. Dozens of leading edge organizations are doing it every day. The longer, more complicated answer, however, depends on how you approach the sticky problem of compensating in a fair and accurate way those who demonstrate behaviors or talents that lead to truly innovative products and processes. Pay and innovation are tied together.

While the link between pay and innovation is both industry practice and conventional wisdom, not all experts agree that pay rewards and stimulates more innovation. Alfie Kohn is probably the most outspoken and articulate opponent of rewards in general. In a nutshell, Kohn claims that rewards actually punish, they undermine relationships, they spoil problem-solving and they reduce risk-taking, a behavior so important to innovation. Yet, American companies continue to reward innovation with a wide variety of pay schemes.

No one would argue with Kohn or anyone else who extols the virtues of "intrinsic" motivation. Intrinsic rewards are inner rewards such as the satisfaction from a job well done or the grand pleasure we take in the enjoyment of work we find personally enriching and rewarding, in and of itself. In such a climate, innovation flourishes.

However, when rewards become extrinsic to the work at hand, when they are offered contingently, Alfie Kohn sees all kinds of problems emerging. He deplores any linkage of

(Continued on page 3)

Pay and Innovation (Continued from page 1)

pay and performance, offering countless studies to prove his point that quality goes down instead of up.

He blasts company contests, promotions, sales commissions, tips for waiters, gainsharing schemes, stock options, bonus pay, parking privileges, awards banquets, plaques, incentive plans and "other bribes" because they are extrinsic to the work, demeaning to those who do not get them, and ultimately destructive of intrinsic motivation. Because of all these attempts to manipulate the behaviors of employees, Kohn calls American industry "a giant Skinner box with a parking lot."

Nevertheless, American companies continue to reward their peak performers, and they in turn continue to lead the world in innovative products and processes. Kohn would say these organizations should be on the leading edge in spite of certain pay practices, not because of them, but that is begging the question. It may be more accurate to say that not all reward-pay schemes are bribes that punish, and how they are implemented can make all the difference, especially in terms of innovation.

The Changing American Corporation and Traditional Pay Systems

Consider the case of The Organization Man and William H. Whyte's 1956 book of the same title. He worked 60 to 70 hours a week, spent much of his time living out of a suitcase and relocated to wherever he was needed most as he climbed the corporate ladder. He followed orders from upper management until he became a manager himself; then he directed, organized, planned, budgeted, judged and controlled others in the top-down organization. He retired comfortably and moved to Florida.

The Entrepreneur pretty much replaced the Organization Man after two turbulent decades of acquisitions, mergers, corporate restructuring, and massive layoffs. With hardly any job security left, the new corporate employee is much more proactive, collaborative and customer-focused. Total Quality Management has set in, and Business Process Reengineering has made the stodgy, old American organization more flexible, efficient and competitive in the world marketplace. The pressure is on to innovate or step aside.

Yet, our reward systems too often resemble those of the Organization Man. If rewards ever shaped human behavior, they could have more easily in the 1950's than in the 1990's. Typically, bonus pay for innovative behavior is doled out using outdated procedures. Traditional reward systems suffer from several inherent flaws that are not suited to today's emphasis on performance:

- an emphasis on individual achievement
- evaluations based only on a supervisor's opinion
- promotion of specialized skills
- promotion of upward mobility
- a de-emphasis of performance.

For example, while recent studies indicate that eight out of every 10 U.S. companies have assigned people to designated work teams, the focus on rewarding individuals persists and sends the wrong signal about corporate practice and policy. To compound the problem, all too often, the bonus or raise is based solely on the recommendation of the employee's immediate supervisor. This is myopic. Would it be fairer and more accurate to dispense with traditional "annual performance appraisals" and go to ratings from team members and customers?

New Pay Systems for New Organizations

There must be a better way, and the most innovative of companies have discovered it. Just as these newly structured organizations have led the way in introducing new products, improving old processes or filing new patents, they have applied innovative thinking to many management practices including compensation. These highly innovative organizations have come up with a systems approach linking rewards to organizational-level goals and objectives.

To understand how this works properly, let us examine a conceptual model of innovation developed in this decade by the authors and a number of associates at the Stevens Alliance for Technology Management. Exhibit 1 is a Model of Innovation developed and refined over the years, starting with best-of -breed interviews, innovation metrics study, model validation within several high technology industries, a study of the food industry (replication), and a close analysis of reward and recognition systems. Since 1992, the research has involved over 100 organizations involving 2000 technology-based employees (see McGourty & Tarshis, SATM News, Summer 1998, Vol. 2., Issue 1).

Specifically, we found that the most innovative of organizations had a systematic approach to cultivating and encouraging innovative behavior, the center of the model. At the very heart of the Alliance Innovation model is the kind of behavior that results in innovation. We found four distinct aspects of that innovative behavior: advocative, collaborative, inquisitive and goal-directed. Without exception, leading innovative firms had instituted practices to encourage and reward

(Continued on page 4)

Pay and Innovation (Continued from page 3)

those very dimensions of innovative behavior, especially when they are directed toward the strategy and goals of the organization.

To what degree are specific behaviors considered the norm among fellow employees? How stable are these behaviors over time? To what degree are these behaviors prevalent across the organization? The culture of on organization should indicate what type of pay schemes will be acceptable or rejected, successful in producing more innovation or a possible failure. Some pay systems are more compatible with an organization's particular culture than others.

In addition, we found six distinct organizational practices that reinforce the behaviors that lead to innovation. Innovative organizations all have some form of strategic drivers, employee selection practices, training and development programs, reward and recognition systems, support systems for new ideas and multi-functional work structures to stimulate and maintain innovation.

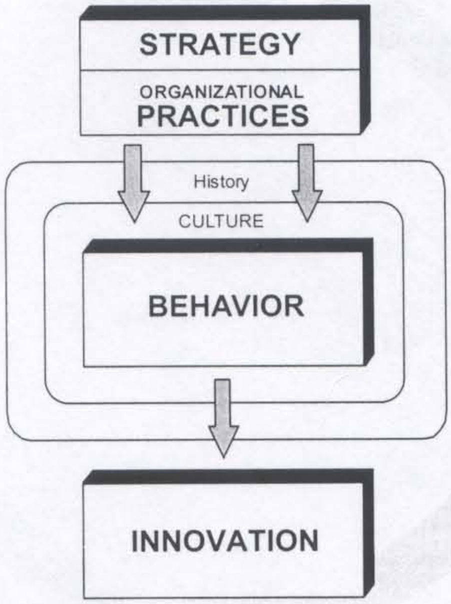

Figure 1. Alliance Innovation Model

Rewards such as pay fit in at this point, as one component of organizational practices in the model of innovation. We found that world class organizations pay extensively for performance, reward patent generation, focus on individual rewards within team structure and offer career paths based on a record of innovation.

In order to understand the connection between pay and innovation better, we launched an associated research study sponsored by the Stevens Alliance. We investigates how variable pay systems affected innovation, and collected organizational data on measurement/pay systems. We sought to understand the potential impact pay might have on innovative behavior. Variable pay consists of financially-based rewards distributed to individuals or teams based on their level of performance on a specific task or project. These rewards are incremental to annual salaries and benefits. Variable pay systems often include individual and/or team lump sum bonuses at management discretion, individual and/or team incentives based on predetermined objectives, profit sharing plans, stock options and allocation of a percentage variable pay to total compensation.

In each category, high innovators offer more variable pay rewards and incentives than low innovators, on average 50 percent more, especially discretionary lump sum bonuses to individuals and profit-sharing. The lowest category for both low and high innovators was pre-determined incentives for teams. A distinct correlation between variable pay and patent performance was found. High innovators also paid out three times as much (12%) variable pay than low innovators (4%), with most of it going to managers and the rest to engineers and scientists. We also observed a clear correlation between variable pay and the four innovative behaviors we identified earlier.

We arrived at several conclusions and implications from this investigation on pay systems:

- High innovators use variable pay schemes more extensively than low innovators.
- Pay emphasis is on individual performance more often than on teams.
- Stock options and profit-sharing are prominent in variable pay schemes.
- Variable pay has a significant impact on patent generation.
- Individual incentives influence innovative behaviors more than team incentives.

The pay research study confirms two previous concerns we had about pay practices. First, what does the organization really hope to accomplish with the introduction of a new pay program? Most pay practices focus exclusively on business-related objectives, but we found that behavioral objectives can be enforced, too.

Pay and Innovation (Continued)

With too much of a focus on "bottom-line" performance, an organization can too easily overlook skill-based pay schemes that can not only promote innovative behavior but also reinforce the behavioral expectations of all involved employees, thus enhancing the culture of innovation.

Secondly, what role do team rewards play in an organization's quest for sustained innovation? There are several concerns about the design of team pay systems and their ultimate effectiveness (see Reilly and McGourty SATM News, Winter 1998, Vol. 1., Issue 4).

Implementing New Pay Systems In The New Organization

Variable pay systems ought to emerge from the organization's strategy, history and culture, not forcibly imposed or presented as the "solution du jour" for management problems. Rather, both research and experience suggest they be phased in gradually.

At the assessment phase, management has to determine how ready the organization might be to accept variable pay. A new pay scheme related directly to the organization's innovation-related objectives has a better chance of acceptance than one that is not connected. Customized design of the new pay-for-innovation systems involves the formation of strategic pay objectives, showing how they are related to overall organizational or corporate goals. Performance objectives are tied to innovation: patents, new products, new processes, or reduced cycle time. Behavioral objectives are tied to each of the four dimensions of innovation: advocative, inquisitive, collaborative, and goal-directed.

In a traditional pay system, a single supervisor makes decisions on rewards or bonuses, but in an innovative organization, the design process is, above all, collaborative. Jointly deciding how behavior and performance objectives are measured should produce a better system because those who are closer to the actual work being done can describe measurable outcomes better than anyone else. Besides, those who are affected by the change are more likely to accept if they are involved in its design.

How the variable pay program is implemented will not only determine how successful it is in terms of innovative performance, but it may also have a lasting effect on employee behavior. A three-part implementation phase may be preferable in those corporate cultures resistant to long interventions. A pilot program in one semi-autonomous work unit may reveal strength and weakness for better acceptance and revision. Full-scale implementation ought to show how the new pay scheme is related to the old one, and what a person is expected to do to earn extra income. Finally, rather than hit and run, management should monitor and evaluate the variable pay system periodically and report back monthly to its employees, even if the pay out is annual. If it needs fixing, fix it openly, and if it does not work as intended, let it go or try again.

Team rewards, as opposed to individual bonus pay, should be assessed, designed and implemented in much the same way. Start with a simple variable pay plan with just two or three measures and involve all team members, if possible. Rewards should be shared equally among all the members, although they may prefer to distinguish between core and support team members. Rewards for individual contributors can be phased in later.

Conclusion

Effectively designed rewards and recognition programs can reinforce the behavior of collaboration. But it takes more than innovative pay programs to promote more innovation. The alert organization will keep renewing its strategy, look for innovative behaviors or potential in the hiring process, offer attractive training and development programs, devise support systems for new ideas and create multi-functional structures where and when they are needed for innovation, The point here is, despite opinions to the contrary, pay and innovation are inextricably linked, and the fact that high innovators use variable pay systems suggests the wisdom of experience.

Dr. Jack McGourty, Associate Dean for Engineering at Columbia University, has worked with over 100 companies to measure and improve innovation rates in their organizations. He has published several articles on innovation, organizational behavior, and engineering education. He serves as an associate editor for the Journal of Engineering Education and as editor of SATM Innovation and Technology Management News.

Dr. Richard R. Reilly is a Professor in the Wesley J.Howe School of Technology Management at Stevens, where he also chairs the Ph.D. program in Technology Management. He has published over 50 articles and chapters on various topics in Human Resources Management, including issues related to the assessment and development of employee competency.