

DOES PERFORMANCE-BASED PAY
REALLY WORKS:
CONCLUSIONS BASED ON THE
SCIENTIFIC RESEARCH

A Report Prepared for the 3M Company

by George Milkovich
and Matthew Bloom¹

EXECUTIVE SUMMARY - DOES PERFORMANCE-BASED PAY REALLY WORK?
WHICH APPROACH MAKES SENSE? - STRATEGIC PERSPECTIVES: BUSINESS BASED
AND RESOURCE-BASED - CAVEAT EMPTOR OR THE IMPORTANCE OF BEING AN
INFORMED CONSUMER - WHAT DO WE KNOW ABOUT PERFORMANCE-BASED PAY?
- THE DARK SIDE TO PERFORMANCE-BASED PAY - APPENDIX.

EXECUTIVE SUMMARY

This Report intends to inform 3M executive leadership about the conclusions that can be drawn from the scientific research on performance-based pay. Answers to two questions are sought:

- +Does performance-based pay really work?
- +Which approach makes the most sense?

Research findings are the focus of this Report. Yet in the final analysis, managing employee compensation is perhaps more art than science; research informs but cannot replace judgment and leadership.

The Report has four sections and draws the following conclusions:

I.-Strategic perspectives matter. The manner in which employees are compensated with performance-based pay can be treated strategically as a potential source of competitive advantage.

¹George Milkovich and Matthew Bloom, are Professors-members of the Research Staff of the ILR School, Cornell University, August 1995. En julio de 1996, durante su visita a Venezuela, el Dr. Milkovich, a solicitud del Director de la Revista sobre Relaciones Laborales e Industriales de la UCAB, concedió su autorización para la publicación de este estudio realizado con su colega Matthew Bloom. Le estamos sumamente agradecidos. Hemos transcrito el folleto original que nos entregó en dicha fecha.

+There exists a widely held belief that incentive pay is woven into the fabric of the overall compensation system and the total HR strategy. It does not operate in a vacuum.

+Two strategic models currently compete, offering two different perspectives on how performance-based pay should be used to achieve competitive advantage.

1.-Business-based perspective asserts that tailoring performance-based pay to support the business strategy and vision is a source of competitive advantage.

2.-Resource-based perspective turns the business-based perspective on its head. Its premise is that human resources are the crucial resources, that the business strategy must be based on them k) achieve competitive advantage. Advocates argue that answers to incentive pay questions are known. However, they disagree on the answers. One set advocates success sharing, the other advocates at-risk plans.

+Strategic intent reflects the philosophy of an organization. Options include:

1.-Predictability-Security (base pay + merit) which offers employees economic predictability and encourages commitment to high-performance initiatives without fear or insecurity.

2.-Success sharing or mutual gains (profit sharing and gainsharing), in which employees and organizations strive to continuously learn and improve, Gains from such improvements are shared.

3.-Risk sharing in which the increasingly competitive and risky economic environment requires a partnership with employees to share the risks and returns.

+Competitors' strategic intent cannot be overlooked and may influence the approach chosen by 3M. Research does not yet offer much evidence about how to respond or position against competitors' strategic intent with incentive pay,

+Five criteria for judging whether 3M's compensation and performance-based pay system achieves competitive advantage include:

1.-Be difficult for competitors to imitate.

2.-Provide unique access to value-added HR capabilities and competencies.

3.-Support significant contributions to customers' benefit.

4.-Support value-added contributions to owners.

5.- Support 3M's employee relationship philosophy,

II.-A consumer's guide to compensation research seeks answers to three questions:

1.-Does the research measure anything useful?

2.-Does the study separate correlation from causation?

3.-Are there competing explanations?

III.-The preponderance of evidence strongly suggests that performance-based pay influences performance, employee satisfaction, and other behaviors.

+Merit Pay

There are virtually no scientific studies that investigate the effectiveness of merit pay. So much money going to so many people without knowing its effects. Yet the pattern of evidence that does exist suggests that merit pay supports a performance philosophy in which individual contributions matter.

When employees believe their pay increases are truly based on performance, both motivation and higher satisfaction follow.

While conventional merit is justifiably criticized, it is being mismanaged, employees' perceptions of the link between their merit increase and their performance is important.

+Unit and Firm Level Bonuses

Greater incentive pay for management employees results in improved performance. A 10% increase in bonus-to-base ratio is associated with a 1.5% increase in subsequent ROA. A 10% increase in the number eligible for long-term incentives (options) yields a 0.2% increase in subsequent ROA. If the long-term incentive plan covers 48% of the managers with 20% incentive ratio, ROA improves by 7.1% (\$341 million in the average Fortune 500 firm).

Uncertainty and risk seemed to mitigate the effects of performance-based pay. Risk sharing plans may be more viable under crises or high external threat conditions. Research is very preliminary.

+Be careful, you may get what you pay for. Case histories (e.g., Sears, Prudential, Green Giant) highlight that incentive pay is a powerful tool. It may encourage dysfunctional behaviors.

+ESOPs/Stock Options

Little research exists on ESOPs' relationship to employee and organization performance. Employees seem to treat stock ownership as they would any other financial investment; it does not appear to increase their perceptions of involvement.

Unfortunately, the effects of extending stock options to all employees is unstudied, though evidence does suggest that wider participation among managerial employees has positive effects on subsequent firm performance.

+Gainsharing-Profit Sharing

The overwhelming pattern of findings is that gainsharing positively influences group and unit performance. Productivity improvements ranged up to 30% over

three to four year time periods. Improvements in quality and increased employee suggestions also occurred.

Findings from unionized and nonunionized firms lend support to the proposition that implementing either gainsharing or profit sharing does have positive effects on subsequent performance.

A review of 26 scientific studies estimated that profit sharing plans are associated with higher company performance. Productivity increases average between 3.5 and 5%.

Conflicting findings exist over whether coupling employee involvement initiatives with group-based performance plans is necessary for the incentive plans to matter. In general, behavioral researchers find it does, economists tend to report that it does not.

Employees favor performance-based pay, all else equal, which it seldom is.

Employees' perceptions of fairness and lack of bias in these plans seems critical.

Loss of star performers under group-based plans is a potential problem. So-called hybrid plans (based on a combination of individual, team, and unit performance) may overcome this loss. But research on such hybrids has yet to be conducted.

+Critical Success Factors

- 1.-Link performance measures clearly to organization objectives.
- 2.-Multiple objectives may require balanced score cards.
- 3.-Employee behaviors must be able to influence the performance results.
- 4.-Employees' perceptions and sense of fair treatment must be continuously fostered.
- 5.-Payouts must be large enough to be meaningful to employees.

IV. Performance-based pay has a potential dark side

+Some critics assert that "Attaching larger pay incentives for successful performance decreases employees' intrinsic motivation and performance" (Kohn). Research evidence directly contradicts this assertion. Intrinsic and extrinsic rewards do not necessarily compete; they can be combined to increase total motivation.

+Political and social criticisms of incentive pay are embedded in the emerging debate over the new social contract in the work place. This debate is worldwide—witness the debate over the European Community Social Contract and Ontario's recent social contract law.

+Employment relationships emerging in the U.S. are shifting increased risks to individual employees. History teaches us that employees faced with increased uncertainty and unprepared to manage it will seek remedies either through the courts or public regulation.

+Such forces are already operating. The public rationale is to increase business competitiveness, yet closer examination suggests initiatives for major changes in public policy regulating employment and labor law. The Dunlop Commission represents an early stage of this emerging public debate. Research does not offer much guidance with respect to the political aspects of the emerging new social contracts in the workplace. Yet it is our belief that the new employment relationship with employees and government's role may be the most strategic of human resource issues.

DOES PERFORMANCE-BASED PAY REALLY WORK? WHICH APPROACH MAKES SENSE?

We are in a period where long-held beliefs about pay and traditional pay practices are being increasingly questioned and scrutinized. Managers face economic pressures to improve productivity, boost quality, control costs and focus on delighting customers and stockholders. In responding to these pressures, managers face decisions about whether performance-based pay really works, under what conditions, for which employees, and does it really make sense for their operation?

A host of sources are available to inform managers' decisions. Personal experience and expertise of the managers are certainly one source. Experts abound and their admonishments are widely available. Fads and fashions also play a role; like geese winging southward, when one organization adopts a certain practice, others follow. Other decisions are based upon beliefs of both managers and employees. Hence, using focus groups to solicit the views of managers and employees helps inform decisions about incentive pay. It is human nature that beliefs drive behaviors, and managers and academics are not exempt. Finally, there is the research evidence. Led by theory and employing scientific methods and statistical analysis, researchers attempt to identify important variables and understand critical relationships.

While recognizing the value of these other sources, the research findings are the focus of this report. Yet in the final analysis, managing compensation is as much an art as a science. Research informs, but it cannot take the place of judgment and leadership. Therefore, this presentation focuses on informing executive decision makers.

This report is divided into four sections. Section I provides a strategic framework which focuses on the strategic intent of performance-based pay and also serves to direct this review of the research. Section II is a "consumer's guide" for managers to use when evaluating compensation research in terms of its quality, relevance, and

value. Section III answers the questions, what does the research on performance-based pay tell us about what really works, and which approach makes sense. Section IV examines the criticisms and shortcomings of incentive pay. There is also an appendix which briefly reviews the relevant theories underlying performance-based pay, with special emphasis on "so what?" does theory really tell us.

At the start, an important caveat should be kept in mind: Knowledge is a matter of degree; changes in our understanding occur constantly. We can draw an analogy between the insights gained from research and legal proceedings. Like the participants in a trial, researchers ask questions and make judgments about the preponderance of evidence—what does the pattern of evidence suggest? Often, the evidence is circumstantial; eyewitnesses or smoking guns are rare. Each piece of evidence is weighted to judge its veracity and information content. Drawing clear-cut conclusions is difficult and potentially misleading, especially when those conclusions are based upon limited, often indirect, evidence. Our conclusions will often be inferred from the preponderance of evidence and based on our judgments.

STRATEGIC PERSPECTIVES: BUSINESS BASED AND RESOURCE-BASED

Two different strategic perspectives are currently popular both in academic and business circles. These perspectives form a mind set—a way of thinking about performance-based pay to insure that it supports the strategy of the business. Both perspectives recognize that performance-based pay does not operate in a vacuum. Rather, it operates as part of a total human resource management system. It is important to recognize that while our discussion focuses on performance-based pay, it is woven into the fabric of the overall compensation system and the total HR strategy.

Business-Based Mind Set: Tailoring Compensation to Support Business Strategy

The traditional strategic perspective, sometimes known as the contingency model, views compensation decisions as deriving ultimately from corporate strategic intent. The corporate vision and objectives determine the structure and process which cascade throughout the organization. Achieving competitive advantage is usually the ultimate purpose. As depicted in Figure 1, 3M's HR strategy is designed to support 3M's corporate vision and business strategy. One part of 3M's HR strategy involves its compensation systems. Decisions about employee compensation are tailored to support 3M's business, its vision, and so on. The purpose is to align employees' work behavior and efforts to help achieve and sustain 3M's competitive advantage. This is a mind set based on the business strategy. As suggested in Figure 2, HR and compensation are most likely to be sources of competitive advantage when decisions about HR programs are focused on supporting the strategic intent of the business. The basic premise is that one size does not fit all, so a cookie cutter approach to incentive pay is not sound.

One of these HR programs is the compensation system. The decisions about compensation are tailored to fit the business. Integral to the compensation system is the total compensation process: the delivery of returns to employees for the work contributions they make. Compensation and other HR systems (e.g., development, employee relations, etc.) influence employees' attitudes and behaviors. HR (and compensation) becomes a source of 3M's competitive advantage through aligning HR initiatives with 3M's vision and strategic objectives. According to the perspective summarized in Figure 2, HR and compensation strategies are an outgrowth of matching compensation decisions with 3M's business strategies. 3M's approach to compensation must be tailored to fit its business and its vision.

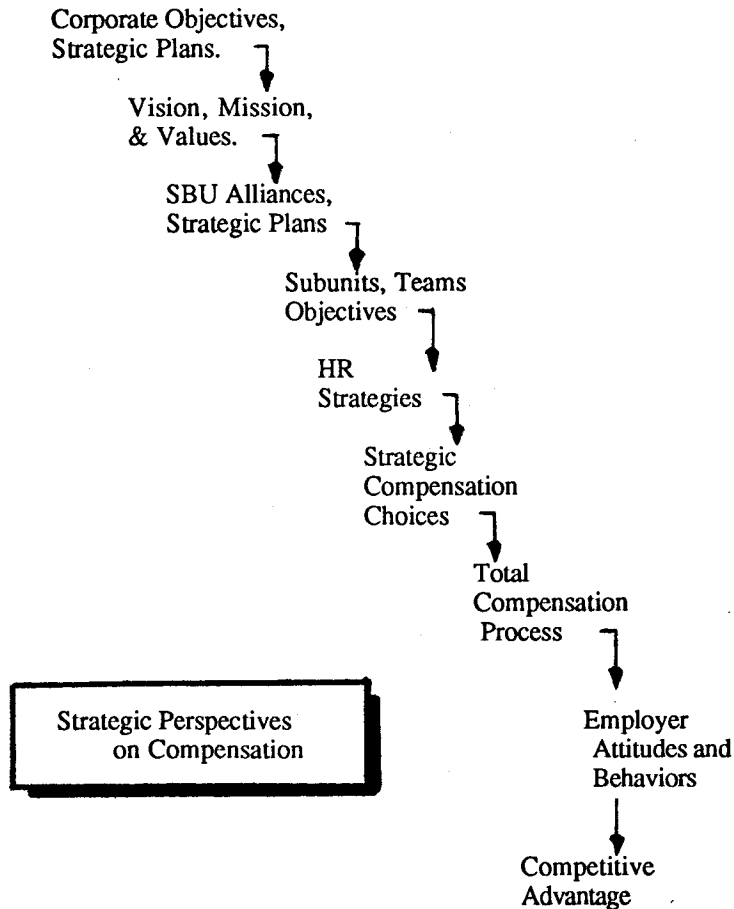


Figure 1

Resource-Competency Mind Set: Business Decisions Depend on HR Competencies

An alternative perspective, commonly called the resource-based view (Figure 3), asserts that an organization's unique resources are the source of its competitive advantage. An organization's ultimate business strategy is determined by the assets and resources it possesses. This view turns the business-based perspective on its head: value-added resources and assets now drive the strategy rather than strategy driving resource allocation. Under this view, an organization's competitive advantage is gained through maximizing its access to unique value-adding resources. Human resources are critical resources. Some executives even assert people are the most valued assets. Treated as assets (the skills, abilities, and knowledge present in the work force) and capabilities (the value-adding potential of HR assets), the role of the compensation system is to support the value-adding HR capabilities. The first challenge is to decide how to treat people, since they are the most important asset. Then, given our HR capabilities and unique assets, we decide what businesses we can compete in.

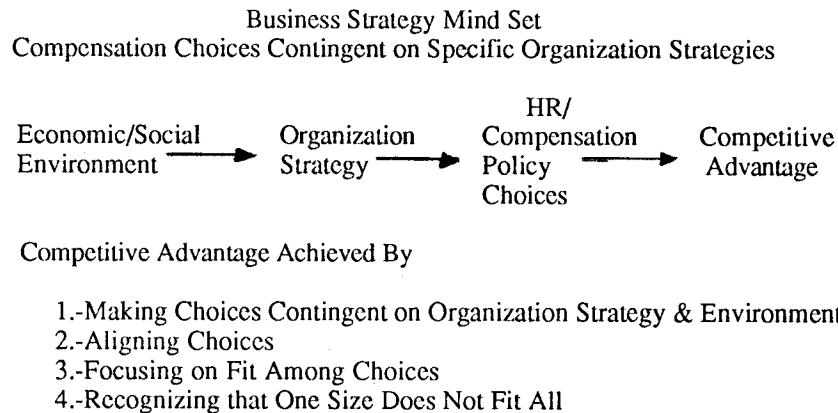


Figure 2

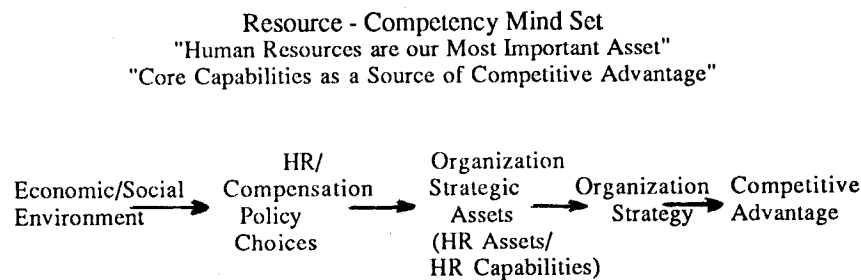
The resource-based perspective supports a series of beliefs about how to pay employees. Some label these beliefs the "new pay," others "enduring truths," "mutual gains," or "high performance systems." Stripped of all the rhetoric, this view asserts that the most effective approach to employee compensation is known. Unfortunately, advocates of each of these beliefs are not in agreement about which incentive approach is best. For example, some (Schuster and Zingheim, 1992) advocate risk-sharing incentives; others prescribe sharing the mutual gains but not the risks (Lawler, 1987; Kochan, 1994; Pfeffer, 1994). So advocates of the "new

pay" do not agree on the best approach to incentive pay. But they do agree that how pay and HR programs operate as a source of competitive advantage is known—all you have to do is ask them. In contrast to the resource-based perspective, the business-based perspective advocates crafting the compensation system to fit the circumstances. Achieving an appropriate "fit" where performance-based pay supports the business, they argue, is the key to using incentive pay as a source of competitive advantage.

Strategic Intent

The strategic intent of performance-based pay is also important. Strategic intent takes one of three general approaches which we refer to as security, success sharing, and risk sharing. Intent relates to the general philosophy or vision an organization sets for itself. And that vision reflects how performance-based pay is used to achieve the desired results. The general approaches are depicted in Figure 4.

The security option uses base pay with merit pay, and/or other predictable increases (COLAs) to foster long-term commitments and support meritocracy. An example of the security option is 3M's merit-based plan for Level 13 and below or even its pay system negotiated with its unionized employees. Employees receive an annual base salary and periodic increases based on merit, but no performance incentives or sharing of any performance gains are included. Promotions and merit increases are the principal mechanisms to motivate performance. Not surprisingly, employees try to behave in ways that yield promotions and merit increases.



Competitive Advantage Achieved By

- 1.-Gaining preferential access to greater value adding assets and capabilities
- 2.-Making choices contingent on securing better access to preferred capabilities
- 3.-Basing policy choices on a vision or set of beliefs
- 4.-Implementation of specific practices

Figure 3

The success sharing policy is the "gravy" approach. The commitment to share some of the successes with employees encourages them to perform beyond current targets. However, the sharing arrangement is not equal: The employer, who assumes all of the risk, often keeps the majority of the returns. An example is Corning's Goal Share program. Employee base pay is set at competitive levels. Goal sharing payouts are based on quality measures, customer satisfaction surveys, and production targets. Individual bonuses are based upon annual earnings or base pay, and bonuses increase as the performance measures exceed targets. These payouts are on top of competitive base pay. Pepsico's SharePower plan is another example. Here, all employees (truck drivers to secretaries to bottlers) participate in stock options which are granted on top of usual compensation. These options equal 10% of base pay and operate in much the same fashion as executive stock options. Many of the current advocates of the resource-based strategy advocate a success-sharing or mutual gains approach.

The risk sharing alternative repositions base pay below market levels, which creates a downside potential: compensation is "lost" if additional payouts do not equal the amount that base pay was repositioned. In Figure 4, base pay is set at 90% of the market rate. The tradeoff for imposing the possibility of downside loss is significant upside potential: employees can garner much greater rewards through outstanding performance. The message here is, "We are partners; we will win or lose together; we share the risks as well as the rewards." 3M's profit sharing plan for level 13 and above is a risk sharing plan. Other examples include plans at Scott Paper, Carbide, Nucor Steel, and Praxair. Praxair's Performance Sharing Plan bases payouts on return on capital (ROC) in excess of a target level (8.5%). Individual bonuses are based upon annual earnings and increase as ROC levels exceed the target.

Contrasting Performance-Based Policies

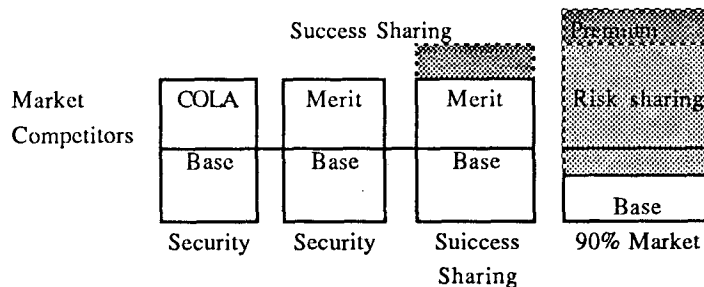


Figure 4

Another example of such an approach is Nucor Steel's plan for plant managers. Plant manager's base pay is set at 25% less than market rates, but 5% of every dollar earned in excess of a target goes toward manager bonuses. The average 1992 plant manager bonus equaled base salary; Nucor Steel's managers ended up earning 150% of competitive market levels. Perhaps the clearest example of the risk sharing approach is the incentive approach used in brokerage houses for sales staff. Pay is completely commission; no base pay is awarded. Brokers earn commissions on every dollar they sell and the commission percentage increases as their sales surpass target levels. The highest-producing brokers earn in excess of one million dollars a year.

This differentiation of the strategic intent for performance-based pay is important. It mirrors the corporate vision and culture; how we are going to use performance-based pay to win in competitive global markets. By emphasizing:

- (1).Predictability and security; (Financial predictability will encourage employees to be committed to high performance without fear and insecurity.)
- (2).Success sharing or mutual gains; (We are striving to continuously improve and will share these gains.)
- (3).Risk sharing. (We face an increasingly competitive and risky environment. This is a partnership involving shared risks and rewards.)

Failure by researchers to differentiate among these three makes their results harder to interpret. Failure by managers to be explicit about the intent of the incentive plans often causes such plans to undercut the entire pay strategy. For example, expanding the 3M profit sharing plan (a risk-sharing approach) to level 6 employees presumes that repositioning level 6 base pay will not be a significant financial hardship on support staff, thereby causing employees to murmur against 3M and lose their commitment to 3M. Likewise, merit pay as practiced at 3M does not support a risk-sharing culture. It was not intended to do so.

Competitors' Strategic Intent

Up to this point, the strategic perspective and intent of 3M have been emphasized. However, 3M operates in a highly competitive environment where increasingly sustainable quality and focus on delighting the customers are part of every corporate strategic statement. So positioning 3M's employee compensation competitively becomes important if it is to be a source of competitive advantage. Indeed, if competitors are adopting incentive plans consistent with the risk sharing intent, then is 3M forced to follow to insure variable labor costs, too? Or will a success sharing or security approach offer competitive advantage not through variable labor costs but through preferential access to critical value-adding human resources?

These are key strategic choices in managing compensation. And as this report will reveal, research does not offer much guidance yet—much is left to executive judgment. However, we can offer five criteria for judging whether 3M compensation and performance-based pay programs are sources of competitive advantage.

Briefly stated, such programs should:

- 1.-Be difficult for competitors to imitate;
- 2.-Provide unique access to value-added HR capabilities and competencies;
- 3.-Support significant contributions to customers' benefit;
- 4.-Support value-added contribution to owners;
5. -upport the employee relationship philosophy.

These standards, particularly "difficult for competitors to imitate", strongly suggest that when making decisions about alternative approaches to incentive pay, both positioning against external competitors and insuring internal alignment are important.

A Field Guide To Performance-Based Pay

Performance-based pay is a financial return to employees that is dependent, both in amount and timing, on attaining performance objectives. Our field guide to performance-based pay is organized along three dimensions: (1) whether it is added to base pay; (2) the level of performance measurement upon which it is based; and (3) the time orientation of potential payoffs. Figure 5 shows how various types of plans fit under this three-dimensional scheme. The first dimension differentiates those plans that compound over time by being added to base pay from those that must be renewed over time. Plans that compound (e.g., merit pay has an annuity effect) may have longer-term effects because the size of current increases is in part dependent upon past increases.

The second dimension, the level at which performance is measured, differentiates plans that are based upon individual performance objectives from those that are based upon team, unit, or total business results. The most direct separation on this line occurs between measurement based upon individual efforts from that based upon the effort of a group of individuals. However, as we shall note later, the size of the group and actual measures used to assess performance are also critical issues in understanding the usefulness of performance-based pay.

The final dimension, time, differentiates plans that focus on short-term compared to longer-term results. For example, commissions on sales are earned as soon as the sale is completed. Long-term incentives (options) are often dependent upon multi-year performance and may not pay off (be exercised) until sometime in the future. This three-dimensional model guides our review of compensation research.

Benchmarking Practices

Notwithstanding all the attention, incentive pay has diffused very slowly among corporations. Figure 6 illustrates how the use of different types of performance-based pay has changed over the past five years. Based upon this information, the potential value-added attributed to performance-based pay has not been matched by growth in its use. Figure 7 illustrates the prevalence of different performance-based pay plans among a sample of U.S. organizations. For example, even with all the press given to gainsharing, only about 14-17% report using it, and it has remained relatively stable over the past five years (Figure 6). The last row and column of Figure 7 indicates that while almost 70% of organizations surveyed used some form of performance-based pay, there was no clear-cut favorite in terms of the specific type. Further, these surveys usually only ask if the plan is used someplace (a facility or unit) within an entire corporation. They do not tell us anything about how widespread eligibility is within a corporation. A skeptic might be suspicious about the purposes of these surveys. Are they to inform or to advocate? Perhaps the take-away here is that popularity and media attention indicate interest in performance-based pay rather than actual use or benefits of such plans.

Classification of Performance-Based Pay Plans

Level of Performance (Measurement)		Division /			
Individual	Group	Organization			
Time Orientation					
Short-term	Long-term	Short-term	Long-term	Short-term	Long-term
Annual Bonus	Commissions	Gainsharing	Profit Sharing	Annual Performance Awards	Stock Options
Piece Rates		Profit Sharing			Stock
Not added into base					
Merit Bonus	Commissions	Annual Bonus	Commissions		Bonus Ownership LTIs
Added Into base					
Merit pay	Merit Pay				

Figure 5

CAVEAT EMPTOR - OR, THE IMPORTANCE OF BEING AN INFORMED CONSUMER

Our understanding of performance-based pay grows as research evidence accumulates. Nevertheless, evidence needs to be evaluated to determine its quality, relevance, and information value. Managers need to be informed consumers. Just as developing a portfolio of high quality stocks or the successful acquisition of another firm requires judgment, so does understanding the state of knowledge about performance-based pay. Whether it is managing your stock portfolio or managing compensation, belief is a poor substitute for informed judgment.

Here we offer a consumer's guide to evaluating the value of research. Too often, case studies or benchmarking surveys are presented as studies which reveal cause and effect. They are not. Case studies are descriptive accounts whose values and limitations must be recognized. Similarly, scientific studies vary in their information value, but sometimes jargon and statistics hide a lack of quality in the evidence. Statistics and data do not, by themselves, make useful research. Becoming a knowledgeable consumer of performance-based pay research hinges on answering the following three questions.

1.-Does the Research Measure Anything Useful?

How useful are the research variables used? How well are the variables measured? For example, many studies purport to measure performance.

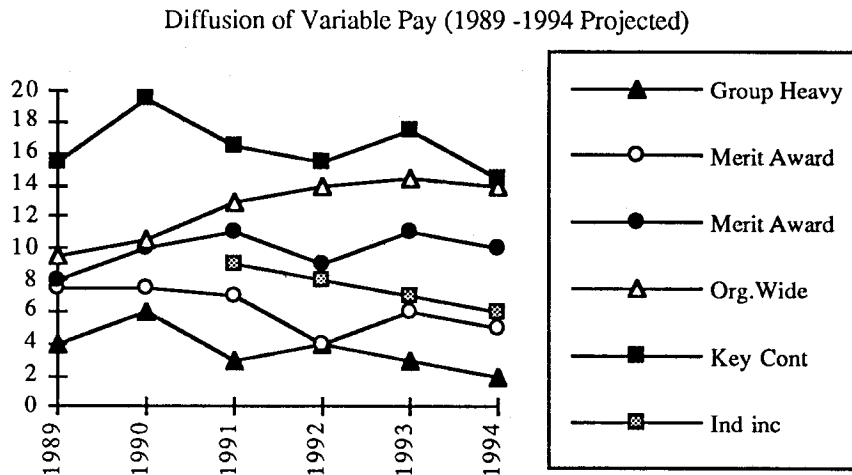


Figure 6.*Merit for those at top of range; **Special awards for Key Contributors
Source: American Comps.Assoc. Report of the Salary Budget Survey 1989-1994.

However, the way performance is actually defined and measured varies. Performance may be accounting measures such as return on assets or cash flow; it may be financial measures such as earnings per share or total shareholder return; it may be operational measures such as scrap rates or defect indicators; or it may be qualitative measures such as customer satisfaction. It may even be the opinions of compensation managers, as in, "How effective is your gainsharing plan?" (Answer choices are Highly effective, Effective, Somewhat effective, Disappointing, Not very effective.)

Many studies use managers' opinions as measures of performance or success. For example, a recent American Compensation Association (ACA) journal article makes heavy use of HR and operations executives' opinions about the effectiveness of their executive compensation plans. As part of their presentation, the authors state that the average effectiveness rating of HR executives of so-called low-performing firms is 4.3, while operating executives of these firms rate the program's effectiveness as 3.8. The authors note the "size's of this gap and assert it indicates these HR executives "...may be too optimistic (p. 76)." However, they offer no evidence that this "gap" really has any meaning or usefulness. More importantly, we have no way of assessing what this gap really means in terms of the plan's actual effectiveness. If we make some reasonable assumptions about the variation in the responses of the 126 HR and operational executives surveyed (responses were limited to 1 through 7), we find that the probability that such a "gap" could be due to chance alone is close to 100%. This means that there really is no difference in HR and operations executives' opinions of plan effectiveness, and therefore, not much of a gap at all.

Results Sharing: Prevalence & Diffusion

Type of Award	Prevalence (% of Companies)	
	Hewitt	Wyatt
Individual Performance Awards (Bonus/Incentives in Addition to Regular Merit Program)	35%	20.8%
Special Recognition Awards	28%	20.3%
Cash Profit-Sharing Awards (Based on Company-Wide Success)	17%	11.9%
Team/Group Productivity or Gainsharing Awards (Based on Local Operating Performance)	14%	16.8%
Stock Ownership/Option/Purchase Awards	11%	NA
Business Incentives (that Combine Financial and Operating Measures for Companies or Business Units)	10%	NA
Some Form of Incentive/Bonus Pay	NA	69.7%

• Percentages Indicate that a Plan is in Place for Any Group of Employees
Picture 7

ACA just published the results of a major project, *Organizational performance and Rewards: 663 Experiences in Making the Link* (McAdams and Hawks, 1994). Among the findings they report are:

- + At the median, organizations earned \$2.34 for every dollar they spent on payouts. This approximates a net return on plan investment of 134 percent;
- + The median gain—the dollar value placed on the performance improvement—is \$2,410 per employee per year.

It is extremely laudable that ACA is sponsoring studies on the effects of performance-based pay. And the findings are undoubtedly going to be widely reported. It seems like a no-brainer—134% return on performance plan investment. Unfortunately, little attention will be paid to the way returns are measured. Their report is somewhat unclear, but it refers to "respondents." By this we presume that someone with knowledge of each of the 663 included plans answered questions.

"We asked respondents to report the dollar value of performance improvement (gains) they realized while their plans were operating. This is not necessarily earnings for respondents; many plans had not been through the exercise of putting a dollar value on gains, and respondents often found their accounting systems were not especially helpful."

So the informed consumer must ask, "Help me understand. Does this research measure anything important?" The ACA study appears to measure compensation directors' opinions of the dollar value of performance improvement. Is this important? Certainly data on actual returns would have been better than the opinions of those who installed these plans.

Are such opinions useless? Not at all. They represent informed beliefs. But the point is to know that a 134% return that is really the opinion of compensation directors is different from measuring the actual returns. So the ACA results of the gains achieved through performance-based pay appear to reflect the opinions of "respondents"—compensation directors. Useful information, but being informed about what is really measured places the results in a different light.

ACA is not alone in using such data. The fact remains that opinion data of this sort is just that: data about opinions. It demonstrates what people think or believe is occurring, but may not indicate what is actually going on. A 1990 study by Gerhart and Milkovich was based upon compensation survey data from 124 companies. When asked to report how they defined their firm's target pay level, all 124 HR executives reported their companies were above the median! But there is no place other than Garrison Keillor's Lake Wobegon where the laws of statistics allow everyone to be above average.

While we do not mean to pick on ACA or question the veracity of their results, we suggest that there are different ways to assess any variable, including the results of incentive plans. The key to becoming an informed consumer is to scrutinize the measures, ask questions about what conclusions can reasonably be drawn from these measures, and then see what the authors do.

This issue of validity applies to all variables included in the study. If customer satisfaction (or even delight) is of interest, how is it measured? How soon after the product or service is delivered is the measure collected? The important question is whether the researchers accurately define and measure the variables of importance.

2.-Does the Study Separate Correlation from Causation?

Correlation does not mean causation. Many studies investigate the relationship between the use of performance-based pay and company performance. Just because the observed use of gainsharing plans is related to improved performance does not mean it caused the improvement. Other factors may be involved. Perhaps new technology, reengineering, improved marketing, or the overall economy underlie the results obtained.

Once we are confident that both performance and performance-based pay are accurately defined and measured, we must be sure that they are actually related. Most often this is answered through the use of statistical analyses. The correlation coefficient is a common measure of association and indicates how changes in one variable are related to changes in another. Many research studies use a statistical analysis known as regression. One output from a regression analysis is the R^2 . The R^2 is much like a correlation in that it tells us what percentage of the variation is accounted for by the variables we are using to predict or explain. For example, Jensen and Murphy (1990) conducted a study on the relationship between firm performance and CEO pay. They include a regression analysis of the change in CEO pay due to change in firm performance. Jensen and Murphy report R^2 s of between 0.8% and 4.5% which indicate that only a very small amount of change in CEO pay is related to changes in firm performance. (We review this study in more detail later.) Note that the word is "related," not that changes "caused" changes in CEO pay or vice versa. For example, just because a 3M facility initiates a new incentive plan and the facility's performance improves, we cannot conclude that the incentive plan caused the improved performance. The two changes are *associated or related*, but *causation* is a tough link to make.

Research on compensation often attempts to answer a number of questions that do not involve causality. For example, the survey data shown previously indicates the prevalence and diffusion of various performance-based pay plans. It is description—benchmarking information, but not causation. Indeed, "benchmarking best practices" often incorrectly implies causation. Just because the best-performing

companies are using a practice does not mean the practice is causing the performance. Indeed, IBM for a long time pursued a full employment policy. Clearly, that policy did not cause the value of IBM stock to increase or improve IBM's profitability. Other alternative explanations exist. However, compensation research often attempts to answer questions of causality. Does the use of performance-based pay lead to greater customer satisfaction, improved quality, and better company performance? Causality is one of the most difficult questions to answer and continues to be an important and sometimes perplexing problem for researchers.

3.-Are There Alternative Explanations?

Consider a hypothetical study that attempts to assess the impact of a pilot performance-based pay initiative at a 3M facility. The researchers measure performance by assessing quality, productivity, customer satisfaction, employee satisfaction, and the facility's performance to plan. The final step is to see if subsequent performance in 1995 improves over 1994. If it does, can we safely assume that it was the incentive pay that caused performance? Or, is it equally likely that the improved 1995 performance has alternative explanations such as the passage of NAFTA, or the declining value of the dollar, or perhaps a change in executive leadership in the facility. In this case, causality evidence seems weak. If the researchers had measured the performance indicators several years prior to and after installing the plan, then the evidence of causality is only a bit stronger. Further, if the researchers repeated this process in other facilities and the results are similar, then the preponderance of evidence is stronger: clearly, 3M is doing something right, and incentive pay seems to be part of it.

The best way to establish causation is to account for these competing explanations, either statistically or through control groups. A control group in our 3M example would be to study the effects of not putting in the incentive plan in one facility while others have it. Researchers must control for these other explanations by measuring their influence and including it in the analysis they conduct.

The point is that, often, alternative explanations exist. And if they do, they need to be accounted for to establish causality. Our experience suggests that it is very difficult to disentangle the effects of incentive pay to clearly establish causality. However, it is possible to look at the overall pattern of evidence to make judgments about the effects of incentive pay.

A study by Pritchard, Jones, and Roth is an excellent illustration of the importance of alternative explanations. They studied the performance gains from the introduction of team incentive plans. First, performance feedback was introduced to employees and their performance gains were measured. Then, in addition to feedback, the employees established specific performance goals-targets for which

employees and the group as a whole should strive. Performance improvements were again measured. Finally, a group incentive was introduced and changes in performance measured once again. The findings of the study were striking. First, the introduction of both feedback and goal setting resulted in dramatic performance improvements. Using a standard based on prior performance, the introduction of feedback resulted in a 50% increase in productivity; goal setting resulted in an additional 25% increase in performance, and the introduction of incentive pay resulted in a performance gain of only 1%. While the authors were very quick to point out that this does not confirm the effectiveness of feedback and goal setting alone nor the ineffectiveness of incentive pay, it does illustrate the necessity of exploring alternative explanations for results. It can be argued that had incentive pay been introduced first, it would have yielded better results. Since financial payments are usually more expensive than feedback and specifying goals, the incentive plan was probably the most costly initiative, too.

A final example of alternative explanations is the distinction between manager- and owner-controlled companies. Manager-controlled companies are those where no single large shareholder is present; owner-controlled firms are those where at least one non-manager shareholder controls 5% or more of the company's stock. Gómez-Mejía and Balkin (1987) studied the effects of differences in ownership control on managers' salaries. After accounting for alternative explanations such as organizational size, firm performance, and industry, they found significant differences in compensation between manager- and owner-controlled firms; managers in manager-controlled firms earned more. Executives in manager-controlled firms earned an additional \$89,949 in total compensation, of which about \$35,000 was base salary and \$23,900 was bonus. Perhaps the most interesting finding was the differences in use of performance-based pay. Managerial pay was much more contingent upon firm performance in owner-controlled firms than in manager-controlled firms!

Besides feedback, setting specific objectives, firm size, and owner-versus managerial-control, research has uncovered other factors that influence the effects of performance-based pay. *Employee* characteristics include age, education, gender, marital status, race, the actual job and job level, and span of control. *Organization* factors include industry, past firm performance, diversification, globalization of operations, and the level of business risk. Certainly additional factors exist, but these provide an idea of the range of important alternative explanations that may affect a study trying to establish a causal link between incentive pay and performance.

In sum, managers need to become informed consumers of research results. The costs of making the wrong decisions affect not only 3M and its reputation, but also 3M employees and their dependents.

WHAT DO WE KNOW ABOUT PERFORMANCE-BASED PAY?

Having placed performance-based pay in a strategic framework (business strategy versus resource based), reviewed strategic intent and competitive positioning (security, success sharing, and risk sharing), offered a field guide to organize the wide variety of approaches, and cautioned consumers to be informed, we now turn to the state of knowledge regarding performance-based pay. The research reported in this section is organized by what is measured and paid for—the level at which performance is measured (individual or group-based plan). We also examine the critical success factors which influence the usefulness of incentive pay.

Individual Performance Plans

Individual incentive pay plans come in a wide variety of forms and types (refer again to Figures 4 and 5). Merit pay is the only form that is added into base pay. The others include piece rates, commission plans, annual bonus, and one-time awards. All can be based upon the performance of a single employee. (To be sure, a criteria for bonuses or merit increases can be how well the employee works with a group, but the focus remains on the individual employee.) Therefore, performance is defined and measured in terms of individual employee outcomes. Individual-based approaches are often designed to support a meritocratic philosophy or vision. Basically, the message is that individual contributions matter and we are going to recognize them with pay increases.

Some of these plans assess short-term performance goals, such as monthly security sales by a stock broker or quality and volume assembled by a single employee (e.g., Lincoln Electric's bonus scheme). Others measure performance over a longer interval. For example, sales managers often receive bonuses based upon sustained performance over a year or even longer. The choice of performance measure is critical since it signals what is important. You get what you pay for. Employees make contributions in order to receive returns. Establishing the critical pay-performance link pivots on selecting measures on which the employee should focus. Time orientation is also crucial. Short-term bonuses reward short-term behaviors. If the firm wants to motivate employees to make long-term decisions, and if pay is to play a part in this motivation, then appropriate measures and messages must be implemented.

Individual Results: Merit Pay

Merit pay, which is the most common form of individual performance-based pay, has recently received substantial criticism (for examples, see Basset, 1994; Lawler, 1989; for a contrast, see Heneman, 1992). Critics claim that merit increases are not related to performance and that employees have come to view merit pay as an entitlement. Further, the compounding impact on costs (increases in base pay

increase fixed cost) has been noted. The use of merit increase grids often appears to be more of a budget management tool than a performance motivating technique. However, Heneman (1992) and Milkovich and Newman (1993) point out that most of these criticisms reflect the way in which merit pay is used, not problems inherent in the technique. *Indeed, along with stock options, merit pay is the sole performance-related pay program to focus on the long term. Just as it has a compounding effect on cost, it also has an annuity effect on employee earnings. The heart of merit pay is its long-term effects, though many compensation professionals have mismanaged merit to focus only on the size of the annual increase.* Given the mismanagement of merit, it is small wonder that it does not serve its purposes very well. If anyone wished to turn merit into a more powerful tool, the answer is simple: Focus on its long-term annuity payoff and fund its budget. Why, for example, can't merit budgets be funded based on corporate performance as well as market movement?

Placing all the rhetoric aside, there are virtually no scientific studies that investigate the effectiveness of merit pay. I chaired a National Academy of Science project which reviewed the state of knowledge on merit pay. Our task force included leading scholars and representatives from the business community. In addition to echoing the oft-heard remark about merit pay—"So much money going to so many people without knowing its effect..." *We concluded that the preponderance of evidence and beliefs is that merit pay supports a meritocratic philosophy or vision (i.e., that individual contributions matter), but virtually no scientific evidence exists regarding its effectiveness.* Evidence does suggest that many problems associated with merit (and other incentive plans) derive from the fact that employees do not perceive a strong link between their pay increases (and bonuses) and performance (Dyer and Theriault, 1976; Heneman, Greenberger and Strasser, 1988). *When employees believe their pay increases are truly based upon performance, both increased motivation and higher satisfaction with pay follows* (Miceli and Lane, 1991). We also know that when employees have a high degree of trust in their relationship with the company, strong associations between pay increases and performance are likely to exist.

So the message is that while conventional merit is being justifiably criticized, it likely is being mismanaged as a performance program. Employees' perceptions of the link between their pay increases and performance matters.

Individual Results: Unit and Firm-Level Performance Bonuses

A number of studies have directly investigated the relationship between use of individual incentive pay and subsequent firm performance (e.g., Abowd, 1990; Gerhart and Milkovich, 1991; Kahn and Sherer, 1990; Leonard, 1990). The managerial incentives are based on individual contributions against targets or objectives derived from corporate or unit objectives. *These studies consistently report that greater use of incentive pay for managerial employees results in*

improved performance. Gerhart and Milkovich found that annual bonuses were positively related to return on assets. In their study, a ten percent increase in bonus/base ratio was associated with a 1.5 % increase in ROA. Similarly, if a company increased the number of managers eligible for long-term incentives by 10%, its ROA increased by .2%. Using Gerhart and Milkovich's results; *a firm which uses an incentive-to-base pay ratio of 10% with 28% of its managers has a predicted ROA of 5.2%, which is \$250 million for the average Fortune 500 company. If that same firm increases the incentive ratio to 20%, its ROA increases by \$19 million (an ROA of 5.6%).* Likewise, if the firm keeps the ratio at 10%, but applies it to 48% of its managers, its ROA increases to 59% or \$283 million. Finally, if the managerial incentive plan covers 48% of managers with a 20% incentive ratio, Gerhart and Milkovich's results suggest improvement in subsequent ROA of \$341 million, or 7.1%. These effects are calculated after accounting for alternative explanations such as differences in firm size, industry factors, firm performance, employees' education, and their job level.

Abowd (1990) found a positive relationship between managerial annual incentive pay and a measure of stock appreciation. In his study, *an increase in incentive pay of 10% was followed by an increase in shareholder value of 0.3 percent.* Additionally, this relationship between managerial incentive bonuses and changes in firm performance varied by how successful the firm had been in the past. The largest increases in performance which could be traced to using performance-based pay occurred in the highest-performing firms. As past firm performance decreased, so did the relationship between using performance-based pay and subsequent improvements in firm performance. In other words, *managerial performance bonuses seemed to work better in strong-performing firms and poorly in poor-performing firms.*

Kahn and Sherer (1990) found that bonuses were linked to improvements in managerial performance. Their study indicates that companies might vary the use of performance-based pay by how critical an employee's performance is to the organization and whether the employee is a high, medium, or low performer. Based upon their sample, companies appear to give high performers the opportunities to garner greater rewards from continued high performance through the use of incentive pay. However, lower performers still receive increases, which suggests that their mediocre performance is tolerated by the firm.

The effects of an individual-performance pay plan in a non-managerial setting were investigated by Wagner, Rubin, and Callahan (1988). Firm performance after introducing the plan increased substantially, and this increased performance level was sustained over a 114-month period. The authors note that it was highly likely that employees had a great deal of trust that management would reward higher performance with larger pay bonuses which, in fact, occurred. In sum, all these studies and others like them were designed to account for alternative explanations of effects such as industry variables, the size of the organization, an organization's past performance, and employee characteristics such as job level, experience, and tenure

with the firm. All of these studies used longitudinal data sets and were, therefore, better able to infer causal relationships. *As a group, the results of these and other studies strongly suggest that individual incentive plans (i.e., managerial bonuses) can have a positive influence on subsequent employee and organizational performance.*

However, other studies raise some questions about the relationship. For example, Bloom and Milkovich (1994) found that the pay-performance link was influenced by the level of business risk. That is, more risky businesses which placed greater emphasis on performance-based pay tended to have lower performance than high risk firms which used less incentive pay. In their data, greater use of incentive pay by high risk firms was associated with lower performance on two measures: total shareholder return and return on equity.

In a study of a pay-at-risk plan in a bank, Brown and Huber (1992) found that the introduction of incentive pay was followed by dramatic reductions in employee satisfaction. Reactions were so bad that the bank was forced to return to the old pay system. (Similar experiences are reported by Du Pont, Polaroid and others, which we will explore later.)

Evidence from these and similar studies suggests that *uncertainty influences the effectiveness of performance-based pay*. Although more research into this area is needed, it appears that when employees are faced with threats to the viability of their employer (e.g., threat of plant closing or relocation) or their own employment security, incentive pay might operate very differently than under conditions of greater security or certainty. Our hypothesis is that risk sharing plans may be more viable when the external threat or some crisis is at hand, whereas success sharing may be more likely to pay off under other conditions. However, that research remains to be done.

In studies of the relationship between executive pay and firm performance, Jensen and Murphy (1994) used longitudinal data collected over a number of years to see if executive pay was related to past firm performance. Part of their argument is that in order for incentive pay to induce effort, rewards must be commensurate with the effort expended. They found that practice does not follow this premise. In fact, their data indicate that a CEO's salary and bonus changes only \$.02, that is 2 cents, for every \$1,000 change in shareholder wealth. The value of a CEO's stock options, an incentive method that is supposed to directly tie CEO wealth to that of shareholders, changes only 15 cents for every \$1,000 increase in shareholder wealth. In response to the recent outcry against "excessively high" CEO pay, Jensen and Murphy also traced CEO pay over time. Using constant dollar adjustments, they found no difference in CEO pay of firms in the top quartile of the New York Stock Exchange during two time periods: 1934-1938 and 1974-1986. However, the market value of these same firms increased an average of \$1.8 billion (in constant dollars) from 1938 to 1986. They conclude that CEO pay is simply not tied strongly or sufficiently enough to firm performance to make a difference.

Gregg, Machin, and Szymanski (1993) used a British data sample to test the CEO compensation/firm performance relationship. Their sample included 288 of the largest companies on the U.K. stock exchange and included directors' (the U.K. equivalent to CEO) pay and a measure of shareholder return. Their results were strikingly similar to those of Jensen and Murphy. In the British sample, an increase in shareholder return of £100 million is associated with a change in director pay of only £ 221, or about 1/3 of 1% of total 1983-1985 compensation. Their data also indicate that this relationship has diminished over time, being much stronger in the early 1980s compared to early 1990s. The same £100 million improvement in shareholder returns in the post-1990 period is associated with no change in directors' pay. Nevertheless, the authors refer to the 1980s change of 1/3 of 1% as "comparatively strong." *One inference to draw from these studies on executive incentive pay is that if executive pay is not sufficiently related to performance, then it may be more difficult to argue that all employees' pay should be more strongly linked.*

Incentive pay based on short-term performance may cause employees to make less risky decisions. Research from a series of studies by Hoskisson and his colleagues indicates that use of incentive pay (managerial annual bonuses) can lead managers to make low-risk decisions that also have low potential for return (Hoskisson, Hitt, and Hill, 1993; Hoskisson, Hitt, Turk, and Tyler, 1989). For example, increases in the use of incentive pay was associated with lower investments in research and development. In effect, *managers under a longer-term plan may be more willing to make the decisions that have longer-term payoffs and not simply focus on decisions that affect next quarter's bottom line.*

Negative Findings: Be Careful, You May Get What you Pay For

Case histories of failed incentive plans can be instructive. The recent debacle at Sears auto repair centers is an example (Fisher, 1992). The State of California uncovered a number of cases where unnecessary repairs were done for unsuspecting customers. Sears employees reported a large portion of these bogus repairs were done because of the commission-based pay plan in place. In fact, Sears CEO Brennan blamed the incentive plan for these "mistakes." A similar situation may have gotten Prudential Securities into trouble with the Federal Trade Commission. Prudential has been forced to make amends totaling several million dollars for inappropriate sales of limited partnerships in the 1980s. However, the often-neglected part of this story is the incentive plan that surrounded sales of limited partnerships. In the early 1980s, most brokerage houses gave their commissioned sales staff significantly higher payoffs for sales of limited partnerships than for any other product they could offer. Often, these commission rates were more than double that available on stocks, bonds, annuities and other investment products. Given the much higher return tied to limited partnerships, the abuses are not surprising. Closer to 3M's home, several years ago Green Giant discovered that the quality of their pea pack was down—too many insect parts. To overcome this, they initiated a

bonus based on insect parts screened. Of course, just like Sears and Prudential, they got what they paid for: more insect parts screened. Eventually, someone revealed that employees were bringing insects from home to add to the pea pack prior to screening them out and collecting the gains. Sears, Prudential and Green Giant illustrate an oft-neglected point: Incentive plans can be powerful tools, but they may motivate employees to overlook other important objectives. The fault in the Sears case does not fall on incentive pay per se, but on inappropriate choices of performance measures. Similarly, the problems at Prudential were caused by sales people responding to incentive pay exactly as the company had hoped; they sold huge amounts of limited partnerships. Often, plan designers fail to consider the lengths that employees might go to reach sales targets. The measures of performance did not include safeguards against abuse such as the appropriateness of investment recommendations. *The need to carefully select and adjust performance measures is a lesson learned from these case histories.*

Critical Success Factors

These studies make clear that individual-based incentive plans can send powerful messages. Employee perceptions of what 3M pays for are important to manage. In effect, you get what employees believe you are paying for.

Several critical success factors can be inferred from this research.

+Performance measures should be closely tied to important organization objectives.

+If objectives change, then performance measures may need to change. Indeed, if multiple objectives exist (delighted customers, sustained quality, income before taxes, return on capital versus competitors), then perhaps a balanced scorecard is required (Figure 8).

+Employees must be able to influence performance measures. This is "line of sight." If employees do not have an impact on important performance targets, the pay plan is less likely to result in improved employee performance. If employees do not understand how they can impact important performance targets, the incentive plan is less likely to influence employee behavior.

+Many problems associated with merit and other individual incentive pay plans derive from the fact that employees do not perceive a strong pay-performance link. When employees believe that increases in pay are truly based upon increases in performance, both increased effort and higher satisfaction with pay will likely follow.

*+Employees' perceptions of what is valued needs to be continually managed.
+Employees' sense of fair treatment or trust in their employment relationship needs to be continually managed.*

Measuring Performance
Balancing the Score Card

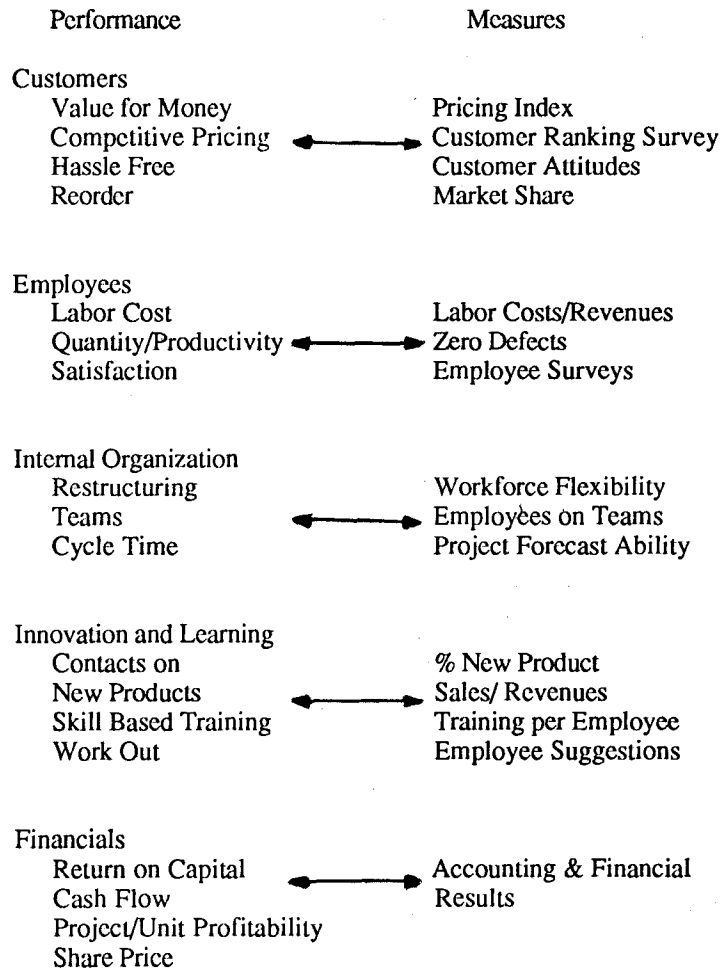


Figure 8

Group Performance-Based Plans

Group-based plans vary widely from gainsharing and profit sharing to stock options and other forms of ownership. First, we review the research evidence on ownership-based plans, then examine the gainsharing and profit sharing findings.

Ownership: ESOPs and Options

In general, the benefits from employee ownership are believed to result from the sense of shared goals, a partnership between the employee and the organization. Ownership links the financial success of the employee with the firm's financial success. Lawler (1987) states that ownership is little more than a symbol that signals that joint effort is needed. Hammer and Stern (1980) state that an employee ownership plan fosters "...some form of psychological partnership... that leads individuals to act on behalf of common goals."

The most common form of employee-based ownership is the *employee stock ownership plan* (ESOP). Under ESOPs, the value of an employee's holdings fluctuates directly with the price of the stock. In addition, dividends are credited to employee accounts and may be held as cash or reinvested. Another common form is *stock option plans*, which do not pay dividends until the options are exercised. Employees share in stock price appreciation in that they may exercise options at any time during the eligible period. Therefore, an individual has all the benefits of investment appreciation without incurring purchase costs until the stock has already increased in value. Pepsico's PepsiShare program annually grants options valued at 10% of salary to every employee (except in Egypt, where an options program is legally treated as an entitlement and cannot be dropped once granted).

ESOPs

The National Center for Employee Ownership surveys U.S. companies with ESOPs. In terms of employees covered, Kroger's plan is the largest, covering 170,000 employees. Included in the top ten are McDonnell Douglas, Rockwell International, Tandy Corporation, TWA, Coldwell Banker, Grumman, and Figgie International. Among the top twenty-five are Avis, Hallmark Cards, Armstead Industries, Morgan Stanley, and Lincoln Electric. The growth of ESOPs from 1975-1989 is shown in Figure 9.

One of the most consistent findings from ESOP research is the *crucial role employee participation plays in plan success. ESOPs alone appear to have little impact on firm performance (Long, 1978a,b). However, ESOPs coupled with a bona fide employee participation plan affecting the employees covered do appear to*

be related to improved company performance (Long, 1980; Tucker, Nock, and Toscano, 1989). A recent survey suggests that ESOPs in companies that stressed employee participation have 6% higher sales than they would have had without an ESOP. Participation was cited as a major factor in this success. Another study focused on ESOPs in 279 companies in Ohio. It reports that 49% outperformed peer organizations, 50% performed as good as peer organizations, and only 1% performed worse than comparable firms. *Unfortunately, none of these studies provide much information about performance measures, nor were alternative explanations discussed.*

Growth in ESOPs: 1975 to 1989

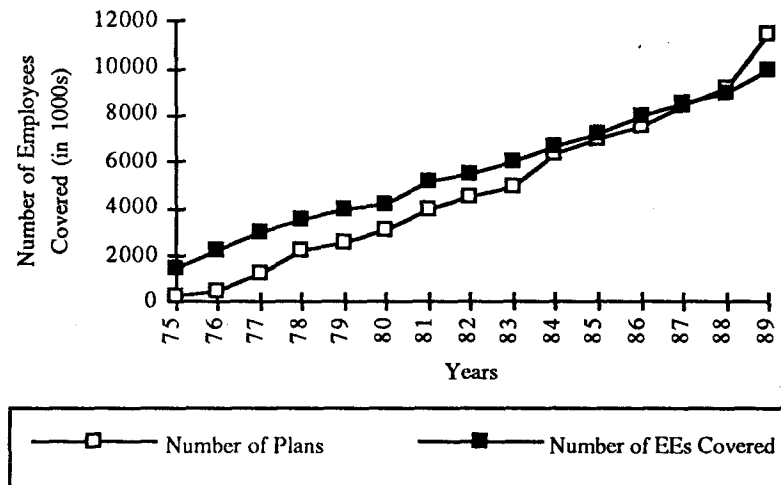


Figure 9 -

The issue of employee participation is complex and complicated.

Employee participation in decision making takes a variety of forms from a suggestion box to actual self-managed work teams (Leana, Locke and Schweiger, 1990). A complete discussion of employee participation is beyond the scope of this report. Obviously, suggestion boxes do not offer employees the same level of involvement or opportunity to affect performance as do work councils or self-managed teams. Nevertheless, the ESOP research clearly prescribes employee participation and implies that more is better. Our reading of this research is that this may be based more on wishful thinking than on scientific evidence. Indeed, as noted later in this report, *conflicting evidence on the importance of employee involvement coupled with performance-based pay exists.*

Some suggest that employees view ownership as a mechanism for affecting company decisions. Research has yielded mixed results on this point. For example, Hammer and Stern (1980) found that ownership did not increase employees' perceptions of control or the desire of employees to be involved in decision making. They conclude that employees viewed their ownership in the company as they would any other financial investment. *These studies have found that financial value did not increase employee perceptions of ownership, thereby suggesting that ownership operates as a general financial incentive and does not align employee objectives with those of the organization.* If this is the case, stock ownership may not offer advantages over other financial incentives.

Other researchers believe that positive results from ownership exist only when it proves to be financially rewarding for employees. Their research offers some support for this belief. *Employee satisfaction was related to the financial value of ownership* (Klein, 1987; Hochner and Granrose, 1985). The greater the financial value and the payoff, the more employees valued ownership—rational behavior after all (French and Rosenstein, 1984). Klein states that with respect to employee satisfaction with stock ownership plans, "...money matters."

Employee Stock Options

The effects of stock options for senior executives on subsequent firm performance have been widely studied and debated. There are a large number of critics of such programs (Crystal, 1991). These critics argue that too often such grants are pure gravy and have no effect on firm performance or shareholder returns except to dilute them. Others (e.g., Baker, Jensen, and Murphy, 1988) argue that CEOs and other senior executives should have a major part of their personal wealth tied up in the value of their employing firm. Unfortunately, the effect of stock options on other employees remains unstudied. Some companies, as we have noted, extend stock options to all employees, including many local nationals beyond the U.S. Others have given one-time grants (Merck), hoping that the effects of ownership catch on at all levels. But their actual effects on employees' performance are unknown.

Gainsharing and Profit Sharing

This section examines some of the research related to profit sharing, gainsharing, and their various permutations. What makes these plans distinctive is that the payoffs are based upon the performance of an identified employee' group e.g., team, facility, business unit, and/or corporation, and the payout is usually based on group membership or salary level, but not on individual performance. One difference between profit sharing and the various forms of gainsharing (e.g., Scanlon, Improshare, customized plans) lies in the measures of performance. As the

name suggests, profit sharing plans are based on some measure of profit, often in the form of a return on capital, assets, or investment, or some target of before-tax profits or even market share. Gainsharing plans usually focus on measures closer to the workplace such as costs, safety, productivity improvements, total quality measures, and the like.

Proponents of gainsharing plans assert that employees have a much greater line of sight under such plans because the performance targets are phrased in terms employees understand and can influence. Employees are rewarded for working harder, smarter, and for making better decisions. The objective is to encourage workers to find ways to shorter cycle time for new products, shave time from production processes, improve customer reorder rates, provide assistance to other workers, reduce scrap and waste, share information, and so on. The differences among most gainsharing plans lie in the methods used to calculate cost savings, the performance improvements, and differences in the payout schedules (thresholds, caps, timing of bonuses).

In what remains *one of the most complete studies of gainsharing*, Schuster (1984) looked at the changes produced by the implementation of a gainsharing plan in six different facilities over time. Productivity was measured as output per worker-hour and quality by scrap produced. Over 101 months of data were collected, beginning before the plans were implemented and continuing for a period of time after implementation. *Productivity improved an average of 30% after plan implementation in five plants.* A sixth plant, although not reporting near-term productivity improvements, had a plan in place for over 20 years. Schuster suggested the plan must be meeting objectives, otherwise it would no longer be in place. (We are somewhat skeptical...inertia is a competing explanation.) Employment and turnover levels did not change, but the number and usefulness of employee suggestions increased significantly. Although it was not part of his analysis, Schuster believes that management commitment to the plan was also an important success factor.

Hatcher and Ross (1991) report that gainsharing improves employee attitudes as well as productivity. Their sample was an auto part manufacturer which replaced a piece-rate system with a gainsharing plan. Attitude and productivity measures were available before and after implementation of the group incentive plan. Attitudes improved; employees reported greater concern for improving quality, cutting costs, and looking for ways to improve overall production and service. And quality improved: Defects per 1,000 shipped parts dropped from an average of 20.93 under the piece-rate system to just 2.31 under the gainsharing plan. Savings were estimated at \$800,000 for the first year expressed in 1985 dollars. Like Schuster, Hatcher and Ross note the probable importance of organizational factors such as a culture amenable to group incentives and a top management team commitment to the plan.

In one of the largest studies to date, Cooke (1994) analyzed group incentive data from 841 unionized and non-unionized companies located in Michigan. Two performance measures were used: value-added per employee, and ratio of labor-to-total production costs. Employee participation was measured by whether the firm used work teams. Cooke was careful to account for alternative explanations such as the effects of company size, technological and capital sophistication, and industry. Unfortunately, he lumped both gainsharing and profit sharing plans together into a single category called group-based performance pay.

He concluded that:

- +Unionized firms with no teams or group-based pay had, on average, 13% higher performance, a 16% lower labor-to-total cost ratio, and paid 19% more in wages than similar non-unionized firms.

- +Among unionized firms, the addition of a profit or gainsharing plan resulted in 19.13% performance improvements without also using teams and 18.60% improvement with teams.

- +Among non-unionized firms, the addition of group-based pay resulted in performance improvements of 18.27% without teams and 20.73% with teams.

- +The advantages of adding teams to a nonunion firm which already uses a group-based pay plan is only a 2.46% increase in performance.

The take-away is that Cooke's findings lend support to the proposition that the addition of group-based pay (either gainsharing or profit sharing) does have positive effects on subsequent performance in both unionized and nonunion firms. However, the introduction of teams also yielded positive results perhaps with less impact on labor costs compared to the incentive plan. Cooke's findings point out that incentive pay is only one alternative for influencing performance; teams is another, and the relative effectiveness of these options needs to be considered. Further, Cooke's data suggest using these options in combination did not add as much value. This is consistent with the earlier study by Pritchard that suggests the value-added achieved by each performance improvement initiative depends on the order they are introduced. There are diminishing returns to be achieved within the same work design.

Profit sharing plans focus on profitability of a facility, division, or company. One major difference between profit sharing plans and gainsharing plans is that profit sharing plans can be part of a deferred benefit or retirement plan. ERISA legislation has mitigated some of the benefits from offering deferred plans, but recent Bureau of National Affairs estimates suggest that 37% of all nonfarm, private workers are covered by some form of profit sharing. Profit sharing can also be paid out directly to employees in the form of cash. However, the deferred option remains the most popular arrangement; 80% of firms offering profit sharing used the deferred option (Milkovich and Newman, 1993).

Does profit sharing affect performance? In an excellent review of the existing state of knowledge, Kruse (1994) focused on 26 statistical studies that estimated the profit sharing effects on company performance after accounting for the competing explanations. He concludes:

- +Profit sharing plans are associated with higher company performance;
- +Profit sharing is associated with productivity increases of 3.5 to 5%;
- +Average productivity increases are larger for small companies and for companies adopting cash payouts (not deferred).
- +There is a widespread belief that profit sharing needs to be combined with other HR programs to create commitment and cooperation for improving performance. "The bottom line is simple: There is little support for the idea that these programs interact with profit sharing in affecting company performance."

Kruse's conclusions are consistent with the emerging pattern of evidence:

(1). Group-based plans seem to have an effect on subsequent performance;

(2). The positive effects of other employee commitment initiatives in combination with group incentives are not clear. There is conflicting evidence.

Notwithstanding the case study description, the prescriptions from pay pundits, and our beliefs, the importance of drawing employees into decision making, coupled with profit sharing, does not find support in the scientific evidence, according to Kruse.

This conclusion conflicts with some studies cited earlier. *The conflicting studies suggest that participation, executive commitment, feedback, and goal setting are all potentially important factors leading to successful group-based incentive plans.* In the Pritchard study, 75% of the productivity improvement was accounted for by feedback and goal setting, while incentive awards added only a 1% additional improvement. Indeed, incentives may be important in sustaining the improvements, but this idea has not been tested. All to say, the competing belief is that there is more to group-based plans than simply extra money linked to performance improvement.

The recent ACA study Organization Performance and Rewards: 663 Experiences in Making the Link is perhaps the broadest study of group-based incentives conducted to date. We have already commented on this study, using it to illustrate our cautions about becoming an informed consumer. The study contains useful information and we recommend obtaining it. As noted earlier, its major conclusion based on surveying 663 distinct group-based plans include the following:

- +Payouts are modest: a median of \$867 per employee per year—about 3% of base pay.

+Plans reporting more intensive communication, feedback, and involvement also report lower payouts. Involvement initiatives for improvement do not require as much direct financial reward.

+Median gain—the dollar value placed on the performance improvement is \$2410 per employee per year;

+On average, organizations earn \$2.34 for every dollar spent on payout, a net return on plan investment of 134%.

+12% of the plans were terminated, most often because the organizations failed to perform well on the performance measures.

+Organizations with performance reward plans tended to perform the same as or better than their competitors.

Taken as a whole, these reported findings also support the proposition that "How you pay matters." Incentive based pay, whether group or individual based, appears to be linked to improved performance.

Having said that, we need to raise cautions on many of the conclusions drawn in the ACA project. To be fair, the authors include a full page "Note of caution to the readers" in which they "worked hard to avoid implying causality;" and, "Avoid generalizing beyond the 663 plans included." Nevertheless, without control groups and proper analysis of alternative explanations, many of the findings need to be treated with caution. Especially troublesome are their conclusions about the tradeoff between involvement initiatives (e.g., employee communication and feedback) and financial rewards, and that organizations with performance reward plans performed the same or better than their competitors. The study design simply does not permit such conclusions.

A cautious consumer can find in the ACA publication some of the richest descriptive data on plan design and the beliefs of compensation professionals regarding these plans' effects. An intriguing finding is that 12% of the plans studied were terminated because the performance targets were not achieved. Questions leap to mind: Are these plans really designed to improve performance, or are they simply devices to insure variable costs?

If plans that fail to pay out as expected are terminated, then what is their value-added? Clearly, research into terminated plans is called for.

Summary of Research on Group-Based Pay

There has been considerable research on the effects of group-based pay. While more research will be useful, several conclusions emerge from the existing studies. The preponderance of evidence suggests that:

+Group-based performance plans have had dramatic and positive influences on firm performance, especially financial measures.

+Ownership can have a positive effect at managerial and executive levels, but little is known about its performance effects for all employees.

+Employees seem to treat stock ownership as a financial instrument rather than a sign of partnership or involvement.

+Both gainsharing and profit sharing plans can have positive effects on subsequent performance.

+Disagreement exists over whether coupling employee involvement initiatives with group based performance plans is necessary for the pay plans to matter. Research conducted or reviewed by behavioralists tend to say it is (e.g., Schuster, Lawler). Economists tend to find little support for this proposition (e.g., Kruse, Cooke).

+Unionized environments are unique and introduce added complexities to the effects of group-based incentives. More work is needed to better understand the dynamics of group-based pay, collective agreements, and the political aspects of union relationships.

Performance-Based Pay: Employee Satisfaction, Attraction, and Turnover

Up to this point our focus has been on the evidence regarding whether performance based pay really works for improving performance. Its potential effects on other outcomes such as employee satisfaction, attraction, and turnover may be equally important. This section briefly covers this research. Conclusions drawn from the employee satisfaction studies include:

+ *Employees favor performance-based pay, all else equal.* However, seldom is all else equal. Hence, other factors influence employee satisfaction with their performance-pay plans.

+ *Employees' perceptions of fairness and lack of bias in the plan are critical* (so-called procedural justice). Employees must believe that the plan will deliver, the measures and data are unbiased, and the administration is fair.

+ *Employees' expectations about their payouts under these plans also appear crucial for satisfaction.* Expectations (perceptions) become the standard for judging the plan, and unmet expectations seem to lead to the most serious dissatisfaction (e.g., Du Pont, Polaroid, Scott terminations of their profit sharing plans are reactions to employee dissatisfaction when the plans failed to pay out because performance thresholds were not achieved).

+ *Employees who tend to be risk takers or risk avoiders appear to react differently toward at-risk plans.* Risk takers focus on the upside: the potential returns. Risk avoiders look at potential losses. And most employees are risk averse, so there must be potential for real and significant returns, even to avoid dissatisfaction among the risk takers.

Performance-based pay may also act as a signal that communicates to prospective employees, customers, and even market analysts. The message communicated is that performance matters so much that one's pay increases are based on performance improvements. Research has begun to identify the signaling effects (Judge and Cable, 1994; Rynes and Miller, 1983). For example, an at-risk

plan may signal, "we are a risk-taking organization that stresses individual accountability, and we value risk-taking." Rynes (1987) captured the essence of the signaling effect by stating that "[c]ompensation systems are capable of attracting (or repelling) the right kinds of people because they communicate so much about an organization's philosophy, values and practices."

Considerable research exists on the retention and performance-based pay relationship. We know that the manner in which people are paid is related to the satisfaction with pay. Furthermore, we know that pay satisfaction influences individuals' decisions to quit or stay with an organization (see, for example, Judge, 1993; Milkovich and Wigdor, 1991). We also have some evidence that employees will choose organizations where they can maximize their earnings and that people's personalities might also be important in their preferences for one pay system over another. Gómez-Mejía and Balkin (1989) found that individuals who were risk-takers were more likely to remain with an organization which emphasized performance-based pay than non-risk takers.

In perhaps the most interesting study to date, Weiss (1987) used AT&T data to look at the retention effects of switching from an individual- to a team-based incentive plan. Weiss suggested that star performers would dislike the switch and would leave the organization. He reasoned that under a team-based plan, all employees receive the same performance-based pay award regardless of their individual effort. The group's output was the average of all members' performance. Bonuses are calculated on the team output. But star performers who regularly produce at levels well in excess of the average may feel cheated compared to what they could earn under an individual performance plan. Their earnings "cheat" them out of this extra pay because they would receive the same payout as all other workers based on average performance. Similarly, below-average employees should like a group-based plan because their performance and hence pay, is below the average under an individual plan. The group-based plan would therefore raise the compensation level of a below-average employee. Figure 10 illustrates this effect. Indeed, the data Weiss analyzed indicated that star performers either reduced their output or quit the firm after the switch to a group-based plan. In fact, of the 208 above-average performers, only one worker continued to record performance increases. High performers under the old individual plan were the most likely to quit after introduction of the group-based plan.

Peterson's (1992a, b) data are consistent with Weiss's but he extends them to suggest that *setting a threshold performance target may offset some of the negative effects associated with below-average performers*. That is, setting a minimum level that must be reached before payouts begin seems to influence poor performers to work harder. However, the effect on star performers is likely to be the same—they are penalized by a group-based pay plan.

Loss of star performers may or may not be bad. For example, for some operations a group of solid, steady performers is what is needed. Indeed, Deming argued that in statistical quality control, deviations were errors and needed to be minimized. This is especially true when the production process is highly interdependent, that is, employees must work together to complete the production cycle. Other work applications rely upon a complex combination of independent and team plan, and the loss of star performers might be more detrimental. Even where teamwork is required, the catalyst effects of star performers may lift the entire team performance. Sports teams illustrate the point. Arguably, Michael Jordan's performance on the basketball court lifted the entire team performance. His performance-based pay plan was targeted to his individual performance as well as the success of the entire team. Indeed, it was designed to support both his star role and his efforts to energize and lead the team. However, Jordan's performance in a baseball uniform is undoubtedly another matter. The advantages and shortcomings of team versus individual plans are frequently oversimplified by advocates and pay gurus. Perhaps the solution lies individual coupled with group-based plans. But research on such mixed hybrid plans has yet to be conducted.

Distribution of Employee Performance
and its Relationship to Individual Earnings

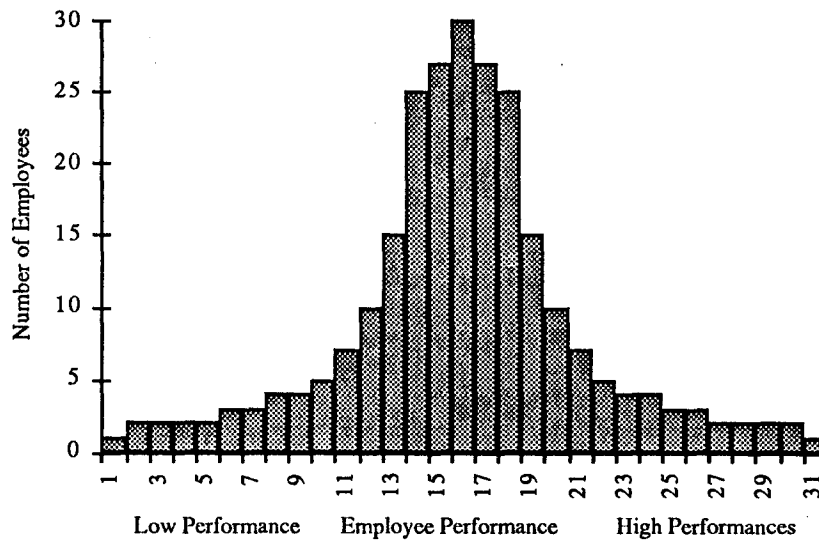


Figure 10

THE DARK SIDE TO PERFORMANCE-BASED PAY

Critics of performance-based pay need to be heard. Their criticism offers a needed counterweight to fads and fashions in employee compensation. Some critics claim performance-based pay does not work and it never will. Others say that it may work under the right conditions, but conditions are so difficult to obtain that it is more efficient (cheaper) to use other nonpay initiatives, and finally, another set assert that performance-based pay is damaging and detrimental to employee well-being and organization success.

Perhaps the most vocal contemporary critic of performance-based pay is Kohn, *Punished by Rewards* (1993), who argues that compensation can do nothing more than prevent dissatisfaction among employees and temporary compliance with certain objectives and rules. He further asserts that "attaching larger pay incentives for successful performance decreases employees' intrinsic motivation and performance."

The research evidence contradicts Kohn's arguments. We have briefly listed each of his criticisms (K) countered by evidence from research (R):

1. K: Pay is not a motivator. Challenging work is.
R: Both can be if properly designed and administered.
2. K: Rewards punish. Sense of accomplishment and achievement motivates.
R: Rewards can support accomplishments and do motivate behaviors.
3. K: Rewards rupture relationships. Cooperation, teamwork are crucial.
R: Rewards can support teamwork.
4. K: Rewards ignore reasons.
R: People ignore reasons.
5. K: Rewards discourage risk taking; Financial security and entitlements nurture risk-taking environments.
R: Complex issue; without rewards, why take the risks?
6. K: Rewards undermine interests. Intrinsic interest is the key to motivation and performance.
R: Rewards and interest improve performance. Rewards can help gain commitment to high performance goals.

The debate over so-called extrinsic (pay increases) and intrinsic (interest and accomplishment) rewards is an old one in academic circles. Contrary to Kahn's implicit model, intrinsic and extrinsic rewards do not necessarily compete with each other; indeed, they can be combined to increase employee total motivation.

One of the most widely known critics of performance based pay is Graef Crystal. His 1991 book, *In Search of Excess: The Overcompensation of American Executives* set the stage for many criticisms of managerial pay. Crystal's major theme is that decisions about executive and managerial pay are strongly affected by organization politics. Since executives and managers hire the consultants, they get what they pay for. While this report is not about executive pay, Crystal does argue that if the pay of the leadership is really not sensitive to fluctuations in performance, why should employees have their pay linked to performance? This argument has two faces, the first political, and the other leadership through example. Research does not offer much guidance on either of these issues. However, the political and social aspects of performance-based pay does relate directly to some potential concerns with much of the current rhetoric advocating at-risk and variable pay.

It appears under several labels; the "new pay", the "new social contract in the workplace", the "new employment deal" are examples. Whatever it is called, there is a widespread belief that new employment relationships are emerging. And while an extended discussion is beyond the scope of this report, one aspect of it is highly relevant. All observers seem to agree, the new employment relationship involves shifting increased risk to individual employees. At-risk plans is an example. Less employment security, self-managed careers and education are others.

If individual employees are being asked to accept greater risks in their employment relations, then they are not being well prepared to manage it. Under at-risk plans, employees are seldom if ever trained how to mitigate their risk through some portfolio of "investments" or to minimize downside risks through savings and the like. Unprepared to manage increased risks, individuals faced with losses and financial uncertainty will surely seek remedies, either through the courts or their public government regulators. Our own view is that the current Dunlop Commission is the early stage of a public debate over coming employment regulations and labor law in this country. The current debate over the social contract in the European Community and Ontario illustrates the point.

So there is a potential dark side to some of these human resource initiatives, performance-based pay, especially at-risk types. Some critics argue against performance-based pay because it does not work or is even detrimental. Research does inform us and, in our view, counters these criticisms. However, research does not offer any guidance with respect to the political underside of the emerging new social contract in the workplace. And it is our belief that it is the new employment relationship with employees that may be the most strategic of all.

APPENDIX

Performance-based pay is the subject of a variety of theories drawn from a variety of fields. Economists, psychologists, sociologists, management scientists all have theories which offer answers to the questions posed at the beginning of this report. Does performance-based pay really work? And which approach makes sense?

Theory is very useful because it helps explain why something does or does not work, because each situation is different.

"The ideas of economists and political philosophers both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical (people) who believe themselves to be quite exempt from any intellectual influences are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back. I am sure the power of vested interests is vastly exaggerated compared with the gradual encroachment of ideas." (John Maynard Keynes, from R. L. Heilbroner, *The Worldly Philosophers*)

We are also sure that a report on theory would be a surefire cure for insomnia. Instead, the theories relevant to performance-based pay are summarized in the accompanying chart. We tried to abstract the essential features of each. And we tried mightily to highlight, "So What?"

THEORIES RELATED TO PERFORMANCE-BASED PAY

Theory	Essential Features	Predictions	So What?
Maslow's Need Hierarchy	<p>People are motivated by inner needs.</p> <p>Needs form a hierarchy from most basic (food & shelter) to higher-order (e.g. self-esteem, love, self actualization).</p> <p>Needs are never fully met, they operate cyclically</p> <p>Higher-order needs become motivating after lower order needs have been met</p> <p>When needs are not met, they become frustrating.</p>	<p>1. Base pay must be set high enough to provide individuals with the economic means to meet their basic living needs.</p> <p>2. An at-risk program will not be motivating since it restricts employees+ ability to meet lower-order needs.</p> <p>3 Success-sharing plans may be motivating to the extent they help employees pursue higher-order needs.</p>	<p>A. Performance-based pay may be demotivating if it impinges upon employees+ capacity to meet daily living needs</p> <p>B. Incentive pay is motivating to the extent it is attached to achievement recognition or approval</p>

THEORIES RELATED TO PERFORMANCE-BASED PAY

Theory	Essential Features	Predictions	So What?
Herzberg's 2-Factor Theory	<p>Employees are motivated by two types of motivators: hygiene factors and satisfiers.</p> <p>Hygiene or maintenance factors, in their absence, prevent behaviors, but in their presence cannot motivate performance. These are related basic living needs, security, and fair treatment.</p> <p>Satisfiers, such as recognition, promotion, and achievement motivate performance.</p>	<ol style="list-style-type: none"> 1. Base pay must be set high enough to provide individuals with the economic means to meet hygiene needs, but it cannot motivate performance . 2. Performance is obtained through rewards; payments in excess of that required to meet basic needs. 3. Performance-based pay is motivating to the extent it is connected with meeting employees+ needs for recognition, pleasure attainment, achievement, and the like. 4. Other factors such as interpersonal atmosphere, responsibility, type of work, and working conditions influence the efficacy of performance-based pay. 	<p>A. Pay level is important - it must meet minimum requirements before performance-based pay can operate as motivator.</p> <p>B. Security plans will induce minimum, but not extra, performance. Success-sharing plans will be motivating. At-risk plans will be demotivating.</p> <p>C. Other conditions in the working relationship influence the effectiveness of performance-based pay</p>
Reinforcement.	<p>Rewards reinforce (i.e., motivate & sustain) performance.</p> <p>Rewards must follow directly after behaviors to be reinforcing. Behaviors which are not rewarded will be discontinued.</p>	<ol style="list-style-type: none"> 1. Performance-based payments must follow closely behind performance. 2. Rewards must be tightly coupled to desired performance objectives. 3. Withholding payouts can be a way to discourage unwanted behaviors 	<p>Timing of payouts is very important.</p>

Theory	Essential Features	Predictions	So What?
Equity	<p>Employees are motivated when perceived outputs (i.e., pay) are equal to perceived inputs (e.g., effort, work behaviors)</p> <p>A disequilibrium in the output-to-input balance causes discomfort. If employees perceive that others are paid more for the same effort, they will react negatively (e.g., shirk)</p>	<ol style="list-style-type: none"> 1. The pay performance link is critical; increases in performance must be matched by commensurate increases in 2. Performance inputs and expected outputs must be clearly defined and identified 3. Employees evaluate the adequacy of their pay via comparisons with other employees. 	<p>A. Performance measures must be clearly defined and employees must be able to affect them through work behaviors.</p> <p>B. If payouts do not match expectations, employees will react negatively.</p> <p>C. Fairness and consistency of performance-based pay across employees in an organization is</p>
important.	<p>to correct the output-to-input balance.</p>		<p>D. Since employees evaluate their pay-effort balance in comparison to other employees, relative pay matters.</p>
Expectancy	<p>Motivation is the product of three perceptions: expectancy, instrumentality, and valence. Instrumentality is employee+s assessment of their ability to perform required job tasks</p> <p>Expectancy is employee+s beliefs that requisite job performance will be rewarded by the organization</p> <p>Valence is the value employees attached to the organizational rewards offered for satisfactory job performance.</p>	<ol style="list-style-type: none"> 1. Job tasks and responsibilities should be clearly defined. 2. The pay-performance link is critical. 3. Performance-based pay returns must be large enough to be seen as rewards. 4. People chose the behavior that leads to the greatest reward. 	<p>A. Larger incentive payments are better than smaller ones.</p> <p>B. Line-of-sight, is critical + employees must believe they can influence performance targets.</p> <p>C. Employee assessments of their own ability are - important + organizations should be aware of training and resource needs required to perform at target levels.</p>

Theory	Essential Features	Predictions	So What?
Goal setting	<p>Challenging performance goals influence greater intensity and duration in employee performance.</p> <p>Goals serve as feedback standards to which employees can compare their performance.</p> <p>Individuals are motivated to the extent that goal achievement is combined with receiving valued rewards .</p>	<ol style="list-style-type: none"> 1. Performance-based pay must be contingent upon achievement of important performance goals. 2. Performance goals should be challenging and specific. 3. The amount of the incentive reward should match the goal difficulty. 	<ol style="list-style-type: none"> A. Line-of-sight is important; employees must believe they can influence performance targets. B. Performance targets should be communicated in terms of specific, difficult goals. C. Feedback about performance is important. D. Performance-based payouts should be contingent upon goal achievement.
Agency	<p>Pay directs and motivates employee performance.</p> <p>Employees prefer static wages (e.g., a salary) to performance-based pay.</p> <p>If performance can be accurately monitored, payments should be based upon satisfactory completion of work duties.</p> <p>If performance cannot be monitored, pay should be aligned with achieving organizational objectives.</p>	<ol style="list-style-type: none"> 1. Performance-based pay must be tightly linked to organizational objectives. 2. Employees dislike risky pay and will demand a wage premium (e.g., higher total pay) in exchange for accepting performance-based 3. Performance-based pay can be used to direct and induce employee performance. 	<ol style="list-style-type: none"> A. Performance-based pay is the optimal compensation choice for more complex jobs where monitoring employees+ work is difficult. B. Performance targets should be tied to organizational goals. C. Use of performance-based pay will require higher total pay opportunity.

REFERENCES

Copies of any of these references are available upon request (ILR S. Cornell U.)

- Abowd, J. M. 1990. Does performance-based managerial compensation affect corporate performance? *Industrial and Labor Relations Review*, 43: 52-73.
- Baker, G. P., Jensen, M. C., & Murphy, K. J. 1988. Compensation and incentives: Practice versus theory. *The Journal of Finance*, 33: 593-616.
- Blasi, J. R., & Kruse, D. L. 1991. *The New Owners*, New York: Harper Collins.
- Bloedorn, J. D., & Chingos, P. T. 1994. Executive pay and company performance. *ACA Journal*, Autumn: 70-89.
- Brown, C. 1990. Firms' choice of method of pay. *Industrial and Labor Relations Review*, 40: 165-S -182-S.
- Brown, C., & Medoff, J. 1989. The employer size - wage effect. *Journal of Political Economy*, 97: 1027 -1059.
- Cable, D. M., & Judge, T. A. 1994. Pay preferences and job search decisions: A person-organization fit perspective. *Personnel Psychology*, 47: 317-348.
- Conference Board. 1993. *Innovative Reward and Recognition Strategies in TQM*, New York: The Conference Board, Inc.
- Cooke, W. N. 1994. Employee participation programs, group based incentives, and company performance. *Industrial and Labor Relations Review*, 47: 4,594-610
- Crystal, G.S. 1991. *In search of excess: The overcompensation of American executives*, New York: Norton.
- Dyer, L., & Theriault, R. 1976. The determinants of pay satisfaction. *Journal of Applied Psychology*, 61: 596-604.
- Eisenberger, R., Faslo, P., & Davis-LaMastro, V. 1990. Perceived organizational support and employee diligence, commitment and innovation. *Journal of Applied Psychology*, 75: 51-59.
- Fisher, L. M. 1992, June 23. Sears auto centers to halt commissions. *New York Times*, D1.
- Folger, R., & Konovsky, M. A. 1989. Effects of procedural and distributive justice on reactions to pay raise decisions. *Academy of Management Journal*, 32: 115-130.
- French, J. L., & Rosenstein, J. 1984. Employee ownership, work attitudes, and power relationships. *Academy of Management Journal*, 27: 861-869.
- Gerhart, B., & Milkovich, G.T. 1990. Organizational differences in managerial compensation and financial performance. *Academy of Management Journal*, 33: 663-691.
- Gerhart, B., & Milkovich, G.T. 1993. Employee compensation: Research and Theory. In M.D. Dunnette & L.M. Hough (Eds.), *Handbook of industrial and organizational psychology* (2nd ed., Vol. 3, pp. 481-569), Palo Alto, CA: Consulting Psychologists Press.

- Gregg, P., Machin, S., & Szymanski, S. 1993. The disappearing relationship between director's pay and corporate performance. *British Journal of Industrial Relations*, 31: 1-9.
- Hammer, T.H., and Stern, R.N. 1980. Employee ownership: Implications for the organizational distribution of power, *Academy of Management Journal*, 23, 1, 78-100.
- Heneman, H. G. III 1985. Pay satisfaction. In K. M. Rowland & G. R. Ferris (Eds.), *Research in personnel and human resources*, (Vol. 3, pp. 115-139), Greenwich, CT: JAI Press.
- Heneman, H. G., III & Schwab, D. T. 1985. Pay satisfaction: Its multidimensional nature and measurement. *International Journal of Psychology*, 20:129-141.
- Heneman, R.L. 1992. *Merit pay: Linking pay increases to performance ratings*, Reading, MA: Addison-Wesley.
- Heneman, R. L., Greenberger, D. B., & Strasser, S. 1988. The relationship between pay-for-performance and pay satisfaction. *Personnel Psychology*, 41: 745-759.
- Hochner, A. and Granrose, C.S. 1985. Sources of motivation to chose employee ownership as an alternative to job loss, *Academy of Management Journal*, 28, 4, 860-876.
- Hoskisson, R. E., Hitt, M. A., & Hill, C. W. 1993. Managerial incentives and investment in R & D in large multiproduct firms. *Organization Science*, 4:325-341.
- Hoskisson, R. E., Hitt, M. A., Turk, T. A., & Tyler, B. B. 1989. Balancing corporate strategy and executive compensation: Agency theory and corporate governance. In K. M. Rowland & G. R. Ferris (Eds.), *Research in personnel and human resource management* (Vol. 7, pp. 25- 57), Greenwich, CT: JAI Press.
- Huber, V. L., Seybolt, P. M., & Venemon, K. 1992. The relationship between individual inputs, perceptions, and multidimensional pay satisfaction. *Journal of Applied Social Psychology*, 22: 1356-1373.
- Isen, A. M., & Baron, R. A. 1991. Positive affect as a factor in organizational behavior. *Research in organizational behavior*, 13: 1-53
- Isen, A. M., & Geva, N. 1987. The influence of positive affect on acceptable level of risk: The person with a large canoe has a large worry. *Organizational Behavior and Human Decision Processes*, 39:145-154.
- Jensen, M.C., & Murphy, K.J. 1990. Performance pay and top-management incentives. *Journal of Political Economy*, 98: 225-264.
- Judge, T. A. 1992. The dispositional perspective in human resources research. In K. M. Rowland & G. R. Ferris (Eds.), *Research in personnel and human resources management* (vol. 10, pp. 31-72), Palo Alto, CA: JAI Press.
- Judge, T. A. 1993. Does affective disposition moderate the relationship between job satisfaction and voluntary turnover? *Journal of Applied Psychology*, 78: 395-401.

- Keeley, M. 1988. *A social-contract theory of organizations*, Notre Dame, IN: University of Notre Dame Press.
- Klein, K.J. 1987. Employee stock ownership and employee attitudes: A test of three models, *Journal of Applied Psychology*, 72, 2, 319-322.
- Klein, K. J., and Hall, R. J. 1988. Correlates of employee satisfaction with stock ownership: Who likes an ESOP most?, *Journal of Applied Psychology*, 73, 630-638.
- Kruse, D. L. 1993. *Profit sharing: Does it make a difference?*, Kalamazoo, MI: Upjohn Institute.
- Lawler, E. E. 1987. Pay for performance: A motivational analysis, In R. Nalbantian (Ed.), *Incentives, cooperation and risk sharing*, Totowa, N.J: Rowan and Littlefield.
- Locke, E. A. 1976. The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology*, Chicago: Rand McNally.
- Long, R. J. 1978a. The effects of employee ownership on organizational identification, employee job attitudes, and organizational performance: A tentative framework and empirical findings. *Human Relations*, 31: 29-49.
- Long, R. J. 1978b. The relative effects of share ownership vs. control on job attitudes in an employee owned company. *Human Relations*, 31: 753-763.
- Long, R. J. 1980. Job attitudes and organizational performance under employee ownership. *Academy of Management Journal*, 23: 726-737.
- Mathieu, J. E., & Zajac, . M. 1990. A review and meta-analysis of the antecedent, correlates, and consequences of organizational commitment. *Psychological Bulletin*, 108: 171-194.
- McAdams, J. L., & Hawk, E. J. 1994. *Organizational Performance & Rewards*, Phoenix, AZ: *American Compensation Association*.
- Miceli, M. P., Jung, I. J., Near, J. P., & Greenberger, D. B. 1991. Predictors and outcomes of reactions to pay-for-performance plans. *Journal of Applied Psychology*, 76: 508-521.
- Miceli, M. P., & Lane, M. C. 1991. Antecedents of pay satisfaction: A review and extension. In K. M. Rowland & G. R. Ferris (Eds.) *Research in personnel and human resource management* (Vol. 9, pp. 235-309), Greenwich, CT: JAI Press.
- Milkovich, G. T. 1988. A strategic perspective on compensation management. *Research in Personnel and Human Resources Management*, 6: 263-288.
- Milkovich, C. T., & Newman, J .M. 1993. *Compensation 4th ed.*. Homewood, IL: Irwin.
- Milkovich, G. T., & Wigdor, A. K. 1991. *Pay for performance*, Washington, D. C.: National Academy Press.
- Oliver, N. 1990. Work rewards, work values, and organizational commitment in an employee-owned firm: Evidence from the U.K., *Human Relations*, 43, 6, 513-526.

- Peterson, T. 1992a. Individual, collective, and system rationality in work groups: Dilemmas and market-type solutions. *American Journal of Sociology*, 98: 469-510.
- Peterson, T. 1992b. Individual, collective, and system rationality in work groups: Dilemmas and market-type solutions, *Rationality & Society*, 4: 332-.355.
- Pierce, J. L., and Furo, C. A. 1990. Employee ownership: Implications for management, *Organizational Dynamics*, Winter, 32-43.
- Pierce, J.L., Rubenfeld, S.A., and Morgan, S. 1991. Employee ownership: A conceptual model of process and effects, *Academy of Management Review*, 16, 1, 121-144.
- Pritchard, R. D., Jones, S. D., Roth, P. L., Stuebing, K. K., & Ekeberg, S. E. 1988. Effects of group feedback, goal setting, and incentives on organizational productivity, *Journal of Applied Psychology*, 73: 337-358.
- Research Institute of America. 1992. *Federal Master Tax Guide*, New York: The Research Institute of America, Inc.
- Rice, R. W., Phillips, S. M., & McFarlin, D. B. 1990. Multiple Discrepancies and pay satisfaction. *Journal of Applied Psychology*, 75: 386-393.
- Rosen, C., & Young, K. M. 1991. *Understanding employee ownership*, Ithaca, NY: ILR Press.
- Rousseau, D. M. 1990. New hire perceptions of their own and their employers' obligations: A study of psychological contracts, *Journal of Organizational Behavior*, 11: 389-400.
- Rousseau, D. M., & Parks, J. M. 1992. The contracts of individuals and organizations. In L.L. Cummings & B.M Staw (Eds.), *Research in organizational behavior* (Vol. 15, pp. 1-47), Greenwich, CT: JAI Press.
- Rynes, S. L. 1987. Compensation strategies for recruiting. *Topics in total compensation*, 2: 185-196.
- Rynes, S. L., & Miller, H. E. 1983. A policy-capturing investigation of the role of expectancies in decisions to pursue job alternatives. *Journal of Applied Psychology*, 68: 147-154.
- Rynes, S. L., Schwab, D. P., & Heneman, H. G. 1983. The role of pay and market pay variability in job application decisions. *Organizational Behavior and Human Performance*, 31: 353-364.
- Scarpello, V., & Campbell, J.P. 1983. Job satisfaction: Are all the parts there? *Personnel Psychology*, 36: 577-600.
- Scarpello, V., Huber, V., & Vanderberg, R. J. 1988. Compensation dissatisfaction: Its measurement and dimensionality. *Journal of Applied Psychology*, 73: 163-171.
- Schuster, J. R., & Zingheim, P. 1982. *The new pay: Linking employee and organization' performance*, New York: McMillan.
- Scott, W. E., Jr., Farh, J., & Podsakoff, P. M. 1988. The effects of "intrinsic" and "extrinsic" reinforcement contingencies on task behavior. *Organizational Behavior and Human Decision Processes*, 41: 405-425.

- Simon, H. A. 1951. Formal theory of the employment relationship. *Econometrica*, 19:293-305.
- Simon, H. A. 1991. Organizations and markets. *Journal of Economic Perspective*, 5:25-44.
- Tannenbaum, A. S. 1983. Employee-owned companies, In B.M. Staw and L.L. Cummings (Eds.), *Research in Organizational Behavior*, 5, Greenwich, CT: JAI Press.
- Toscano, D.J.(1983), Toward a typology of employee ownership, *Human Relations*, 36, 7, 581-602.
- Tosi, H.L., & Gomez-Mejia, L.R. 1989. The decoupling of CEO pay and performance: An agency theory perspective. *Administrative Science Quarterly*, 34:169-190.
- Tucker, J., Nock, S. L., & Toscano, D. J. 1989. Employee ownership and perceptions of work. *Work and Occupations*, 16: 26-42.
- Tully, S. 1993. Your paycheck gets exciting. *Fortune*, November 1, pp. 83-98.
- Wagner, J. A., III, Rubin, P. A., & Callahan, T. J. 1988. Incentive payment and non-managerial productivity: An interrupted time series analysis of magnitude and trend. *Organizational Behavior and Human Decision Processes*, 42: 47-74.
- Weiss, A. 1987. Incentives and worker behavior: Some evidence. In H. R. Nalbantian (Ed.), *Incentives, cooperation and risk sharing* (pp. 137-150), Totowa, NJ: Rowan & Littlefield.
- Weitzman, M. L., & Kruse, D. L. 1990. Profit sharing and productivity. In A. S. Blinder (Ed.), *Paying for productivity.V*

This paper was developed with the support of the Center for Advanced Human Resources Studies (CAHRS) in the School of Industrial and Labor Relations at Cornell University. CAHRS is committed to producing and providing high-quality research and development to improve the practice of human resource management. CAHRS operates as a partnership between corporate sponsors and participating faculty members.

For mor information about CAHRS, contact Albert T. Brault, Executive Director at Cornell University.

Este estudio se plantea dos preguntas fundamentales, que los altos Ejecutivos de la Compañía 3M, de los Estados Unidos, hicieron a los investigadores de la Escuela de Relaciones Industriales y Laborales de Cornell:

- ¿Acaso el Pago Basado en Competencias realmente funciona?
- ¿Cuál de los enfoques tiene más sentido?

Milkovich y Mathew Boom, con el apoyo del Centro de Estudios Avanzados de Recursos Humanos de la Escuela de Relaciones Industriales y Laborales de Cornell, llevaron a cabo el estudio que hemos presentado, y una vez concluido pidieron autorización a los Ejecutivos de la 3M para publicarlo, persuadidos de que podía interesar a otros investigadores y profesionales del ramo. Estos accedieron de buen grado.

Como señalamos en la Editorial, y en una nota a pie de página de este trabajo, el Dr. Milkovich, a su vez nos autorizó a publicarlo en las páginas de nuestra revista. Hemos preferido publicarlo en inglés, para mantener la fidelidad con los términos utilizados en el estudio y a sabiendas, además, de que la mayoría de nuestros lectores no tiene dificultad alguna en la lectura del inglés.

La temática del pago por competencias ha alcanzado en estos últimos años su climax, en el mundo de las relaciones de personal, por ello nos pareció importante su publicación en nuestra Revista. Sobra decir que estamos sumamente agradecidos al Dr. Milkovich por esta atención para con nosotros.