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**PAYING FOR THE SKILLS,
KNOWLEDGE,
AND COMPETENCIES OF
KNOWLEDGE WORKERS**

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Increasingly, organizations are adopting pay systems that reward employees for their skills and knowledge, rather than the job they hold. Just during the period 1987 to 1993, the percentage of Fortune 1000 firms using some form of pay for skills increased from 40 percent to 60 percent (Lawler, Mohrman, and Ledford, in press).

So far, most skill-based pay systems cover non-exempt manufacturing employees or employees in routine, high volume service work, such as financial services and insurance operations (Jenkins, Ledford, Gupta, & Doty, 1992). These were natural places for skill-based pay to arise. In such settings, it is relatively easy to identify and document the skills employees need. As a result, it is relatively easy to train for those skills and to certify that employees have acquired them.

As use of pay for skills systems broadens and deepens, many organizations have begun to explore whether skill-based pay systems are applicable to professionals and managers. Paying knowledge workers for their knowledge, skills, and competencies is a natural step in the evolution of skill-based pay systems. Indeed, it would be peculiar if organizations permanently restricted skill-based pay systems to employee populations whose skill requirements are far more limited than those of engineers, accountants, and managers.

Paying for the knowledge and skills of professionals and managers presents formidable challenges. By comparison, the design task in a factory pay plan is straightforward. Compensable skill blocks usually are built primarily around the skills needed to produce tangible products or deliver specific services. An analyst can identify most production skills simply by observing them in use. However, much of the labor of knowledge workers is not directly observable. It goes on within the heads of employees. The work of these employees is varied, abstract, non-routine, full of uncertainty, and sometimes creative (Mohrman, Cohen, & Mohrman, in press). Knowledge workers may engage in activities such as research or product development that have a cycle time

of years and few meaningful metrics for measuring effectiveness in the interim. Defining compensable sets of skill and knowledge for work of this type is no easy task. How can knowledge and skill of this type be defined and combined into compensable blocks? How can organizations train these skills, and certify that an employee has obtained them?

This article examines the emergence of new forms of skill-based pay. The new forms of skill-based pay are important because they represent forms that apply to new populations, namely professionals, managers, and other knowledge workers. Applying skill-based pay concepts knowledge workers will force us to rethink our assumptions and techniques.

This article begins by defining key terminology. We then examine why there is so much interest in the new forms of skill-based pay. We consider different design options in developing these systems in some detail. Finally, we consider what we will need to learn about these systems in the future.

Skill-Based Pay, Knowledge-Based Pay, and Competency-Based Pay: Definitions

To some extent, competency-based pay is skill-based pay, relabelled with a new term. The new term serves several purposes. First, it may be more appealing to the managers and professionals who may be covered by the plan than the term skill-based pay. Knowledge workers may identify “skills” as more basic than competencies, and skill-based pay plans as applicable to non-exempt employees rather than themselves. Second, competency-based pay is a short-hand way of referring to discussing skill-based pay plans that apply to knowledge workers. I use the term competency-based pay in that sense in this article.

Compensation consulting firms also use the term for product differentiation purposes. This allows consultants to sell a new product even if they are not experienced with skill-based pay plans, or prefer not to recognize the foundation for understanding provided by prior research on skill-based pay. We should recognize this labeling game for what it is. Through case studies and

large-scale surveys, we have learned a good deal about how to design skill-based pay plans, the typical effects of skill-based pay plans, success and failure factors, and contextual conditions that facilitate use of skill-based pay. (See, for example, Jenkins et al., 1992; Lawler, Ledford, & Chang, 1993; Ledford, 1991.) Paying knowledge workers for competencies raises unique design problems, but knowledge about skill-based pay is an important point of departure for designing competency-based pay plans.

There is no agreement in the literature on exactly what constitutes skill, knowledge, or competency. Boyatzis (1982), then President of McBer and Company, proposed an approach in one of the few empirical studies of competencies. He defined a competency as an underlying characteristic of a person leading to effective job performance, and included motives, traits, skills, aspects of one's self-image or social role, and bodies of knowledge as competencies. This "everything but the kitchen sink" definition is not very satisfying because it is hard to say what is and is not a competency. Others (such as O'Neal, 1993/4) distinguish among many different types of competencies.

We may define competencies as "demonstrable characteristics of the person, including knowledge, skills, and behaviors, that enable performance." Competencies are characteristics of the person, meaning that they are independent of the person's job or position, and thus are transported by the employee from position to position. Competencies must be demonstrable if they are to be the basis of pay. If we cannot verify in some way that the person has a competency, we should not be paying for it. Competencies may include knowledge, skills, or behaviors; we need not make sharp distinctions among these terms here. Finally, competencies indicate the potential for performance, but are not necessarily an indicator of performance per se. For this reason, the organization needs a separate performance-based pay system along with a competency-based pay system to motivate performance.

Why the Interest in Competency-Based Pay?

Competency-based pay systems for knowledge workers are the focus of a tremendous amount of interest in the compensation community. Why have competencies become the center of so much attention? Three factors appear to stand out.

1. The decline of the job. Throughout the last 50 years, compensation systems as well as other human resource systems have been built around the job. The job has been the lowest level of organizational structure, and the point at which division of labor stops. Job analysis has been the basis of base pay pricing, training and development, career ladders, and many other practices. However, firms increasingly are viewing the job as an anachronism, a dated concept that fit only about two centuries of human history. Contemporary conditions such as continuous organizational change, steady downsizing and associated reengineering of work, and team-based designs are rendering the discrete job obsolete. Employees will have work to do, but many will not have one discrete, well-defined job for very long (Bridges, 1994).

Even where jobs continue to be a relevant concept, the downsized human resource function may be unable to manage at the level of the job. Increasingly, companies are deciding that the job can no longer be the atom of human resource practice. This has direct and unsettling implications for compensation design. If we are not to build HR practice around the job, what will be the basis of HR practices? If we are not to pay for the job, for what will we pay?

The most common answer has been to focus on paying the person rather than paying for the job. In particular, the focus has been on paying for employees' skills, knowledge and competencies. No other approach has received anywhere near the attention of this option. Managers have shown increased interest in all forms of skill-based pay as their search for alternatives to job-based pay has intensified.

2. Competency-based pay is an evolution of skill-based pay and pay-for-knowledge systems. The growth in the use of pay for knowledge and skill plans has been tremendous, as I have indicated. The overwhelming majority of organizations using skill-based pay report it to be successful (Jenkins et al., 1992; Lawler et al., in press). For example, three-quarters or more of the respondents in a study of 97 skill-based pay plans reported that the plan increased productivity, increased worker flexibility and adaptability of employees to changing production needs, enhanced motivation, increased work team effectiveness, enhanced recruitment and retention, and reduced labor costs despite higher average wages (Jenkins et al., 1992).

It is natural for companies that have a positive experience with skill-based pay for non-exempt employees to begin exploring how the concept might be adapted for exempt workers. In my experience, every firm that has attempted to design skill-based pay for knowledge workers has had one or more favorable experiences at the factory level or equivalent.

3. Interest in competency-based pay follows from the focus on core competencies in the field of business strategy. Another reason that the term “competencies” has received so much favorable attention is that it appears to link compensation to business strategy. This is because the most prominent approach in the strategy arena in recent years has been the “core competencies” approach. Prahalad and Hamel (1990) described this approach in an award-winning article in the Harvard Business Review. Their analysis helps corporations identify the small number of technical skills that enable it to gain competitive advantage. For example, Sony’s core competencies in miniaturization and precision manufacturing provide competitive advantages across seemingly unrelated product lines and markets. The approach by Stalk, Evans, and Schulman (1992) of the Boston Consulting Group focuses on strategic “capabilities” that are organizational and managerial rather than technical in nature. For example, Wal-Mart’s strategic

capabilities in distribution, marketing, and information systems provide important competitive advantages.

There is a fundamental difference between the core competencies or strategic capabilities approaches and the competency approach that typically is used in compensation systems. The strategists focus on very few competencies -- perhaps only two or three for a major corporation -- that offer competitive advantage. Identifying core competencies is hard work, and requires extensive analysis and conceptualization about the business of the firm. Strategists would not recognize as “core” the dozens of competencies that fill many competency-based pay plans. They would be unimpressed by a common scene today: the compensation consultant shopping a prepackaged listing of competencies to potential clients, encouraging the clients to select the competencies they like. This procedure cannot yield “core competencies” of the type discussed by strategists.

Even if some in the compensation community have misunderstood the strategy terms they were hearing, the emphasis of many executives on competencies and capabilities has had an impact on compensation practice. In some organizations, it is the key reason for the development of competency-based pay plans.

Examples of Competency-Based Pay Plans

Competency-based pay is not one thing. There is tremendous variety in the design of competency-based pay plans for knowledge workers. Some examples of this kind of plan include the following.

- A business unit of a major aerospace firm with thousands of employees has installed a competency-based pay plan that is based on learning contracts. All exempt employees negotiate these learning contracts with their supervisor. An appraisal of performance against learning objectives is separated by six months from the more familiar appraisal against performance objectives. Employees receive pay increases for meeting learning objectives. The amount of the increase is determined by the degree of difficulty of the objective and amount of learning that occurs.
- A manufacturing division of a consumer products company pays all managers based on their degree of progress in mastering four competencies that apply to all managerial work, regardless of their job or work location. This de-emphasizes the need for managers to compete for the handful of plant manager assignments at the largest plants to receive the highest pay. It also decreases their resistance to taking positions in which they are needed but which may have a lower job evaluation rating (for example, staff assignments and startups of small new plants).
- A research and development facility of a chemical firm applies competency-based pay to scientific and technical personnel. It includes a variety of organizational competencies, not just the technical competencies that would be found in a technical ladder.
- A defense electronics business unit has placed exempt employees on a system that rewards over 30 competencies. Different departments select the competencies that are relevant to their operations from the master list. At this point, it appears that the plan is successful but there are concerns about its integration with the performance appraisal process, especially peer review. The organization may simplify the plan in the future.

Compensation professionals need a way of making sense of such variety. We next consider some basic design options that underlie the variety of plans now in use.

Design Dimensions for Competency-Based Pay Systems

Very little has been written about the basic design choices facing organizations that are installing competency-based pay for knowledge workers. Some consultants have outlined the approach used by their firm, but this falls short of helping organizations understand the range of choices they face. What is lacking is an understanding of the range of different models of competency-based pay. This kind of understanding helps managers make more informed choices among alternatives, and helps them discover specific approaches that best fit their particular circumstances.

One way to capture the key design choices is through an encompassing set of polar design dimensions. Experience suggests the importance of a number of key dimensions in the design of competency-based systems. These dimensions are depicted in Figure 1. The dimensions represent an initial framework for describing competency-based systems.

First, competencies can be *narrow* or *generic*. Narrow competencies may be restricted in their focus to particular business units, work locations, organizational levels or functions, or jobs. The narrowest are competencies tied to specific jobs. These may resemble elements of a job description. On the other hand, generic competencies are applicable to all employees in the organization. For example, all employees might be asked to understand the organization's business (knowledge of the organization's products and services, markets, competitors, key performance indicators, etc.). Another example is group problem solving and decision making skills, which might be useful to all employees in team-based organizations. Systems emphasizing technical skills tend to be narrower, while those emphasizing managerial, organizational, or cultural skills tend to be more generic.

Competency-based pay systems can emphasize *existing* or *novel* competencies. Existing competencies are based on skills and knowledge that are familiar in the organization, while novel competencies are new to the organization. Some advocate the use of existing competencies when they argue that the organization should study high performers, identify what distinguishes them from others, and pay all employees for obtaining these distinguishing competencies (e.g., Tucker and Cofsky, 1994). In relatively stable organizations, this can be helpful. In some cases, however, it may be critical to develop new competencies that are not yet prevalent or valued and that may lead individuals displaying them to be branded as deviant rather than successful. Firms that face major changes in their environment may be poorly served by encouraging more of the competencies that made them successful in the past. IBM and General Motors are examples of companies that have suffered in recent years because of cultures that reinforce old competencies no longer associated with business success.

Competencies can be determined using either a *bottom up* or *top down* approach. The bottom up approach resembles a conventional job analysis in that it proceeds from an examination of the competencies used by organizational members in their work. Perhaps because of its similarity to familiar compensation approaches, the bottom up approach appears to be the most common among compensation consulting firms. The top down approach proceeds from the assumption that competencies should be defined by organizational needs rather than by current work patterns. For example, a multi-divisional business unit of a large corporation has derived its competencies from a study of the organization's business strategy, structure, and desired organizational culture. Some authors recommend this approach (for example, O'Neal, 1993/4).

Competencies can be *complex and precise* or *elegant and nimble*. Compensation traditionally has been the most quantitative and precise of the human resource disciplines. The natural tendency of compensation professionals and compensation consulting firms in approaching

competencies is to generate very complex plans that have many different competencies and complex control elements (tight skill definitions, thorough certification procedures, etc.). However, this may merely be replicating a basic problem in current compensation practice. If job-based systems are being replaced because they are too complex and cumbersome to maintain when organizations are undergoing continual change, the answer is not to implement equally complex competency systems. For organizations undergoing continual change, it may be necessary to simplify pay system designs radically so that they can be easily adapted to organizational changes as necessary. This would suggest that in many organizations, a nimble design may be the most desirable form of competency-based pay (see the companion article in this issue on nimble pay).

Competencies can be easily *observable* or highly *abstract*. Observable competencies, such as operating machinery or conducting effective problem solving meetings, are relatively easy to describe, train, and verify. Abstract competencies, such as the ability to create new products, are much harder to define and verify. An external observer may be unable to tell whether a person is displaying an abstract skill; it may be possible to see evidence of the competency months or years later, when it generates an observable output. We would expect that systems based on abstract competencies will have more difficulty in defining, training for, and certifying competencies.

Competencies can have *enduring value* or *temporary value*. The assumption in most competency-based pay plans is that competencies have enduring value. Thus, the competencies initially identified are expected to be relatively stable over time. Considerable effort can be placed on developing a refined system because it will be in place for many years with only minor changes. However, the assumption of enduring value is not always valid. Technical knowledge in particular has a short shelf life. For example, none of the information systems knowledge that is

necessary to manage personal computer systems even existed a decade ago. The hardware, the operating systems, the software applications, network technologies, communication technologies, and so on have all changed drastically. “Soft” skills also evolve. For example, the overwhelming majority of large U.S. firms now use employee involvement and quality practices, but these practices were relatively rare as recently as the early 1980s (Lawler et al., in press).

Competency-based pay systems that assume competencies have temporary value are likely to be quite different from systems that assume enduring value for competencies. For example, systems based on competencies that have only temporary value must be much more nimble than those based on competencies with enduring value. This enables the pay system to keep up with competencies needed by the organization.

Competency-based pay systems can reward the acquisition of competencies either by means of a *permanent annuity*, such as a base pay increase, or a *one-time bonus*. Annuity-like increases compound over time, and the ultimate compounded value of the increase usually is far greater than the original amount of the increase. Base pay increases are particularly suited to competencies that have enduring value. Base pay systems appear to be much more common than bonus systems, perhaps in part because competency-based pay is viewed as a replacement for job-based salary systems. However, bonuses are much more appropriate for competencies that have only temporary value.

Bonuses for competency acquisition also may be appropriate in situations where control of base pay costs is critical, as when base pay is well above market before adoption of the competency-based pay system. This condition may be relevant to many older firms that suddenly find themselves facing newer, more agile competitors that have low labor costs. The bonus approach offers employees in the older firm the opportunity to reward the acquisition of critical competencies without incurring a further permanent disadvantage in labor costs.

Finally, competencies can be *valued in the marketplace* or they can be *valued strategically*. The organization may attempt to discover what a particular competency is worth to other organizations by comparing plans. The rarity of competency-based pay plans means, however, that there is very little available salary survey information that will be useful for this purpose. In some cases, organizations may assess market value indirectly. For example, one insurance company has used the skill and knowledge component of its regular job evaluation system as the basis for setting value, disregarding other elements of the point factor system. Other organizations use market survey data to help price the overall system, rather than each competency in the system. Market data may indicate the worth of a few key benchmark positions in the competency ladder (such as entry, average, and very highly skilled expert), and the worth of unique steps in the competency ladder may be extrapolated.

Other organizations rely on strategic valuing, which involves estimates of what a skill is worth to the organization. This may involve intentional departures from market rates. For example, a firm may determine that a particular technical or managerial competency is critical to its success, and it may be willing to pay much more than the market rate for that competency. Alternatively, it may pay less than the market rate for competencies that are less critical to the organization.

Patterns in the Dimensions of Competency-Based Pay. The use of different design choices and the clustering of choices is uneven. In general, the choices on the left side of each dimension in Figure 1 represent choices that are most similar to more familiar job-based pay systems. This suggests, given what we know about organizational change, that competency-based pay plans making these choices will be the ones that are easiest to develop and implement. In practice, these choices do appear to be the most common. This pattern is reinforced by the major

compensation consulting firms, which tend to market competency-based pay plans based on these options.

Choices on the right side of Figure 1 are appropriate for many organizations. In some cases, these choices represent blind spots and unrecognized opportunities. Considerable experimentation will be needed to understand the consequences of these choices more fully, as well as the organizational conditions most favorable to them.

What do We Need to Know about Competency-Based Pay?

There is very little prior work to help organizations in designing competency-based pay plans for knowledge workers. There are a few overview articles, but there is little research and not even one good case study on the topic. Here we consider what we need to know about competency-based pay, and what kind of research can provide that knowledge.

We first need to understand the design process used to develop competency-based pay plans. It is important to understand how organizations that adopt competency-based pay think through the issues of what constitutes key competencies in their organization. How do they define competencies? Are there specific design configurations that recur in different plans? How do organizations relate competencies to the business strategy, structure, and desired culture of the unit? We know from research on skill-based pay that the design process, especially the degree of employee involvement in the design, is important to success. Is this true of competency-based pay plans as well?

We also know that training and certification are important in the long-term viability of skill-based pay plans. How do firms with competency-based pay certify these relatively abstract skills? How do they provide training for the competencies? Are plans using broad definitions of competencies, including for example personality traits and motives as competencies, more

confusing to employees and harder to manage than those with more precise definitions of competencies?

The level of employee acceptance of skill-based pay plans is relatively high, in part because these plans typically increase the overall level of employee compensation. Many competency-based pay plans are designed to allocate the compensation pie differently, but not necessarily to increase the amount of money available. Does this affect employee acceptance of competency-based pay plans? Do employees agree with the logic of competency-based pay plans, or is there too much management discretion for them to trust these plans?

The transition from conventional pay practices to competency-based pay is likely to be a stormy one in many organizations. What factors lead to a smooth transition to the new system? Are some plans generally easier than others for employees to accept?

It appears that the success rate in skill-based pay plans is relatively high. Is the success rate of competency-based pay plans equally high? What factors account for any differences in success? What problems are typical of competency-based pay plans?

These questions and many others cannot yet be answered. Skill-based pay systems are analogous to competency-based pay and thus provide clues as to the issues organizations will face in adopting competency-based pay. However, knowledge work is different enough from production work that organizations adopting competency-based pay for knowledge workers probably will encounter many problems that did not arise in skill-based pay systems for production work. Research is needed to begin to understand these issues.

The first step should be a set of intensive case studies. Enough companies have experiences with competency-based pay that it should be possible to draw some conclusions about what it is, how it was implemented, what effects it has, and so on. Multiple case studies will be

needed for us to understand the impact of different types of plans. Until we know more about competency-based pay, large-scale surveys of competency-based pay users are premature.

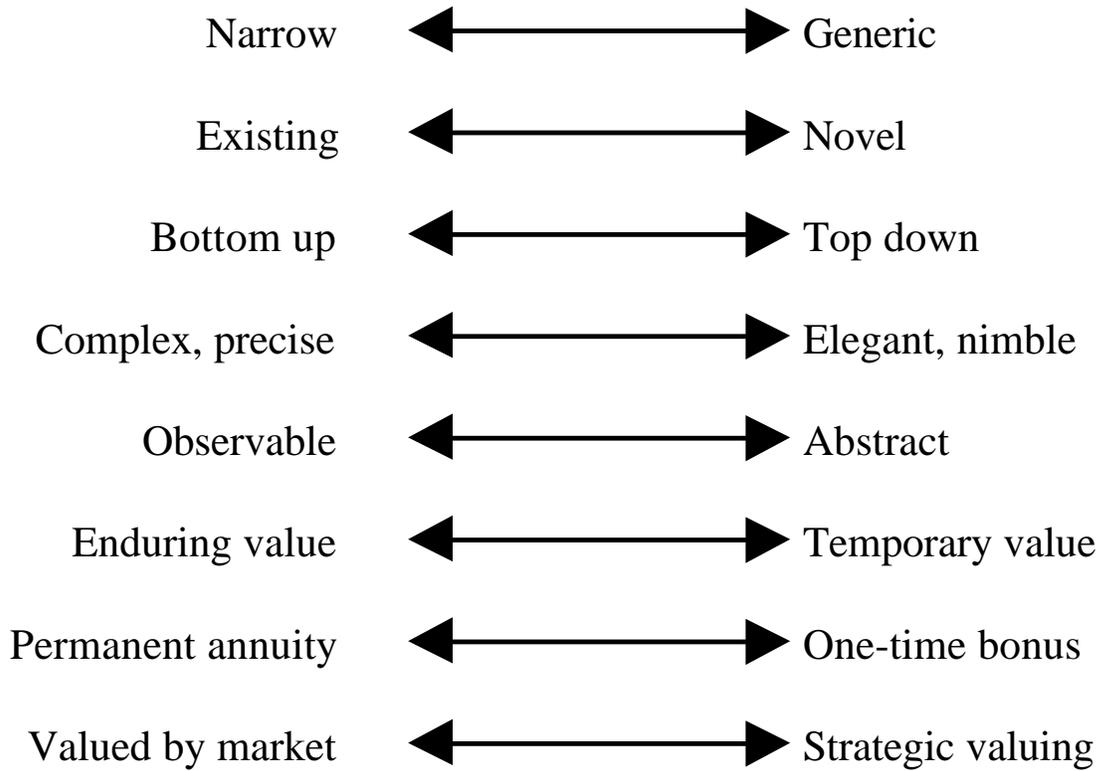
Conclusion

This article has attempted to help explain why competency-based pay has generated so much interest in the compensation community. I have not advocated or focused attention on any particular brand of competency-based pay. At this point, we lack the research base to determine the distribution of plan types that are being used, or what the effects of different plans are on organizations and individual employees. Thus, I have attempted to broaden our views about the range of design choices that we may make in designing these plans.

The forces that have led to the current level of interest in competency-based pay are intensifying. As a result, I expect that we will see a tremendous increase in experimentation with competency-based pay plans for knowledge workers during the next ten years.

Figure 1

Dimensions of Competency-Based Pay



REFERENCES

- Boyatzis, R.E. (1982). *The competent manager: A model of effective performance*. New York: John Wiley & Sons.
- Bridges, W. *JobShift*. Reading, MA: Addison-Wesley.
- Jenkins, G.D. Jr., Ledford, G.E. Jr., Gupta, N., & Doty, D.H. (1992). *Skill-based pay: Practices, payoffs, pitfalls, and prospects*. Scottsdale, AZ: American Compensation Association.
- Lawler, E.E. III, Ledford, G.E. Jr., & Chang, L. (1993). Who uses skill-based pay, and why they use it. *Compensation and Benefits Review*, 25(2), 22-26.
- Lawler, E.E. III, Mohrman, S.A., & Ledford, G.E. Jr. (In press.) *Creating high performance organizations: Employee involvement and total quality management*. San Francisco: Jossey-Bass.
- Ledford, G.E. Jr. (1991). Three case studies on skill-based pay: An overview. *Compensation and Benefits Review*, 23(2), 11-23.
- Mohrman, S.A., Cohen, S.G., & Mohrman, A.M. Jr. (In press.) *Designing team-based organizations: New forms for knowledge work*. San Francisco: Jossey-Bass.
- O'Neal, S. (1993/4). Competencies: The DNA of the corporation. *ACA Journal*, 2(3), 6-13.
- Prahalad, C.K., & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, 68(3), 79-93.
- Stalk, G., Evans, P.E., & Shulman, L.E. (1992). Competing on capabilities: The new rules of corporate strategy. *Harvard Business Review*, 70(2), 57-69.
- Tucker, S A., and Cofsky, K.M. (1994). Competency-based pay on a banding platform. *ACA Journal*, 3(1), 30-45.