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Skill-Based Pay Systems**

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THE EFFECTIVENESS OF SKILL-BASED PAY SYSTEMS

Skill-based pay (SBP) systems reward employees for the range, depth, and types of skills they possess. Employees are paid for the skills they are capable of using, rather than for the job they are performing at any point in time. Thus, SBP plans are based on a different logic than traditional job-based pay (JBP) systems, which pay employees based on the value of the job they are performing. SBP is the most prominent example of what Lawler⁸ terms "person-based pay"--that is, systems that set compensation rates based on characteristics of the employee, rather than the employee's job.

Skill-based pay also has been called pay-for-knowledge, multi-skilled pay, and pay-for-skills. In practice, these terms are used interchangeably.

A number of articles are available that consider in detail the nature of SBP^{1,4,7,8,9,14} and design of SBP plans.^{5,12} This paper summarizes the available research on SBP, focusing on what we know about the effectiveness of SBP systems. We begin by considering where SBP is used.

Prevalence of SBP

Use of SBP appears to be accelerating. During the last ten years, SBP has been used in manufacturing, especially with process technologies; in service organizations, such as financial services, hotels, and retail stores; in unionized as well as non-union organizations; and with every type of employee, including professionals. Some companies make especially extensive use of SBP. Procter & Gamble has implemented SBP in over 30 plants. Polaroid is attempting to become the first major corporation to pay virtually all employees on a SBP system.

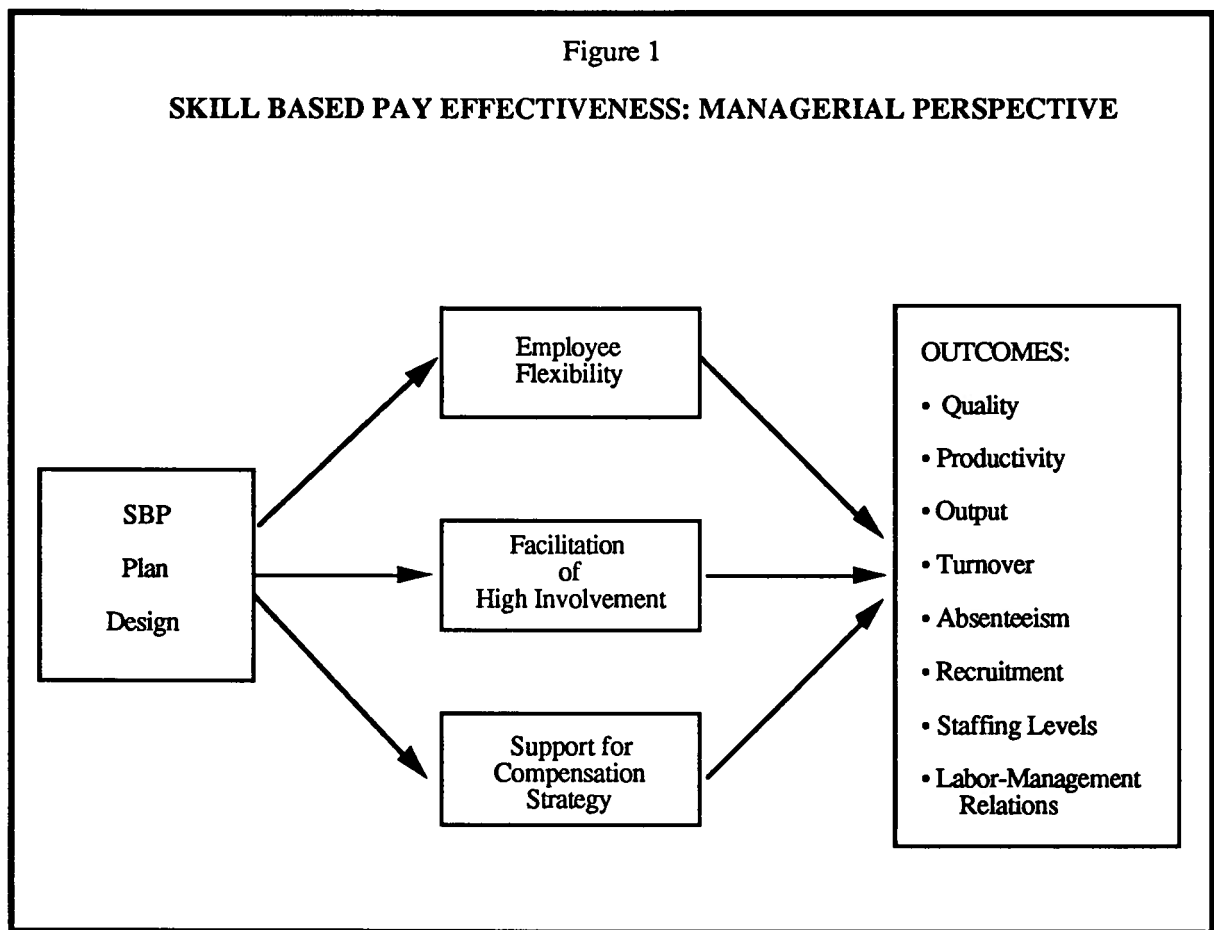
Three studies have attempted to assess the prevalence of SBP in the U.S. The most sophisticated study⁴ found that eight percent of companies listed on the New York and American Stock Exchanges used SBP. Similarly, a survey of 1600 large organizations by the American Compensation Association and the American Productivity Center¹³ found that five percent used SBP with production and/or service workers. The latter study found that two-thirds of SBP users had adopted it within the previous five years, and study respondents projected a 75 percent increase in future use of SBP. Finally, a recent study of Fortune 1000 firms¹⁰ found that 40 percent used SBP, broadly defined, with at least some employees.

SBP is increasingly prevalent, but does it work? We need to examine this question from two different perspectives: the management perspective and the employee perspective.

Effectiveness from the Management Perspective

Like any innovation, SBP carries risks. SBP tends to increase average employee wages -- otherwise it offers no incentive. Also, a failed plan may cause morale problems and employee resentment over broken promises. What benefits offset these risks?

Figure 1 indicates that a well-designed SBP plan can positively affect three causal factors that can contribute to organizational effectiveness.⁹ *First, SBP can increase flexibility* by giving employees an incentive to learn a variety of jobs. Flexible employees can help with production bottlenecks and cover for each other in the event of illness, transfers, or training of fellow employees.



Second, SBP facilitates a high involvement management style by giving employees skills they need to manage themselves effectively. This, in turn, can lead to leaner direct labor and management staffing. SBP also makes self-management more effective by giving employees a broader understanding of the production or service delivery system.

Third, creative matching of SBP and compensation strategy can lead to lower labor costs. For example, in startups SBP can be helpful if employees begin at a low rate of pay. Pay rates increase as employees learn new skills and become more valuable to the organization, while at the same time the organization's ability to compensate employees increases as production levels accelerate.

Figure 1 further suggests that the three causal factors can produce a number of *favorable outcomes*, including more and better output, less absenteeism and turnover, lower staffing levels, and better labor-management relations.

Are the benefits of SBP realized in practice, and are the benefits generally greater than the costs? It would be desirable to answer these questions on the basis of well-controlled field experiments. Unfortunately, no such studies have been reported so far.

In part, this is a result of where SBP is found. SBP most frequently has been implemented in "new design" manufacturing plants as part of a complex package of innovations that are intended to create high levels of employee involvement. In such organizations, it is impossible to disentangle the effects of the pay system from the effects of innovations in job design, training, hiring, information systems, and so on. Clearly, high involvement organizations using SBP often are highly effective compared to traditional organizations in terms of cost savings, productivity, quality, and other measures.⁸ This suggests that SBP might have positive effects on performance, but it does not prove such effects.

The best available data on the effectiveness of SBP are provided by two studies of managerial perceptions in organizations that have adopted SBP. Perceptual data are not as strong as direct evidence of performance improvements, but they can be collected efficiently from large numbers of organizations.

The first study examined 19 SBP plans for the U.S. Department of Labor.^{3,4,5} Eighteen cases were in manufacturing plants, but otherwise the sample varied considerably in terms of organizational characteristics, types of employees covered, and plan characteristics. Almost all respondents saw SBP as having positive effects of varying intensity, and virtually none saw negative effects, on a wide variety of outcomes. Positive outcomes reported included work-force flexibility, labor and overall cost reductions, better quality, higher output, lower absenteeism and turnover, better labor-management relationships. The respondents also reported a positive impact on effectiveness from the employee perspective, including improved employee satisfaction, motivation, and commitment.

The second study of managerial perceptions was the ACA/APC study of over 1600 organizations,¹³ primarily representing the membership of ACA and APC. Again, the overwhelming majority of respondents with SBP plans reported that SBP positively impacted organizational effectiveness. Fully 70 percent indicated that SBP had a "positive" or "very positive" impact on unit performance.

SBP probably is more effective in some technologies and organizational cultures than others, but the available research provides little guidance on this issue. However, most observers agree that the organization should have or be moving toward a participative management style in order to realize fully the benefits of SBP and to offset higher average wages under SBP.

Effectiveness from the Employee Perspective

Data on employee attitudes toward skill-based pay remains limited. On balance, the evidence from available case studies^{4,11,14} indicates that employee pay satisfaction is high in SBP systems. I personally have studied SBP using questionnaire data in six manufacturing plants. In these plants, SBP was outstandingly successful in two plants from the employee perspective, successful in two others, a mixture of success and failure in two cases, and a failure in none.

What factors lead to effectiveness from the employee perspective? Figure 2 presents a model that addresses the question. The model displays variables that theory and research have suggested as causes of SBP effectiveness.

Effectiveness Criteria

Figure 2 suggests that there are two key outcomes by which skill-based pay can be assessed from the employee perspective. The first is pay satisfaction, which is the conventional measure of pay system effectiveness from the employee perspective. A second criterion, preference for skill-based pay, also is pertinent to effectiveness from an employee perspective.

Predictors of Effectiveness

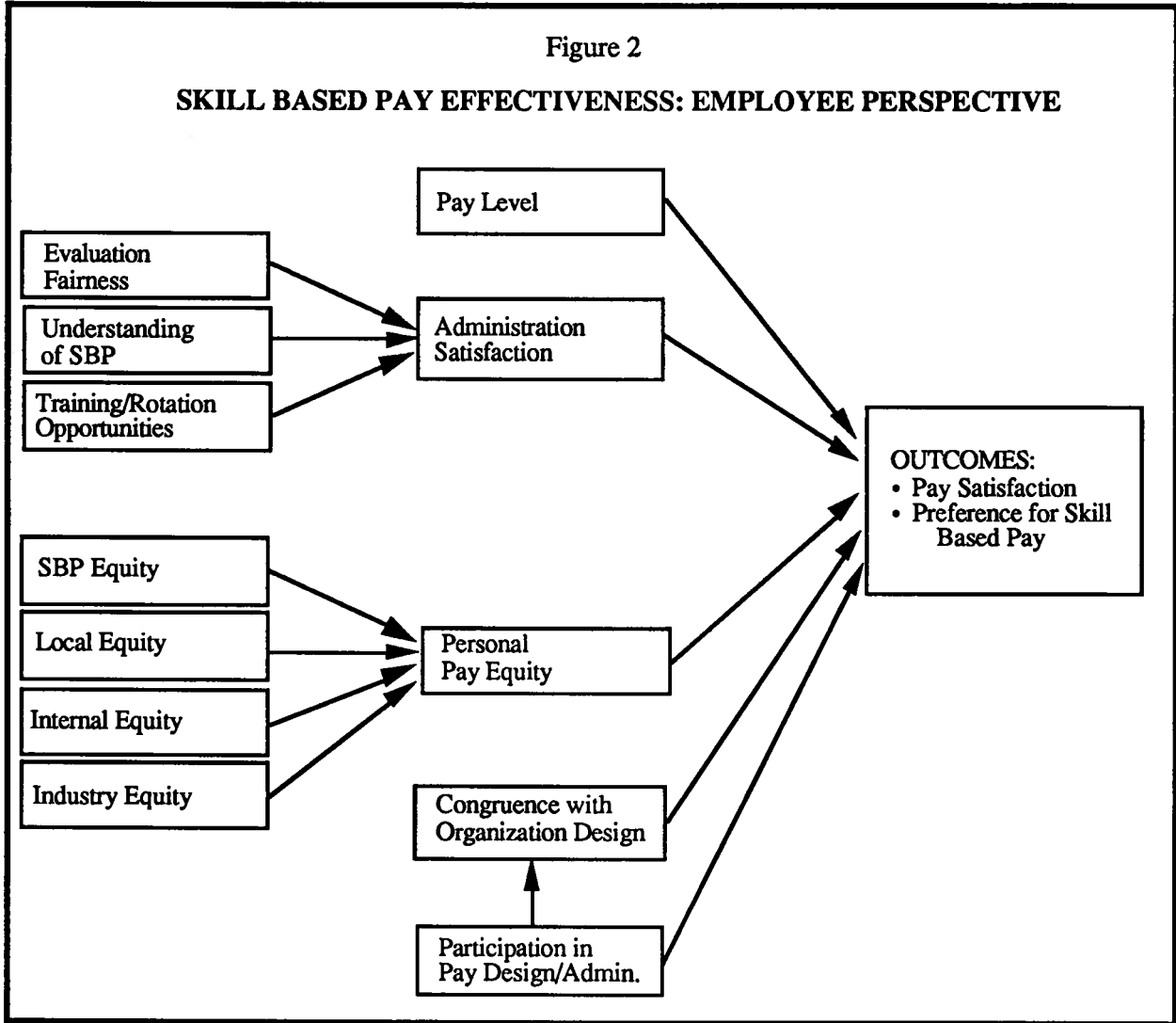
Figure 2 suggests that there are five main predictors of pay satisfaction and preference for skill-based pay.

1. Pay Level. Past research on pay systems has shown, not surprisingly, that the more people are paid, the more satisfied they tend to be with their pay. The pay level - pay satisfaction relationship has been well established in prior research.⁶ Consistent with this research, I found a fairly strong relationship between pay increases due to SBP and pay satisfaction in a recent study of a manufacturing plant. Employees earning at least an extra 75 cents per hour as a result of skill-based pay had a level of pay satisfaction that was over a point higher on a seven-point survey measure than those earning lesser pay increases or no pay increase.

However, pay level does not always predict pay satisfaction in SBP systems. I have studied four different SBP plans in which there is not even a statistically significant correlation between pay level and pay satisfaction. I can propose only one logical explanation for this finding. That is, employees may see themselves as rapidly advancing through various pay levels, and their pay satisfaction may be more related to the pay they expect to earn in the future than the pay they are earning now.

At this point, it is best to assume that pay level matters in SBP. Research on the "smallest meaningful pay increase" offers some guidance on the amount of increased pay that represents a real incentive. The research tentatively suggests that pay increases of less than five to ten percent are not considered meaningful by employees. This has obvious implications for the size of the base pay increases

that SBP plans should offer. However, it may be possible for a SBP plan to offer cumulatively meaningful incentives even if any one pay step is smaller than five to ten percent.



2. Pay Administration Satisfaction. The way in which pay is administered is a significant cause of pay satisfaction in traditional pay systems.² Pay administration satisfaction may be even more important in SBP than JBP, because SBP plans tend to be much more complex to administer than JBP systems.

Under most JBP systems, employees really must know only what job they hold, the pay rate associated with their job, and where to pick up their paycheck. Under SBP, employees need to know much more, including the range of jobs or sets of skills that they are eligible to learn, the pay increases associated with the various skill blocks, how to obtain training in new skills, time frames for advancing through the system, and the procedures and content of evaluation or certification examinations. Extensive

communication and education of employees usually is required to convey all of this information. From the managerial perspective, providing the needed education, training, and certification can be very time-consuming and costly, and there are many opportunities to make mistakes that lead to hard feelings.¹²

3. Pay Equity. Nearly all theories of pay satisfaction assume that feelings of pay equity are a cause of pay satisfaction. Most theories assume that the discrepancy between how much pay employees actually make compared to how much they feel they should make leads to pay satisfaction or dissatisfaction. This process is captured in Figure 2 by the variable "personal pay equity."

Figure 2 further suggests that employees base their assessment of the fairness of their pay on four factors. The first is their estimation of the equity of the SBP design. This includes whether the skill blocks are fairly valued, whether it affords real opportunity for pay increases to employees, and so on. The remaining factors concern different kinds of comparisons that employees make to determine the fairness of their pay. That is, they consider pay rates in the local community (local equity), pay rates within the organization (internal equity), and pay rates in competitive organizations (industry equity).

No research so far has examined what personal characteristics, if any, are related to feelings of pay equity in SBP systems. However, we can speculate that those who stand to gain the most from SBP will be the most likely to deem it equitable; in turn, they may be more satisfied with their pay and may prefer SBP more than others. If so, education level and training may be positively related to perceived pay equity under SBP, while age, seniority, and organization level may be negatively related to perceived pay equity under SBP. In addition, personality characteristics such as needs for personal growth may predict feelings of equity under skill-based pay.¹⁴

4. Congruence with Organization Design. It is widely recognized that the congruence, or fit, between skill-based pay and key organizational characteristics is important for SBP success. The organization's selection system, work designs, management style, and other key design elements need to support the SBP plan. If the pay plan works at cross-purposes with the culture, business needs, or the technology of the organization, the plan will be rejected by employees and managers alike. In the University of Arkansas studies, organizational contextual factors were the strongest predictors of SBP success.^{3,4,5}

Considering in depth how the pay plan might fit with its organizational context is a new skill for many compensation professionals. This is because traditional JBP systems generally do not need to be highly custom-tailored in order to fit well with the design of traditional organizations.

5. Participation in Pay Design and Administration. Considerable research has demonstrated that employee participation leads to understanding and support for organizational changes.

Thus, it seems likely that employee involvement with SBP will increase pay satisfaction and preference for SBP.

Two types of employee participation are common. One is involvement in SBP design, either directly through employee membership on a design task team or indirectly through inputs to task team representatives. A second type is involvement in SBP administration. Employee work teams often are responsible for conducting skill block certifications, skill training and job rotation, and informing new employees about the system.

Figure 2 indicates that participation in the SBP plan is related to congruence with organization design as well as pay outcomes. This is because participation in pay design and administration reinforces the participative culture that most organizations with SBP have or are striving to achieve.

Relationship between Managerial and Employee Perspectives

The two types of SBP effectiveness are related but not equivalent. In the short run, either the organization or employees may benefit while the other party does not. In the long run, however, the skill-based pay system is threatened unless both sides perceive benefits from it.

Conclusion: Designing Effective SBP Plans

Considering SBP effectiveness in terms of variables and models does not imply that effective SBP plans can be created in a mechanical way. The SBP concept is so novel that initial mistakes in design and implementation are common. All SBP plans I have studied have been modified after implementation to correct design mistakes and to respond to changing technologies and business needs. Often, the benefits of SBP became more obvious than the costs only after a period of adjustment that sometimes lasted a year or longer.

This argues that organizations adopting SBP should plan to monitor it intensively, and should use the data for mid-course corrections at appropriate times. This paper has identified a number of variables that can be assessed in the feedback and adjustment process. Employee questionnaires, interviews, and performance data all can be used for assessment.

In summary, the available research suggests that SBP has a bright future. Its use is increasing rapidly, and the evidence so far suggests that it often is an effective pay system from the point of view of both managers and employees.

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