CHAPTER 34

Job Evaluation in Organizations

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TABLE 5 The Point Method of Job Evaluation: Factors, Weights, and Degrees

(3) Weights	(1) Factors	(2) Degrees				
40%	Skills required	1	2	3	4	5
30%	Effort required	1	2	3	4	5
20%	Responsibility	1	2	3	4	5
10%	Working conditions	1	2	3	4	5

Source: Milkovich and Newman 1993.

for each factor according to the correspondence between the job being evaluated and the benchmark jobs or descriptions for each factor scale. Then the ratings are multiplied by the factor weights and the products are summed. In the above example, skills required carries a greater weight (40% of the total points) for this employer than does working conditions (10% of the total points). Thus, a job's 240 total points may result from two degrees of skills required ($2 \times 40 = 80$), three each of effort required ($3 \times 30 = 90$) and responsibility ($3 \times 20 = 60$), and one of working conditions ($1 \times 10 = 10$); ($80 + 90 + 60 + 10 = 240$).

Once the total points for all jobs are computed and a hierarchy based on points established, then jobs are compared to each other to ensure that their relative locations in the hierarchy are acceptable. Almost without fail, certain naturally occurring clusters of jobs will emerge.

2.5. Single-Factor Systems

The premise underlying single-factor approaches is that the job content or value construct is unidimensional. In other words, proponents argue that internal value of jobs can be determined by evaluating them against each other on a single factor, instead of the more traditional 5- to 10-factor systems. The two most widely known single-factor plans are Jaques's time span of discretion (TSD) and Arthur Young's decision banding (Jaques 1970). In time span of discretion, each job is made up of tasks and each task is judged to have an implicit or explicit time before its consequences become evident. Jaques defines TSD as ''the longest period of time in completing an assigned task that employees are expected to exercise discretion with regard to the pace and quality of the work without managerial review'' (Jaques 1964). According to Jaques, TSD is distinct from job evaluation in that it represents measurement (of time units) rather than subjective judgement.

The single factor used in the decision banding method is the decision making required on the job (Patterson and Husband 1970). It identifies and describes six types of decisions that may be required on the job. In order from simplest to most complex, they are: defined, operational, process, interpretive, programming, and policy making. Under this approach, results of job analysis are examined to determine the highest level of decision-making required of the job. Each job is then placed in the corresponding decision band.

Over 50 years ago, Lawshe and others demonstrated that a few factors will yield practically the same results as many factors (Lawshe 1947). Some factors may have overlapping definitions and may fail to account for anything unique in the criterion chosen. In multifactor plans, 3 to 5 factors explained most of the variation in the job hierarchy. In a study conducted 30 years ago, a 21-factor plan produced the same job structure that could be generated using only 7 of the factors. Further, the jobs could be correctly slotted into classes using only 3 factors. Yet the company decided to keep the 21-factor plan because it was ''accepted and doing the job.''

3. OTHER METHODS OF VALUING JOBS

3.1. Market-Based Pay Systems

For every organization, prevailing wages in the labor market will affect compensation. For some jobs and some organizations, market wage levels and ability to pay are virtually the only determinants of compensation levels. An organization in a highly competitive industry may, by necessity, merely price jobs according to what the market dictates. For most companies, however, to take all their jobs (which may number in the hundreds or thousands) and compare them to the market is not realistic. One can only imagine the effort required for a company to conduct and/or participate in wage surveys for thousands of jobs every year. Alternatively, one computer company was able to slot thousands of jobs into 20 pay grades using a version of the point factor method.

Market pricing basically involves setting pay structures almost exclusively through reliance on rates paid in the external market. Employers following such an approach typically match a large percentage of their jobs with market data and collect as much summarized market data as possible. Opting for market pricing usually reflects more of an emphasis on external competitiveness and less of a focus on internal consistency (the relationships among jobs within the firm).

Market pricers often use the ranking method to determine the pay for jobs unique to their firms. Often called rank to market, it involves first determining the competitive rates for positions for which external market data is available and then slotting the remaining (nonbenchmark) jobs into the pay hierarchy. At Pfizer, for example, job analysis results in written job descriptions. This is immediately followed by labor market analysis and market pricing for as many jobs as possible. After that, the internal job relationships are reviewed to be sure they are ''reasonable in light of organization needs.'' The final step is pricing those jobs not included in the survey. These remaining jobs are compared to the survey positions ''in terms of their total value to Pfizer.'' This internal evaluation seeks to ensure consistency with promotion opportunities and to properly reflect ''cross-functional job values'' (e.g., production vs. clerical jobs).

3.2. Knowledge-Based Pay Systems

As we indicated earlier, some organizations consider individual employee characteristics, in accordance with internal organizational factors and external market conditions, in setting pay rates. Increasing foreign and domestic competition and rapid technological change have inspired innovative individual and team pay-for-performance and knowledge- and skill-based pay systems. Such systems are posited to engender (1) greater mutual commitment between individuals and organizations, and (2) stronger linkages between the rewards given to employees and the performance of the organization.

Technically, knowledge-based pay systems do not involve job evaluation. Instead, they are an alternative to systems that do involve job evaluation. Knowledge-based pay systems pay employees based on what they *know* rather than what particular job they are doing (Gupta., et al 1986). Generally, such systems base pay on the depth of knowledge in a particular field (e.g., scientists and teachers) (Luthans and Fox 1989). For instance, all else equal, a sixth-grade teacher with a Master's degree will be paid more than a sixth-grade teacher with a Bachelor's degree under this system.

3.3. Skill-Based Pay Systems

Similarly, skill-based pay systems reward employees for their breadth of knowledge pertaining to different jobs (e.g., proficiency in a number of various production jobs). For instance, if one person could operate machines A, B, and C, she may be paid $15 per hour (even if she only works on machine A all year). Her colleague may be qualified to work on machines A and C, and therefore he would only make $13 per hour (even if he worked on both machines over the course of the year). As can be seen, pay is driven by the quantity of tasks a person is qualified to perform.

The chief advantages of knowledge- and skill-based pay systems are leaner staffs and greater flexibility in scheduling. Advocates claim they benefit employees: job satisfaction increases because employees get a sense of having an impact on the organization, and motivation increases because pay and performance are closely linked. Potential disadvantages include higher pay rates and increased training costs, the administrative burden of maintaining records, the erosion of knowledge/skills if not used, and the challenge of managing an equitable job rotation. These disadvantages may or may not be offset by having a leaner workforce and greater productivity.

4. CREATING THE JOB-EVALUATION SYSTEM

4.1. Implementing Job Evaluation

The major decisions involved in the design and administration of job evaluation include:

1. What are the objectives of job evaluation?
2. Which job-evaluation method should be used?
3. Should a single plan or multiple plans be used?
4. Who should participate in designing the system?

4.2. Specifying the Macro Objectives of Job Evaluation

From a macro standpoint, job evaluation allows an organization to establish a pay structure that is internally equitable to employees and consistent with the goals of the organization. Once an organization decides on its strategic goals and its value system, job evaluation can help to reward jobs in a manner consistent with the strategic mission. For example, organizations in mature industries may decide that continued success depends on greater risk taking amongst employees, particularly in new product development. Compensable factors can be chosen to reinforce risk by valuing more highly those jobs with a strong risk-taking component. Once this emphasis on risk taking is communicated to employees, the first step in reshaping the value system has begun.

Since they guide the design and administration of job evaluation, strategic plans and business objectives need to be clearly and emphatically specified. Unfortunately, these initially established objectives too often get diluted, discarded, or muddled in the midst of all the statistical procedures

performed. Another complication can be the bureaucracy that tends to accompany the administration of job evaluation. Job evaluation sometimes seems to exist for its own sake, rather than as an aid to achieving the organization's mission (Burns 1978). So an organization is best served by initially establishing its objectives for the process and using these objectives as a constant guide for its decisions.

4.3. Specifying the Micro Objectives of Job Evaluation

Some of the more micro objectives associated with job evaluation include:

Help foster equity by integrating pay with a job's contributions to the organization.

Assist employees to adapt to organization changes by improving their understanding of job content and what is valued in their work.

Establish a workable, agreed-upon pay structure.

Simplify and rationalize the pay relationships among jobs, and reduce the role that chance, favoritism, and bias may play.

Aid in setting pay for new, unique, or changing jobs.

Provide an agreed-upon device to reduce and resolve disputes and grievances.

Help ensure that the pay structure is consistent with the relationships among jobs, thereby supporting other human resource programs such as career planning, staffing, and training.

4.4. Choosing the Job-Evaluation Method

Obviously, the organization should adopt a job-evaluation method that is consistent with its job-evaluation objectives. More fundamentally, however, the organization should first decide whether job evaluation is necessary at all. In doing so, it should consider the following questions (Hills 1989):

Does management perceive meaningful differences between jobs?

Can legitimate criteria for distinguishing between jobs be articulated and operationalized?

Will job evaluation result in clear distinctions in employees' eyes?

Are jobs stable and will they remain stable in the future?

Is traditional job evaluation consistent with the organization's goals and strategies?

Do the benefits of job evaluation outweigh its costs?

Can job evaluation help the organization be more competitive?

Many employers design different job-evaluation plans for different job families. They do so because they believe that the work content of various job families is too diverse to be adequately evaluated using the same plan. For example, production jobs may vary in terms of working conditions and the physical skills required. But engineering and marketing jobs do not vary on these factors, nor are those factors particularly important in engineering or marketing work. Rather, other factors such as technical knowledge and skills and the degree of contact with external customers may be relevant. Another category of employees that might warrant special consideration, primarily due to supervisory responsibilities, is management.

The most common criteria for determining different job families include similar knowledge/skill/ability requirements, common licensing requirements, union jurisdiction, and career paths. Those who argue for multiple plans, each with unique compensable factors, claim that different job families have different and unique work characteristics. To design a single set of compensable factors capable of universal application, while technically feasible, risks emphasizing generalized commonalities among jobs and minimizing uniqueness and dissimilarities. Accurately gauging the similarities and dissimilarities in jobs is critical to establish and justify pay differentials. Therefore, more than one plan is often used for adequate evaluation.

Rather than using either a set of company-wide universal factors or entirely different sets of factors for each job family, some employers, such as Hewlett-Packard, start with a core set of common factors, then add other sets of specialized factors unique to particular occupational or functional areas (finance, manufacturing, software and systems, sales, management). These companies' experiences suggest that unique factors tailored to different job families are more likely to be both acceptable to employees and managers and easier to verify as work related than are generalized universal factors.

4.5. Deciding Who Will Participate in the Job Evaluation Process

Who should be involved in designing job evaluation? The choice is usually among compensation professionals, managers, and/or job incumbents. If job evaluation is to be an aid to managers and if

maximizing employee understanding and acceptance is an important objective, then all these groups need to be included.

4.5.1. Compensation/Job-Evaluation Committees

A common approach to gaining acceptance and understanding of pay decisions is through use of a compensation (job-evaluation) committee. Membership on these committees seems to vary among firms. They all include representatives from key operating functions, and increasingly, with the emphasis on employee empowerment, they are including nonmanagerial employees. In some cases, the committee's role is only advisory; in others its approval may be required for all major decisions.

4.5.2. Employee–Manager Participation

Participation in the design and administration of compensation plans seems related to increased trust and commitment on the part of employees and managers. Lack of participation makes it easier for employees and managers to imagine ways the structure might have been rearranged to their personal liking. For example, an operating manager may wish to elevate the job title for a star performer in order to exceed the maximum pay permitted for the existing job title. This is less likely to occur if the people affected by job-evaluation outcomes are involved in the design and administration processes. Some evidence has been found, however, for the assertion that incumbents tend to rate their jobs higher than their supervisors. Hence, there is a need for a system of checks and balances in the process (Huber 1991).

4.5.3. Unions

Management probably will find it advantageous to include union representation as a source of ideas and to help promote acceptance of the results. For example, at both AT&T and Borg-Warner, union–management task forces have participated in the design of new job-evaluation systems. When this occurs, the union joins with management to identify, negotiate, and resolve problems related to the job-evaluation process. As noted below, not everyone buys into this notion of cooperation.

Other union leaders, however, feel that philosophical differences prevent their active participation in job evaluation (Burns 1978). They take the position that collective bargaining yields more equitable results than does job evaluation. In other cases, jobs are jointly evaluated by union and management representatives, and disagreements are submitted to an arbitrator.

5. MAINTAINING THE JOB-EVALUATION SYSTEM

As an administrative procedure, job evaluation invites give and take. Consensus building often requires active participation by all those involved. Employees, union representatives, and managers may be included in discussions about the pay differences across various jobs. Job evaluation even involves negotiations among executives or managers of different units or functions within the same organization. So viewed as an administrative procedure, job evaluation is used for resolving conflicts about pay differences that inevitably arise over time.

5.1. Handling Appeals and Reviews

Once the job structure or structures are established, compensation managers must ensure that they remain equitable. This requires seeing that jobs that employees feel have been incorrectly evaluated are reanalyzed and reevaluated. Likewise, new jobs or those that experience significant changes must be submitted to the evaluation process.

5.2. Training Job Evaluators

Once the job-evaluation system is complete, those who will be conducting job analyses and evaluations will require training, especially those evaluators who come from outside the human resource department. These employees may also need background information on the entire pay system and how it is related to the overall strategies for managing human resources and the organization's objectives.

5.3. Approving and Communicating the Results of the Job-Evaluation Process

When the job evaluations are completed, approval by higher levels in the organization (e.g., Vice President of Human Resources) is usually required. Essentially, the approval process serves as a control. It helps ensure that any changes that result from job evaluation are consistent with the organization's overall strategies and human resource practices. The particular approval process differs among organizations. Figure 4 is one example.

The emphasis on employee and manager understanding and acceptance of the job-evaluation system requires that communications occur during the entire process. Toward the end of the process,

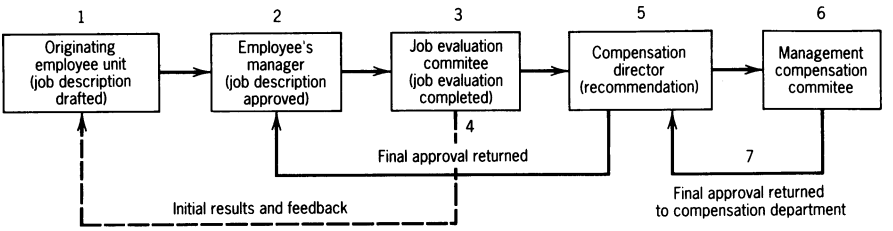

Figure 4 Job Evaluation Approval Process. (From Milkovich and Newman 1993)

the goals of the system, the parties' roles in it, and the final results will need to be thoroughly explained to all employees.

5.4. Using Information Technology in the Job-Evaluation Process

Almost every compensation consulting firm offers a computer-based job evaluation system. Their software does everything from analyzing the job-analysis questions to providing computer-generated job descriptions to predicting the pay classes for each job. Some caution is required, however, because "computer assisted" does not always mean a more efficient, more acceptable, or cheaper approach will evolve. The primary advantages for computer-aided job evaluation according to its advocates include:

Alleviation of the heavy paperwork and tremendous time saving
Marked increase in the accuracy of results
Creation of more detailed databases
Opportunity to conduct improved analyses (Rheaume and Jones 1988)

The most advanced use of computers for job evaluation is known as an expert system. Using the logic built by subject matter experts and coded into the computer, this software leads a job evaluator through a series of prompted questions as part of a decision tree to arrive at a job-evaluation decision (Mahmood et al. 1995).

But even with the assistance of computers, job evaluation remains a subjective process that involves substantial judgment. The computer is only a tool, and misused, it can generate impractical, illogical, and absurd results (Korukonda 1996).

5.5. Future Trends in the Job Evaluation Process

Job evaluation is not going to go away. It has emerged and evolved through the industrial, and now the informational, revolution. Unless everyone is paid the same, there will always be a need to establish and institutionalize a hierarchy of jobs in the organization. The process should, and will, continue to be improved upon. The use of computer software will dramatically simplify the administrative burdens of job evaluation. Furthermore, new technologies and processes will enable organizations to combine internal job-evaluation information with labor market data to strengthen the internal consistency–external competitiveness model discussed above.

6. EVALUATING THE JOB-EVALUATION SYSTEM

Job evaluation can take on the appearance of a bona fide measurement instrument (objective, numerical, generalizable, documented, and reliable). If it is viewed as such, then job evaluation can be judged according to precise technical standards. Just as with employment tests, the reliability and validity of job evaluation plans should be ascertained. In addition, the system should be evaluated for its utility, legality, and acceptability.

6.1. Reliability: Consistent Results

Job evaluation involves substantial judgment. Reliability refers to the consistency of results obtained from job evaluation conducted under different conditions. For example, to what extent do different job evaluators produce similar results for the same job? Few employers or consulting firms report the results of their studies. However, several research studies by academics have been reported (Arvey 1986; Schwab 1980; Snelgar 1983; Madigan 1985; Davis and Sauser 1993; Cunningham and Graham 1993; Supel 1990). These studies present a mixed picture; some report relatively high consistency (different evaluators assign the same jobs the same total point scores), while others report lower

agreement on the values assigned to each specific compensable factor. Some evidence also reports that evaluators' background and training may affect the consistency of the evaluations. Interestingly, an evaluator's affiliation with union or management appears to have little effect on the consistency of the results (Lawshe and Farbo 1949; Harding et al. 1960; Moore 1946; Dertien 1981).

6.2. Validity: Legitimate Results

Validity is the degree to which a job-evaluation method yields the desired results. The desired results can be measured several ways: (1) the hit rate (percentage of correct decisions it makes), (2) convergence (agreement with results obtained from other job-evaluation plans), and (3) employee acceptance (employee and manager attitudes about the job-evaluation process and the results) (Fox 1962; Collins and Muchinsky 1993).

6.2.1. Hit Rates: Agreement with Predetermined Benchmark Structures

The hit rate approach focuses on the ability of the job-evaluation plan to replicate a predetermined, agreed-upon job structure. The agreed-upon structure, as discussed earlier, can be based on one of several criteria. The jobs' market rates, a structure negotiated with a union or a management committee, and rates for jobs held predominately by men are all examples.

Figure 5 shows the hit rates for a hypothetical job-evaluation plan. The agreed-upon structure has 49 benchmark jobs in it. This structure was derived through negotiation among managers serving on the job-evaluation committee along with market rates for these jobs. The new point factor job-evaluation system placed only 14, or 29%, of the jobs into their current (agreed-upon) pay classes. It came within ± 1 pay class for 82% of the jobs in the agreed-upon structure. In a study conducted at Control Data Corporation, the reported hit rates for six different types of systems ranged from 49 to 73% of the jobs classified within ± 1 class of their current agreed-upon classes (Gomez-Mejia et al. 1982). In another validation study, Madigan and Hoover applied two job-evaluation plans (a modification of the federal government's factor evaluation system and the position analysis questionnaire) to 206 job classes for the State of Michigan (Madigan and Hoover 1986). They reported hit rates ranging from 27 to 73%, depending on the scoring method used for the job-evaluation plans.

Is a job-evaluation plan valid (i.e., useful) if it can correctly slot only one-third of the jobs in the "right" level? As with so many questions in compensation, the answer is "it depends." It depends on the alternative approaches available, on the costs involved in designing and implementing these plans, on the magnitude of errors involved in designing and implementing these plans, and on the magnitude of errors involved in missing a "direct hit." If, for example, being within ± 1 pay class translates into several hundred dollars in pay, then employees probably are not going to express much confidence in the "validity" of this plan. If, on the other hand, the pay difference between ± 1 class is not great or the plan's results are treated only as an estimate to be adjusted by the job-evaluation committee, then its "validity" (usefulness) is more likely.

6.2.2. Convergence of Results

Job-evaluation plans can also be judged by the degree to which different plans yield similar results. The premise is that convergence of the results from independent methods increases the chances that the results, and hence the methods, are valid. Different results, on the other hand, point to lack of validity. For the best study to date on this issue, we again turn to Madigan's report on the results of three job-evaluation plans (guide chart, PAQ, and point plan) (Madigan 1985). He concludes that the three methods generate different and inconsistent job structures. Further, he states that the measurement adequacy of these three methods is open to serious question. An employee could have received up to $427 per month more (or less), depending on the job-evaluation method used.

These results are provocative. They are consistent with the proposition that job evaluation, as traditionally practiced and described in the literature, is not a measurement procedure. This is so because it fails to consistently exhibit properties of reliability and validity. However, it is important

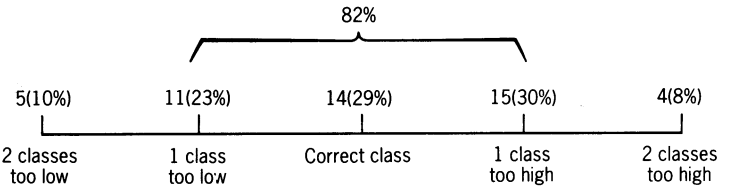

Figure 5 Illustration of Plan's Hit Rate as a Method to Judge the Validity of Job Evaluation Results. (From Milkovich and Newman 1993)

to maintain a proper perspective in interpreting these results. To date, the research has been limited to only a few employers. Further, few compensation professionals seem to consider job evaluation a measurement tool in the strict sense of that term. More often, it is viewed as a procedure to help rationalize an agreed-upon pay structure in terms of job- and business-related factors. As such, it becomes a process of give and take, not some immutable yardstick.

6.3. Utility: Cost-Efficient Results

The usefulness of any management system is a function of how well it accomplishes its objectives (Lawler 1986). Job evaluation is no different; it needs to be judged in terms of its objectives. Pay structures are intended to influence a wide variety of employee behaviors, ranging from staying with an employer to investing in additional training and willingness to take on new assignments. Consequently, the structures obtained through job evaluation should be evaluated in terms of their ability to affect such decisions. Unfortunately, little of this type of evaluation seems to be done.

The other side of utility concerns costs. How costly is job evaluation? Two types of costs associated with job evaluation can be identified: (1) design and administration costs and (2) labor costs that result from pay structure changes recommended by the job evaluation process. The labor cost effects will be unique for each application. Winstanley offers a rule of thumb of 1 to 3% of covered payroll (Winstanley). Experience suggests that costs can range from a few thousand dollars for a small organization to over $300,000 in consultant fees alone for major projects in firms like Digital Equipment, 3M, TRW, or Bank of America.

6.4. Nondiscriminatory: Legally Defensible Results

Much attention has been directed at job evaluation as both a potential source of bias against women and as a mechanism to reduce bias (Treiman and Hartmann 1981). We will discuss some of the studies of the effects of gender in job evaluation and then consider some recommendations offered to ensure bias-free job evaluation.

It has been widely speculated that job evaluation is susceptible to gender bias. To date, three ways that job evaluation can be biased against women have been studied (Schwab and Grams 1985).

First, direct bias occurs if jobs held predominantly by women are undervalued relative to jobs held predominantly by men, simply because of the *jobholder's gender*. The evidence to date is mixed regarding the proposition that the gender of the jobholder influences the evaluation of the job. For example, Arvey et al. found no effects on job evaluation results when they varied the gender of jobholders using photographs and recorded voices (Arvey et al. 1977). In this case, the evaluators rightfully focused on the work, not the worker. On the other hand, when two different job titles (special assistant—accounting and senior secretary—accounting) were studied, people assigned lower job-evaluation ratings to the female-stereotyped title ''secretary'' than to the more gender-neutral title, ''assistant'' (McShane 1990).

The second possible source of gender bias in job evaluation flows from the *gender of the individual evaluators*. Some argue that male evaluators may be less favorably disposed toward jobs held predominantly by women. To date, the research finds no evidence that the job evaluator's gender or the predominant gender of the job-evaluation committee biases job-evaluation results (Lewis and Stevens, 1990).

The third potential source of bias affects job evaluation indirectly through the *current wages paid for jobs*. In this case, job-evaluation results may be biased if the jobs held predominantly by women are incorrectly underpaid. Treiman and Hartmann argue that women's jobs are unfairly underpaid simply because women hold them (Trieman and Hartmann 1995). If this is the case and if job evaluation is based on the current wages paid in the market, then the job-evaluation results simply mirror any bias that exists for current pay rates. Considering that many job-evaluation plans are purposely structured to mirror the existing pay structure, it should not be surprising that the current wages for jobs influence the results of job evaluation, which accounts for this perpetual reinforcement. In one study, 400 experienced compensation administrators were sent information on current pay, market, and job-evaluation results (Rynes et al. 1989). They were asked to use this information to make pay decisions for a set of nine jobs. Half of the administrators received a job linked to men (i.e., over 70% of job holders were men, such as security guards) and the jobs given the other half were held predominately by women (e.g., over 70% of job holders were women, such as secretaries). The results revealed several things: (1) Market data had a substantially larger effect on pay decisions than did job evaluations or current pay data. (2) The jobs' gender had no effects. (3) There was a hint of possible bias against physical, nonoffice jobs over white-collar office jobs. This study is a unique look at several factors that may affect pay structures. Other factors, such as union pressures and turnover of high performers, that also affect job-evaluation decisions were not included.

The implications of this evidence are important. If, as some argue, market rates and current pay already reflect gender bias, then these biased pay rates could work indirectly through the job-evaluation process to deflate the evaluation of jobs held primarily by women (Grams and Schwab

1985). Clearly the criteria used in the design of job evaluation plans are crucial and need to be business and work related.

Several recommendations help to ensure that job evaluation plans are bias free (Remick 1984). Among them are:

1. Ensuring that the compensable factors and scales are defined to recognize the content of jobs held predominantly by women. For example, working conditions should include the noise and stress of office machines and the working conditions surrounding computers.
2. Ensuring that compensable factor weights are not consistently biased against jobs held predominantly by women. Are factors usually associated with these jobs always given less weight?
3. Ensuring that the plan is applied in as bias-free a manner as feasible. This includes ensuring that the job descriptions are bias free, that incumbent names are excluded from the job-evaluation process, and that women are part of the job-evaluation team and serve as evaluators.

Some writers see job evaluation as the best friend of those who wish to combat pay discrimination. Bates and Vail argue that without a properly designed and applied system, ''employers will face an almost insurmountable task in persuading the government that ill-defined or whimsical methods of determining differences in job content and pay are a business necessity'' (Bates and Vail 1984).

6.5. Acceptability: Sensible Results

Acceptance by the employees and managers is one key to a successful job-evaluation system. Any evaluation of the worthiness of pay practices must include assessing employee and manager acceptance. Several devices are used to assess and improve the acceptability of job evaluation. An obvious one is the inclusion of a formal appeals process, discussed earlier. Employees who feel their jobs are incorrectly evaluated should be able to request reanalysis and reevaluation. Most firms respond to such requests from managers, but few extend the process to all employees, unless those employees are represented by unions who have a negotiated grievance process. They often justify this differential treatment on the basis of a fear of being inundated with appeals. Employers who open the appeals process to all employees theorize that jobholders are the ones most familiar with the work performed and know the most about changes, misrepresentations, or oversights that pertain to their job. No matter what the outcome from the appeal, the results need to be explained in detail to any employee who requests that his or her job be reevaluated.

A second method of assessing acceptability is to include questions about the organization's job structure in employee attitude surveys. Questions can assess perceptions of how useful job evaluation is as a management tool. Another method is to determine to what extent the system is actually being used. Evidence of acceptance and understanding can also be obtained by surveying employees to determine the percentage of employees who understand the reasons for job evaluation, the percentage of jobs with current descriptions, and the rate of requests for reevaluation.

As noted earlier, stakeholders of job evaluations extend beyond employees and managers to include unions and, some argue, comparable worth activists. The point is that acceptability is a somewhat vague test of the job evaluation—acceptable to whom is an open issue. Clearly managers and employees are important constituents because acceptance makes it a useful device; but others, inside and outside the organization, also have a stake in job evaluation and the pay structure.

7. SUMMARY

In exchange for services rendered, individuals receive compensation from organizations. This compensation is influenced by a wide variety of ever-changing dynamics, many of which are identified in this chapter. The central focus of this chapter, though, was on just one of these influences: the internal worth of jobs. We introduced the different systems for evaluating jobs, the procedures necessary to operationalize these systems, and the criteria for evaluating the effectiveness of these systems in an organization.

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A NEW METHOD OF JOB EVALUATION

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Introduction

Job evaluation is a crucial point in human resources management. The aim of human resources management is linking employees with their work results which should met in order for an organization to fulfill its tasks. Thus, job evaluation occurs as an irreplaceable factor that enables management through learning the necessary values. Enhancing the efficiency of a company depends on various endogenous and exogenous factors. Job evaluation may be the aspect that tips the scales in your competition's favor. The evaluation itself is an analysis and assessment of requirements aiming at valuation of job quality.

The results of job evaluation are used in human resources management, particularly in creating remuneration systems, i.e. decision making process concerning the differences between payments for different jobs. Many job evaluation methods have been developed in the previous century. Yet none of them defines directly the relative value of given job posts within an organization. The aim of this article is to work out a **new method** measuring quality features of jobs in a simple, transparent, universal and timeless way.

The method itself is a development of the concepts and remarks of authors specializing in the field of job evaluation, as well as of practical experiences and implementation of modern knowledge coming from cognitive psychology, behavioral patterns in organizations and applied mathematics, including multi-criteria decision support.

The additional cause for reexamining the issues was the fact that the most popular job evaluation methods (analytical point ranking) did not change much since the beginning of the 20th century, when they were established.

1. The Essence of Job Evaluation

Job evaluation is a technique used to measure the quality features of work. M. Armstrong describes job evaluation as a "systematic process of determining the relative value of different job posts within an organization". Many methods that enable its measurement process have been established (see Table 1). The main issue is that the measured analytic criteria within the synthetic criteria were assigned to arbitral point values, for which there was often no logical explanation offered.

Table 1. Characteristics of chosen job evaluation methods

Method Name	Characteristics	Merits	Flaws
Ranking job posts	A summary method based on ranking job posts from the hardest to the easiest ones	- Easy to use - Easily understood by the employees	- No definition of a model - The least accurate - Does not measure the difficulty of a job - Hard to explain
Classifying job posts	A summary method based on grouping job posts into homogenous classes (categories); the jobs are then compared to a model	- Easy to use - Easily understood by the employees	- Subjective in character - Hard in creating good job descriptions - Does not measure the difficulty of a job
Comparing factors	An analytical method based on determining the right hierarchy of job posts regardless of level of job difficulty	- Universal – it can be used in different organizations	- Difficult in appropriate selection of key job posts - Subjective in character
Analytical point ranking	Methods based on determining the level of job difficulty on the basis of analysis of previously described criteria and comparing them to the scale; a given number of points is attributed to each criterion	- Easy in evaluating and describing the differences between posts - Takes into account more factors influencing the difficulty level of a job post - Gives the evaluator defined evaluation criteria - Guarantees a flexible relation between work and remuneration	- Its creation, implementation and application is complicated - It requires a great deal of knowledge on occupations, posts, tasks etc. from the people creating the remuneration systems - Surface objectivity – giving points to criteria is based on subjective evaluation - Difficulty in explaining the difference between various levels of established criteria
Bedaux's Method, Ch. Bedaux (1916)	An analytical method based on point evaluation of requirements for various jobs carried out by employees	- Takes into account more factors influencing the difficulty level of a job post	- Laborious - It requires a great deal of knowledge on occupations, posts, tasks etc. from the people creating the remuneration systems
Hay Guide Chart and Profile Method (E.N. Hay) (www. Haygroup.com)	An analytical point ranking method based on three synthetic criteria: know-how, problem solving and accountability, which were extended by analytical and fragmentary criteria – all to enable examining job features in terms of their difficulty	- Mostly used in case of managerial posts evaluation - Constantly developed and modified by consultants of Hay Group, based on experience from over 40 countries worldwide	- Aimed at evaluating non-production jobs - It is difficult in comprehension for the employees

Scheme of Geneva, International Labor Organization (ILO) (1950)	A method unifying different, practical criteria of job evaluation dividing them into synthetic and analytical ones	- The basis for many job evaluation methods, especially in industrial companies	- Used to evaluate difficulty for blue-collar posts
Universal Method of Job Evaluation (UMEWAP)	Point ranking method referring directly to the Scheme of Geneva; it uses for synthetic criteria	- Universal – used for evaluation of managerial and executive posts in all branches of economy	- Laborious - In case of lack of independence in organization, it may cause erroneous evaluation by inflating value of work or faking the whole process
National Joint Council (NJC) (1997)	Job evaluation for blue-collar workers and administrative staff based on 13 synthetic criteria	- Only one evaluation criterion is used to assess the know-how really needed to perform tasks on a given post	- No analytical criteria - Comparable range of interaction of all 13 criteria
Questionnaire Job Evaluation (AWP, AWP-N, AWP-2BIS)	Point ranking method based on the Scheme of Geneva referring directly to the UMEWAP method	- Easy to use - Greater differentiation in point ranking of posts	- Laborious - Encourages omitting job descriptions
Market-based job evaluation	A method based on evaluation of pay rates in comparison with the market pay rates for similar job posts	- The job is paid as much, as the market is willing to pay for it	- Does not take into account that values of posts in one organization may differ from values in other organizations - Difficulty in acquiring information about pay rates on the market

Source: Personal study

Job evaluation methods are covered in about every book on human resources management, e.g. [Armstrong 2005, Banfield, Kay 2008, Król, Ludwiczyński 2006, Rostowski 2003]. Details on individual job evaluation methods may be found in works of [Armstrong et al. 2008, Borkowska 2006, Juchnowicz, Sienkiewicz 2006, Martyniak 1998, Poels 2000, Wartościowanie stanowisk pracy… 2008]

People, even these having the appropriate expertise, are known to be poor at estimating and comparing objects of similar value. Scales with several extremes and distant levels, sometimes even differentiated by description or examples are reasonable for qualitative, as well as criteria primarily measured quantitatively. The limitations in human estimation and comparison abilities in terms of multiple criteria may lead to inconsistencies in evaluation or oversimplification of rules, which will omit the clear aspects of each model of job evaluation.

For instance, in research conducted by specialists, who evaluated job applicants, it occurred their evaluations were similar when they used a scale with small number of verbal marks and more differentiated when they used a qualitative scale from 1 to 10 [Moshkovich et al. 2005].

Number of compared elements **"n"** should be in the (5-9) bracket. The range was determined by the so-called **Magical Number 7**, i.e. 7+/-2 [G. Miller 1956]. With a larger number of compared criteria, there is a higher risk of erroneous opinions and conclusions. This means that human mind cannot comprehend a larger number of variables and compare them in a correct manner. These facts were repeatedly confirmed by psychological research [Blumenthal 1977, Miller 1956, Tversky 1971, Larichev 1984, Larichev, Moshkovich, Rebrik 1998]

Problems with using accurate quantitative estimates from the decision-makers may be overcome by using information preferential to a given decision-maker (e.g. “presumably”, “definitely” etc.)

Verbal descriptions arranged in terms of different levels, and not numerical values not only make the decision-makers more comfortable with their assessments, but also should lead to achieving more stable, clear-cut results. People prefer to use verbal communication than quantitative statements. Words are received by interlocutors as more flexible and less precise; therefore they fit the description of vague opinions. I. Erev i B. Cohen found that making people use quantitative phrases, statements on unclear situations, when it is only possible to differentiate between a few levels of probability, may lead to confusing estimates [Erev, Cohen 1990].

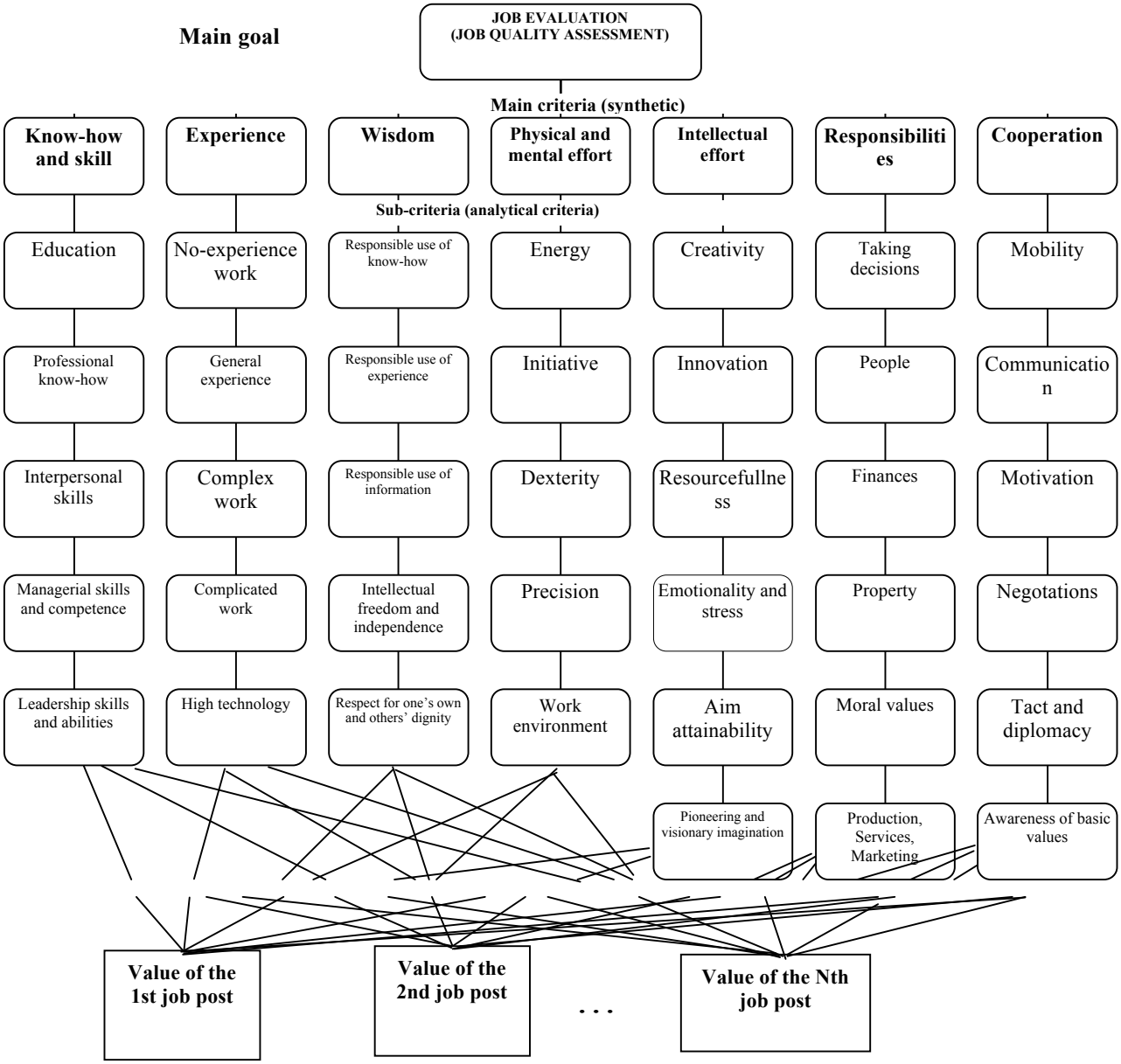
The research have shown that **quantitative assessment** and comparison of different objects is more difficult for people than making the same mental effort with using **qualitative** tools for expressing one’s preferences [Moshkovich et al. 2005]. Therefore in our job evaluation method we will use scales based on verbal descriptions, which after their quantification (scaling) will provide a quantitative aspect for criteria in job evaluation models. The number of synthetic, as well as analytical and fragmentary criteria will not in any circumstances exceed 7, as in the proposed method.

2. Steps (phases) in the measurement method of qualitative features of jobs

In job evaluation, the following phases are proposed:

1. Introducing the problem – developing a new method of measuring quality features of jobs (job evaluation) in a simple, transparent, universal and timeless way,
2. Identifying the main aim – a relative assessment of job posts in an organization,
3. Knowing the exterior and interior factors determining the value of job posts,
4. Establishing a multi-level structure of a problem in the form of a hierarchical tree, the main, the main criteria (synthetic), sub-criteria (analytical criteria) and degrees of intensity of each analytical criterion (Fig. 1),

Fig. 1. Hierarchical structure of job evaluation



Source: Personal study