

Job evaluation and the changing wage pattern

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SYNOPSIS

This paper sets out to show how changing forces are affecting the techniques that have been used in the evaluation of Black jobs on gold mines in the Anglo American Group since the introduction of job evaluation in 1961. Initially, job evaluation was essentially a management tool designed to differentiate jobs in a limited skill spectrum and thereby permit the establishment of a 'many stepped' job ladder for Black employees to climb. With the changing wage pattern, job evaluation is becoming an industrial-relations tool aimed at recognizing the skill and effort contributed by the worker so that the pay relationships between jobs are seen to be equitable by the employees.

SAMEVATTING

Hierdie verhandelings begin deur aan te toon hoe veranderende magte die tegnieke wat sedert die invoering van taakevaluering in 1961 gebruik is om die take van Bantoes by die goudmyne in die Anglo American-groep te evalueer, beïnvloed. Taakevaluering was aanvanklik 'n wese in bestuurswerktuig wat bedoel was om take in 'n beperkte vaardigheidspektrum te onderskei en so die daarstelling van 'n taakleer met baie sporte moontlik te maak waarteen Bantoe-werknemers kan uitklim. Met die veranderende loonpatroon word taakevaluering tans 'n werktuig vir nywerheidsbetrekkings wat daarop ingestel is om die vaardigheid en inspanning wat die werker bydra, te erken sodat die werknemers die besoldigingsverband tussen take as regverdig beskou.

HISTORICAL PERSPECTIVE

Job evaluation was introduced on Anglo American gold mines in 1961 to prepare the basis for a new wage scale that was designed to meet the requirements of the productivity drive mounted at that time. All jobs were ranked according to a points method, and were then grouped in a large number of pay grades through which workers passed as they moved up the promotional routes established at the same time. Job evaluation, pay, selection, training, and manning systems were integrated in a plan aimed at motivating the worker to climb the job ladder. The 'steppies' system, as it came to be known to the workers, was very successful and remained in force for the following twelve years. During this period, the role of job evaluation was to fit new and enriched jobs into the basic structure established in 1961. Wages during the first ten years of this period remained virtually unchanged, and differentials were small. For those who moved rapidly through the pay groups, the system ensured regular increments and thereby rewarded the successful for their greater effort and capabilities.

In the early 1970s, a variety of factors exerted pressure on the wage scales. The increase in the gold price, inflation, growing concern about the very low level of earnings of Black migrant workers, and the productivity agreement with the Unions in

1973, all combined to exert a strong upward pressure during this period. The movement accelerated in 1973, when the average earnings of Black workers on Anglo American Group gold mines increased by approximately 60 per cent. During this period, differentials between Job Groups increased significantly, particularly as both the concern about the gap between Black and White wages and the concessions agreed to by the Mineworkers Union resulted in the Black wage scale being tilted more steeply at the top. The tensions that emerged in the labour force during that year are well known. With the increase in differentials, it became much more critical that jobs were correctly grouped, rather than correctly ranked. To achieve this, it was necessary to reduce the large number of pay groups, and this increased the differentials even further.

THE JOB EVALUATION TECHNIQUES USED

The job-evaluation systems ap-

plied in South Africa have been very largely influenced by the points methods developed by the National Institute for Personnel Research after World War II.

The first plan used by the Anglo American Group gold mines was the 16-factor weighted-points system for both supervisory and non-supervisory jobs. This was soon replaced by three separate plans—one each for supervisory, non-supervisory, and clerical jobs—which remained in force for a further ten years.

There are three important points about these plans that should be noted.

- (1) The main aim was to differentiate jobs within a very limited skill spectrum. In both the choice of factors and the definitions of the various levels in each factor, no account was taken of whether the factors were intelligible to the employees or of whether the employees recognized the differences indicated by the defini-

TABLE I
DEFINITIONS OF JOB COMPLEXITY

Level	Definition	Points	Benchmark Jobs
(a)	A simple task needing little ability and requiring attention to one simple process	0	—
(b)	A simple job not requiring a high degree of ability or a wide distribution of attention except over a few simple processes	4	Acclimatization Gang Supervisor
(c)	A fairly complex job requiring fair ability and distribution of attention in a task that involves more than one process	8	Réclamation Gang Supervisor
(d)	A job of considerable complexity requiring a good deal of mental capacity and involving the distribution of attention over a fairly involved process	12	Stope Gang Supervisor
(e)	A job of great complexity requiring a high level of mental capacity and involving the distribution of attention over an involved process	16	M.O.'s Supervisor

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tions of the various levels. As an illustration of this point, the factor Job Complexity and its definitions taken from the supervisory plan are set out in Table I. When the skill spectrum of Black jobs is considered in relation to the skill levels of the whole company structure from Mine Manager to the unskilled labourer, the use of phrases such as 'great complexity' to describe top underground Black jobs is incongruous.

- (2) The plans included certain factors that did not relate to the worker's contribution to the job. For example, one of the factors was 'Cost of Loss of Production and/or Damage to Equipment or Loss of Cash or Leakage of Confidential Data'. Factors such as this tended to protect the company's interests by attaching importance to jobs that could lead to significant losses irrespective of the skills or effort required in the job.
- (3) The design of the job-evaluation plans, particularly in the setting of benchmarks, restricted their use to Black jobs, and there was no intention of relating Black skills to White skills.

The above three points are made, not in an attempt to criticize the early job-evaluation plans used, but to illustrate their nature. The success of the 'steppies' plan is evidence enough of the success of these job-evaluation systems.

During more recent years, there has been a growing awareness that job evaluation could provide the means of arriving at an equitable wage structure. This concern focused on the need to arrive at a common job-evaluation procedure for Black and White jobs so that the extent of the 'equivalent work' wage gap between Black and White jobs could be identified and in due course a programme developed to eliminate it. To meet this requirement, first outside South Africa and then on the gold mines, the 26-factor plan was introduced. This plan was designed as a 'universal' system and, though used on a few isolated occasions for the evaluation of jobs in the managerial ranks, was ideally suited to the ranking of jobs from foreman

level down to the unskilled labourer. It was, however, still essentially a management tool, and, as at least half of the factors were not structured, it could also give rise to a certain degree of artificial differentiation, although this was less than with the earlier plans.

The various points systems referred to above all ranked jobs in a hierarchical order, but none provided any rationale for the grouping of jobs. With the rapid increase in wage scales and the widening of the differentials referred to earlier, grouping became more critical. The determination of suitable cut-off points for satisfactory groupings was particularly difficult, as total points scores comprised a variety of factors and in no way represented a linear scale of measurement. It thus became increasingly evident that the underlying techniques were no longer suitable for the rapidly changing circumstances of the early 1970s, and it was decided during 1973 that further development work should be undertaken on a system that would overcome these difficulties.

DEVELOPMENT OF JOB EVALUATION AS AN INDUSTRIAL RELATIONS TOOL

The paragraphs that follow should be seen only as an indication of the direction that the development work is taking, because the work is far from complete.

Identification of Relevant Factors

The evaluations made of a large number of jobs using the 26-factor plan provide a wealth of statistical material. By means of statistical analysis it has been possible to determine which factors tend to move in the same direction (i.e., which are highly correlated), which factors are seldom used, and which factors have given rise to inconsistent scoring. In this way it has been possible to reduce the number of factors significantly. From these analyses, it appears that the following are the critical factors in the ranking of Black jobs on the gold mines:

Judgement/Decision-making/Skill,
Work Sequence,
Physical Effort,
Environment — including both

hazardous and unpleasant conditions, and

Supervision Given.

With the exception of environment, these factors all relate to the worker's contribution to his job.

Identification of Levels for Each Factor

As far as the mental skill factors, i.e., Judgement and Work Sequence, are concerned, evidence suggests that there are only two clearly distinguishable levels, with possibly a third in the case of Judgement/Decision-making to cater for the recently created Team Leader positions.

Both Physical Effort and Environment are important factors, and investigation into the various levels is continuing. It seems, however, that the necessity here is to recognize only those conditions that place the worker under severe physical or environmental stress, and to make sure that the system compensates these positions. In the traditional points systems used on the gold mines, there is no guarantee that jobs scoring above the average on these factors would move to a higher pay level as a result.

As far as Supervision Given is concerned, investigation has shown that the real dimension is the level, and not the number of people supervised. The essential role of this factor is to ensure the correct placement of supervisors in the job groupings in relation to those supervised.

Combination of Factors to Provide an Equitable Job Structure

This is, of course, the critical stage, given that the objective is to provide an equitable structure. What makes it more difficult is that there is a conflict between the interests of the company, which inevitably attaches greatest weight to the mental skill factors, and those of the workers, who attach greatest weight to Physical Effort and the Environment.

At this point, the views of both management and the workers are being studied. The views of the workers are being obtained by the paired-comparison technique. As the research is not sufficiently far advanced, it is not possible to indicate the extent of the gap, if any, be-

TABLE II

	RANKING OF JOBS			Total Points
	Work Sequence	Physical Effort	Environment	
Machine Crew	1	3	3	7
Stope Team	1	3	2	6
Scraper Winch Driver	1	2	2	5
Loader Driver	1	2	2	5
Loco Crew	1	1	1	3

tween the views of management and those of employees.

The intention is to sort jobs initially into two bands in terms of the two levels of Decision-making referred to above, and then to rank the jobs within these bands on a simple points system using the remaining factors. In this way, it is hoped to preserve a broad skill structure and, within this, to compensate for Physical Effort and Environment. An illustration of this approach is given in Table II, where all the jobs listed would fall into the higher of the two levels of

Judgement/Decision-making and are thus scored on the remaining factors.

This form of analysis suggests that, while Judgement and Work Sequence are of an equivalent level for all these positions, there is a significant difference between the Loco Crew and the other positions when it comes to Physical Effort and Environment, and for this reason the Loco Crew should be rewarded at a lower level. This table is included for illustrative purposes only and should not be taken as any indication of the final outcome of the plan.

CONCLUSION

If job evaluation is to become a mechanism for the distribution of equity, it will tend to equate the jobs occupied by Blacks on the mines rather than to differentiate between them, because of the very narrow skill spectrum involved in these jobs when considered in relation to the total range of skills in the company. This is because the underlying principle of equity is that the worker compares his inputs and outcomes with the inputs and outcomes of other workers. As the skill spectrum of the Blacks advances, as happened with the various concessions agreed to by the Unions in 1973, workers will increasingly draw comparisons across the colour line. It will then be of even greater importance that job evaluation should be able to recognize the real, rather than the imaginary, differences in inputs.

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