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THE ELEMENTS OF JOB EVALUATION IN THE DEVELOPMENT OF A PAY
STRUCTURAL COMPARISON SYSTEM GUIDE TO CONDUCTING COMPENSATION SURVEYS
TO DETERMINE COMPETITIVE ADJUSTMENTS TO BASE SALARY RANGES

T H E S I S

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by

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To my mother, the optimist,
and to Shauna, who was always
there to lend a sympathetic ear.

P R E F A C E

The research conducted for the purposes of this project has been primarily aimed at the development of a comprehensive guide to conducting compensation surveys, such guide relying on the comparisons of total pay structures of participating organisations, rather than on comparisons of individual positions, as a basis for the calculation of an average survey community pay structure.

However, in the process of developing such a guide, it became necessary to further research, to a certain degree, basic concepts, techniques, methods and systems which were vital to the formulation of a sound foundation upon which this new survey system could be based. Thus, a certain amount of attention and research has been aimed at the selection and development of the elements of job evaluation, these essentially being Job Analysis, and its constituent elements, and the Job Evaluation Plan or Method. The studying and testing of these basic components involved in the development of the compensation survey guide further provided necessary insight into their useful, and vital, application in the actual survey procedure.

Once the basic components had been researched, and the basis of the survey guide established according to these selected components and concepts, it was necessary to further develop and empirically test a thoroughly comprehensive guide, the emphasis being on the practicality of the total system, such that it would be possible for any organisation within the industrial setting, whether large or small, and within any labour market, to adopt the guide as an acceptable and reliable survey system.

In order to facilitate these goals, the completed text has taken the form of a guide within itself in that both literature review as well as the survey system as such have been presented in guide form, the aim being to facilitate the understanding of the application of basic concepts, and not only of the survey procedure. In this way, the completed comprehensive compensation survey guide forms the nucleus around which research has been completed, both in order to initially

develop the guide, and subsequently to empirically test the guide within the industrial setting by its practical application over a number of years.

Thus, as a result of the practical nature of this compensation survey guide, as well as the extremely wide base of concepts, techniques and methods utilised in its development, this study has not been aimed at a comprehensive review of any theoretical background, since a definable theoretical framework does not exist, but rather a review and testing of the basic concepts and techniques upon which such comprehensive guide is based and developed, and, most important, a study of the practical acceptability of the developed guide as a whole.

Grateful acknowledgement is made to all organisations who were willing to participate in the provision of data necessary for completion of this study.

Special thanks to the Personnel Staff of Mobil Oil Southern Africa (Pty) Limited for their vital aid and contribution in the gathering and analysis of data, to Professor H.W. Page, who supervised and to Mrs. Myra Frewen, who very kindly undertook the task of typing.

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The Elements of Job Evaluation in The Development of a Pay Structural
Comparison System Guide to Conducting Compensation Surveys to Determine
Competitive Adjustments to Base Salary Ranges

R. J. SNELGAR

Abstract

If the wage policy of an organisation is to remain competitive in the labour market, that is, pay rates that are at least approximately equal to those prevailing in the community, then it must collect accurate wage and salary data in order to alter its pay structure as may become necessary. Wage and salary survey information provides a means by which management can determine whether its entire wage level is in accordance with that of the external labour market, and thus it is absolutely essential that methods and techniques utilised to collect such information are as objective and accurate as possible.

The vital factor which has been revealed by the utilisation of many existing wage and salary survey guides is that the unavoidable subjectively involved in the basic techniques utilised in survey procedures tends to have a cumulative effect on both data collection and analysis, and ultimately interpretation. As each technique is utilised, whether it be to obtain job comparability or to adjust salary data, the overall level of subjectivity is increased, which results in a cumulative increase in the margin of error involved in data collection.

This study has been aimed at developing and practically testing a comprehensive guide to conducting wage and salary surveys which effectively minimises and, over successive surveys, eradicates the necessity for these subjective techniques. Due to the fact that the elements of job evaluation, namely, job analysis, job description, job specification and the job evaluation plan itself, form the nucleus of the techniques utilised for the data gathering and analysis process,

the initial study was aimed at developing a job evaluation process which would be as objective as possible. In the development of such a system a range of job evaluation plans were tested for comparability in rating of jobs, the hypothesis being that any evaluation method or plan, when correctly applied to a series of jobs, will result in the same classification. This study intercorrelated rates derived for twenty-four key jobs selected from one particular organisation, using the job evaluation methods utilised by sixteen different organisations, and found that these rates intercorrelated between 0,93 to 0,99.

These intercorrelations indicate a high degree of commonality among the sixteen methods; thus providing a justification for the utilisation of one particular job evaluation plan for the adjustment and weighing of wage and salary data in the survey data analysis procedure. To further justify the utilisation of one particular method, and thereby increase probability of acceptance by participating organisations, the independence of the sub-factors of the selected plan were tested by intercorrelating the factor scores for two job samples, one consisting of sixty jobs, type and level being heterogeneous, the other consisting of forty jobs, type and level being homogeneous. Sub-factor intercorrelations in the group of heterogeneous jobs ranged from 0,71 to 0,98 while all but one correlated at or above 0,90 with the total score, thus emphasising the independence of sub-factors, while intercorrelations in the group of homogeneous sample were much lower, ranging from 0,26 to 0,89, indicating greater factorial independence due to the fact that these jobs are limited to a narrower range of grades such that specific job differences in respect of sub-factors are more likely to show up.

Utilising this selected job evaluation plan as the core of the developed job evaluation process, a wage and salary survey guide was formulated, the unique concept being a comparison of participating organisation pay structures rather than comparison of positions as a basis for data collection. The job evaluation system was utilised in the formulation of a "one-time" standardisation of participating organisation pay structures according to the survey organisation pay structure, the hypothesis being that these standardised pay structures may be utilised over successive surveys without the necessity for restandardisation, and thus eliminating the use of subjective methods

and techniques subsequent to the initial standardisation.

Utilising an international oil company as the survey organisation this newly formulated structural comparison guide was practically tested by applying it in conjunction with the existing survey organisation wage and salary survey guide as a means of competitive market wage and salary data gathering and analysis, over successive survey years, namely, 1974, 1977, and 1980. The results obtained through application of this guide were subsequently compared with those results obtained by two professional survey organisations, and proved to be reliable and consistent enough over the applicable survey years to warrant acceptance of the pay structural comparison concept as a valid wage and salary survey technique.

PART I

INTRODUCTION

CHAPTER I

ESTABLISHING THE PAY STRUCTURE: JOB EVALUATION AND THE WAGE AND SALARY SURVEY

WAGE AND SALARY ADMINISTRATION

Wages and salaries¹, as a means of providing income for employees and as a cost of doing business to the employer, constitute one of the most important subjects in the field of Personnel Management. Wages and salaries, as a part of the overall compensation process, are a major factor in attracting, stimulating, and retaining employees at all levels, and as such, the administration of wages, salaries and other labour costs affect an organisation's profits, due to the fact that labour costs affect both total volume of sales, and profit on the sales².

Formerly, wage rates in organisations, whether in industry or in government and nonprofit institutions, tended to be established in a haphazard fashion, with little consideration given to consistency with prevailing wages paid in other establishments. However, after the 1950's the adoption of sound principles and practices of wage and salary administration became more mature as the realisation developed that a multiplicity of influences plays upon any determination of wages for the individual and for an organisation as a whole. Business cycle shifts, technological change, union activities, legislation, consumer taste fluctuations, and alterations both in the industry and in the labour market all exert varying degrees of influence at different times. On a narrower scale, changes in the financial condition of an organisation and changes in individual jobs alter both the overall level

¹Although the words "wage" and "salary" are used interchangeably throughout this text, these terms have slightly different meanings in popular usage. "Wages" usually refers to an hourly rate; "salaries" normally refers to weekly or monthly rates.

²Raymond Rogers estimates that employee compensation takes seventy-eight percent of the total income generated by production. See Raymond Rogers, "The Personnel Function : A Progress Report", A.M.A. Management Report No. 24 (1958), pp. 43, 44.

of wages and internal relationships.

It was thus realised that wage and salary administration should be based on a clearly formulated philosophy. Grounded in such philosophy should be sound principles of wage management, and growing out of both should be the policies that guide operations. For all three bases, criteria for establishing and maintaining wages must be considered as well as features in wages and salaries that affect employee relations.

Basic philosophies pertaining to wages and salaries vary extensively. Externally, philosophy can take the direction of paying the highest possible level of wages and salaries consistent with an organisation's objectives, or at the other extreme regarding wage costs as a necessary evil, can slant toward keeping wages as low as possible without jeopardising organisational stability. In between is a philosophy embodying resignation to paying prevailing wages and salaries, coupled with the recognition that wages are an integral cost of competitive business. Internally, philosophy can also be of these three general degrees, with variants in between. It can be asserted then, that a philosophy should be broad enough to include an organisation's social responsibilities - responsibilities not only in the community but in the national economy.

It may be stated that of all management responsibilities, those concerning wages and salaries are subjected to the greatest pressures while protected with the fewest principles³. Numerous forces play upon remuneration, and upon salary structures in particular. For example, scarce classifications of graduates, computer programmers, and scientific and technical personnel compel organisations to bid high, and this throws salary structures out of balance. Then, high entry pay rates must be brought back into line by slowing down at some stage the salary increases for such personnel, creating further problems. It is either that or one of two other moves: (1) permit

³Richard P. Calhoon, Personnel Management and Supervision (New York: Appleton-Century-Crofts, Educational Division, Meredith Corporation, 1967), p. 289.

distorted pay relationships between newer and older employees on similar work to persist, or, (2) change the entire rate structure. As can be seen from these factors, standards and behavioural problems are rife in both contingency and special award programs.

Accompanied by procedures for implementation, policies provide operating guides and should, in turn, be grounded in principle and philosophy. Wage and salary policies are too numerous to list, but a general statement is that they should provide uniform application of management objectives, control the actions of management personnel, and afford a framework for employee understanding.

Basically, then, the primary aim of wage and salary administration should be to adopt philosophies, principles and policies which will result in the systematic procedure of implementing and maintaining a sound compensation structure. In order to achieve this specific aims and objectives of such a program must be met, namely:

1. To control wages, salaries and rewards in the organisation.
2. To maintain consistency throughout the organisation by establishing standard wages and salaries for standard occupations.
3. To adjust wages and salaries with changes in the labour market.
4. To pay more money for more difficult and more responsible jobs in an attempt to maintain equity in wages and salaries.
5. To recognise the principle of merit in compensating individuals according to their proficiency.
6. To improve the ability of supervisors and executives to deal with wage and salary questions raised by employees.
7. To provide rational methods of adjusting wage and salary issues.

Thus, to design, from scratch, a comprehensive program of financial compensation for an organisation requires that the designer have a rationale - a set of goals and underlying principles about compensation and how it should work. Once such factors have been accepted, the actual problems of designing a salary structure (or pay structure) are to be faced. In order to appreciate such problems, the designer must of necessity take into account all aspects of the

compensation process, which forms a complex network of sub-processes directed toward compensating people for services performed, and motivating them to obtain desired levels of performance.

However, although the broad subject of compensation in terms of cost to the organisation may be examined in terms of two areas, namely: (1) wage and salary administration; and (2) fringe-benefit administration, the primary concern of the organisation is initially the determination of within the organisation wage payments, in other words, how much specific employees are paid. Thus, although fringe-benefits do form a vital portion of the overall compensation package, attention should initially be paid to establishing an internal rate structure which will indicate the relative value of jobs within the organisation.

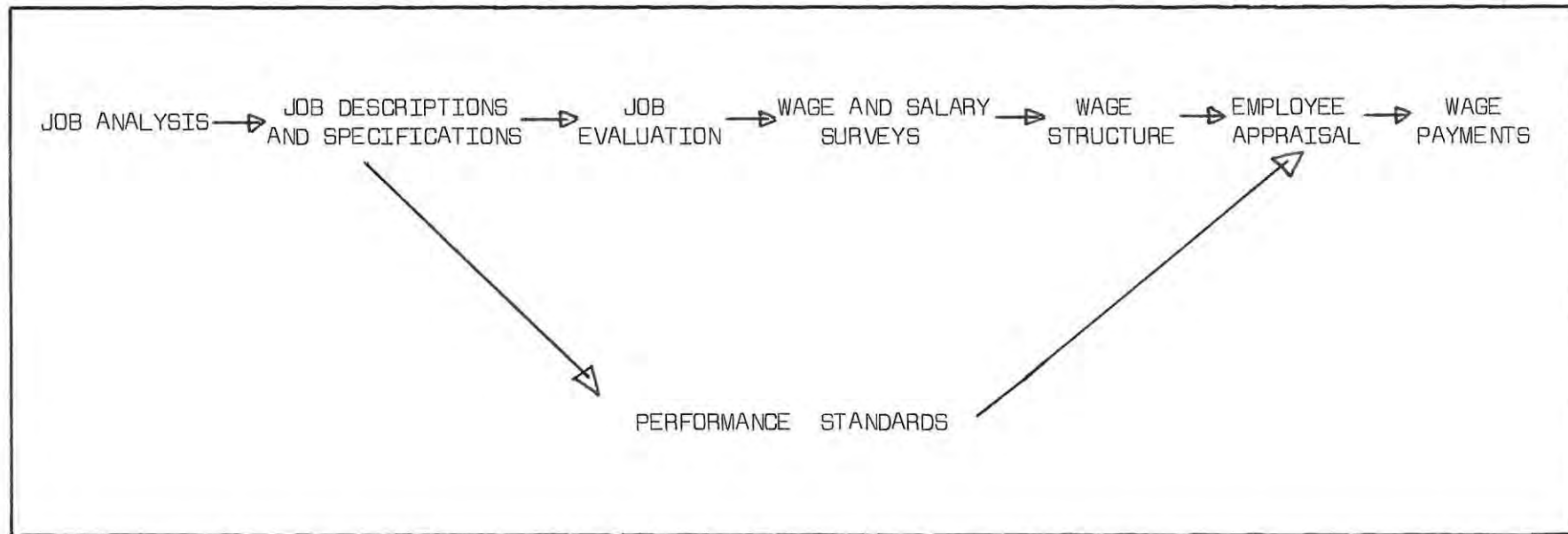
DEVELOPING THE PAY STRUCTURE

In keeping with modern developments in management practice, concepts in pay structures and administration systems have undergone significant change. Salary has, as previously mentioned, in the past been regarded as a "private arrangement" between management and the individual. However, the advent of the large corporation, the growing influences of the collective bargaining agencies, and the need to speed up the processes of salary administration, have resulted in greater standardisation and the levelling out of individual differences based on merit. In this process, the adoption of standardised management techniques, such as job evaluation, has become more common. However, whilst a measure of uniformity and standardisation is inevitable and even beneficial, it is important to recognise the inherent danger of over simplification.

The main area where this concept of oversimplification should be avoided when establishing pay policies and related administrative procedures relates to the "framework" that is utilised to develop the pay structure. The process of determining wage and salary payments involves utilising such a framework of devices, systems and policies which form a flow of events, with wage determination forming the final goal, and the pay structure forming an integral part of such a flow. This flow of events is illustrated in Figure 1.

FIGURE 1

THE WAGE DETERMINATION PROCESS^a



^aAs adapted from R.J. Snelgar, "A Guide To Conducting Compensation Surveys" (unpublished Master's dissertation, Department of Psychology, Rhodes University, January 1979), p.5.

This diagram, although emphasising the fact that each step involved in the systematic process of wage determination forms a vital link in a chain of processes, only provides us with an overview of the complexity of the system. In order to discuss the interreliance of such methods on further devices and methods, and, most important, their interreliance on each other for efficient functioning, the process of developing an internal pay structure as such may be divided into two main sections, namely: (1) establishing the internal basis, which involves solving the problem of developing an internal wage and salary structure; and (2) establishing the external basis, which involves solving the problem of setting wage and salary levels for the internal structure.

I. Establishing the Internal Basis: The Job Evaluation System

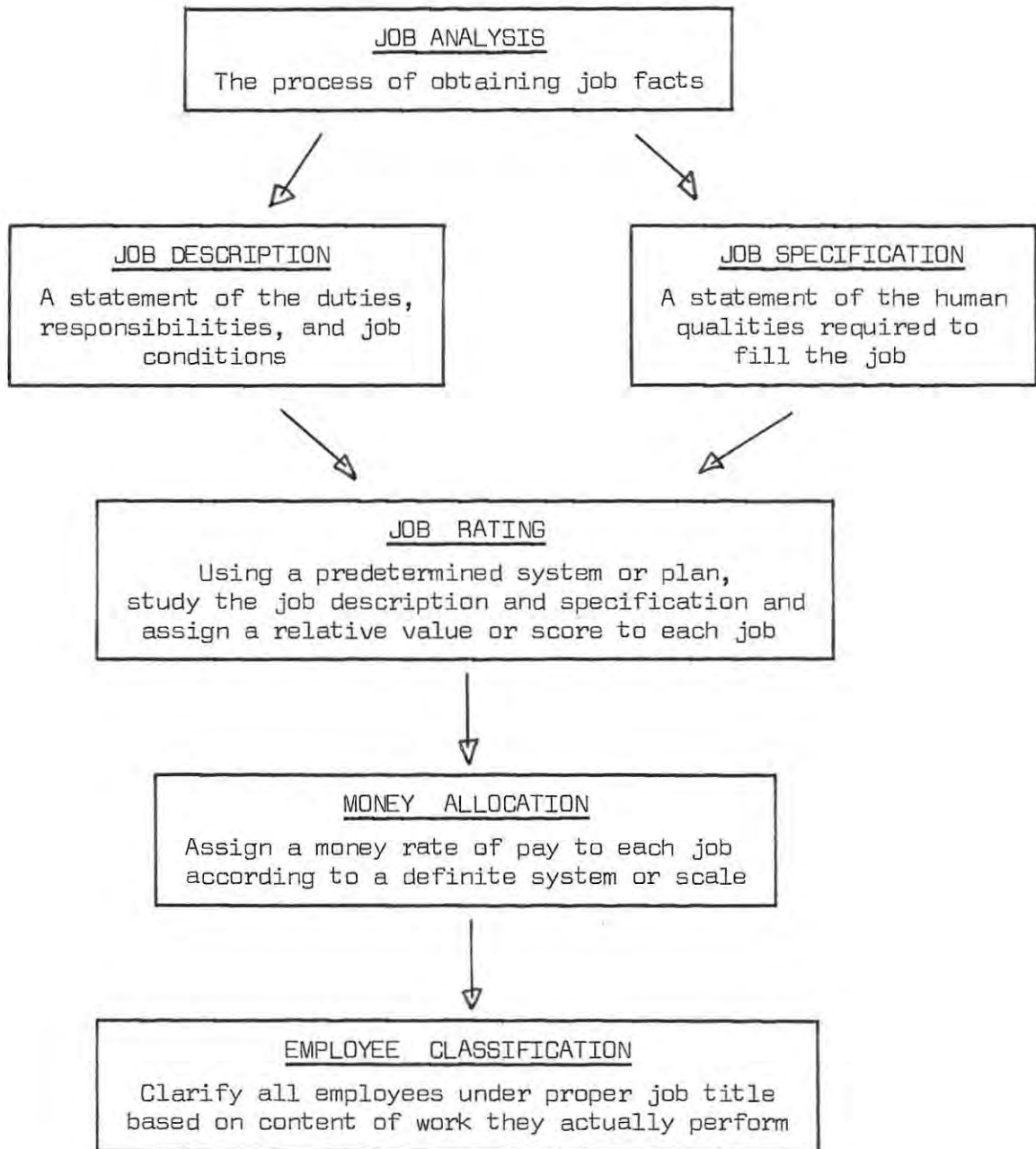
In order to establish an internal basis for developing the pay structure, some plan must be set up such that more difficult and more responsible jobs are paid more than less difficult and less responsible jobs. This is the problem of setting wage and salary structures. In providing a solution to this problem attempts are made to set up a hierarchy of jobs on some logical basis such that pay for these jobs is relative to job status within this hierarchy.

In order to achieve such a goal most organisations eventually install a system of job evaluation, which is a formalised process of determining the relative worth of various jobs within the organisation, so that differential wages can be paid to jobs of different worth. The job evaluation system as a whole encompasses the analysis of jobs for the purpose of writing job descriptions and specifications, the rating of these jobs through use of a job evaluation method, and conversion of relative job values to definite wage rates.

The various elements of the job evaluation system and their interrelationship is illustrated in Figure 2.

Although the actual process of job analysis and the method of job evaluation will be discussed in greater detail in a later chapter, it is necessary to briefly describe the flow of events in the system

FIGURE 2

THE ELEMENTS OF JOB EVALUATION^a

^aAs adapted from D.S. Beach, Personnel : The Management of People at Work (3rd ed.; New York: MacMillan Publishing Co., 1975), p. 653.

as a whole at this stage, such that its importance is emphasised. In this process job analysis, which is the systematic investigation of a job in order to reduce its essential characteristics to writing in the form of a job description⁴, serves to provide the essential data for job evaluation or rating. More specifically, job analysis may be defined as the process of determining, by observation and study, and reporting pertinent information relating to the nature of a specific job. It is the determination of the tasks that comprise of the job and of the skills, knowledges, abilities and responsibilities required of the worker for successful performance and which differentiate the job from all others.

In other words job analysis provides the data for writing job descriptions and specifications, which, in turn, are used as reference documents in job evaluation or rating. It is then the specific job evaluation method, or plan, which utilises descriptions and specifications in order to rate jobs such that relative worth may be determined, and differential rates applied to jobs of different worth. Thus, the job evaluation method derives indices of relative job values within an organisation on the basis of judgements about the jobs. In turn the indices of relative job values are utilised as the basis for determining wage rates of the jobs that are covered by the system.

In simple terms then, job evaluation is the systematic method of appraising the relative worth of each job in relation to other jobs within the organisation, such that a hierarchy of positions may be established. Presumably "relative worth" of jobs means relative value produced, but since the contributions of a specific job to the goals of an organisation are difficult to measure, other variables are examined which are assumed to be related to value produced. Such factors as "responsibility", "skill", "effort", and "working conditions" are typical factors considered in formal job evaluation methods, and presumably the higher the degree of such performance

⁴Wendell French, The Personnel Management Process : Human Resources Administration (Boston : Houghton Mifflin Co., 1964), p. 238.

characteristics required by the job, the greater the contribution to the goals of the enterprise.

Job Evaluation is thus a prime example of philosophies, principles, and policies in action, as it purports to establish fair relationships between jobs within an organisation. Systematic job evaluation not only provides the initial basis for establishing an internal pay structure, but performs a number of valuable services in the effective maintenance of such a structure. It keeps rates in line and relationships between jobs intact. To management, well established evaluation procedures provide some assurance of equitable relationships and some defense when pressures arise to distort those relationships. To employees, job evaluation is a protection and affords some assurance that job relationships are fair and free from discrimination. Under a sound system there can be no base pay differential based on prejudice or ability to buy labour cheaply.

However, such a system cannot be completely accurate, since it depends on the judgements of evaluators involved, although these are informed judgements based on detailed job studies and content comparisons. Whilst this system is far from perfect, it is possibly the best known means for introducing order into the inevitable chaos that results from haphazard determinations.

Whilst orderliness is a desirable objective, it is necessary to guard against the entire pay structure developing into a "closed system", or becoming oversimplified, as mentioned previously. This means that in making pay decisions care must be exercised against overemphasising internal organisational factors or preserving the mechanics of the job evaluation system. There are other factors that may be built into the framework of a pay structure and its administration, and thus, a most important dimension in pay structuring and administration is the need to cultivate a greater awareness of the influence of the external environment. The environment is diverse. It does not remain static for very long, nor does it affect every organisation in the same way. Nevertheless, there are common external factors that may be identified and examined, in addition to each organisation researching those factors specific to

its own operations.

II. Establishing the External Basis: The Wage and Salary Survey

Wages and salaries are influenced by external factors such as the labour market and the Consumer Price Index. An awareness of the labour supply position, particularly in the South African situation where the White population is no longer an adequate source of supply, and there has not been an effective program for developing the Black population to fill the gap, results in the need for greater flexibility in pay structures and administrative procedures. Traditionally, the grades that are derived from a job evaluation system are tied to fixed salary scales, which is largely an administrative convenience that is proving inadequate for present day circumstances.

The job evaluation system groups job categories on the basis of various factors such as skill and responsibility, and whilst it may be argued that the same remuneration should be applicable to all jobs within a grade, experience indicates that the market eventually determines the position. Therefore, the pay system and structure should be seen not simply as a linear system but rather as a multidimensional one in which supply and demand play an important role.

Organisational participation in salary and wage surveys indicates an awareness of the problem, and a practical effort to solve it by evaluating the conditions in the labour market at regular intervals⁵. The most important factor with regard to external factors and the labour market which influences the internal pay structure, then, are the wages and salaries paid by other organisations, and in short, the organisation needs to ensure against the probability that its pay levels will drift out of line with those of competitive organisations.

⁵For an excellent discussion of the impact of labour markets on internal pay structures, see G.H. Hildebrand, "External Influences and the Determination of the Internal Wage Structure", in Internal Wage Structure, ed. J.L. Meij (Amsterdam: North Holland Publishing Co., 1963), pp. 260-299.

This is achieved by means of the salary survey.

For the vast majority of employers, a first approximation to a workable wage and salary is obtained by discovering "going rates" in the community or industry. This "going rate" may refer to that rate which is regarded as being competitive to all organisations operating in the local labour market, to organisations in the same industry in the local labour market, to organisations in the same industry without regard to location, or some combination of these.

In short, the greatest influence on wage and salary levels is probably the level of wages and salaries paid in the area or industry for comparable work, and this "going rate" information must be obtained by utilising a data collecting system which is as objective as possible.

In general, because of the continuous rise in wage and salary levels experienced in this country, resulting from a variety of environmental pressures, considerable thought must be given to utilising such a system in order to accommodate upward changes in the wage and salary structure. Some organisations meet the problem by making general percentage or "across the board" pay increases in accordance with the rise in the Consumer Price Index. Other organisations include a general adjustment factor in merit or length of service increases.

According to two studies, a high percentage of personnel directors prefer to do away with general wage adjustments. ⁶However, it is generally considered that general adjustments are inevitable in an inflationary period, although means of adjustment tend to differ greatly. Smaller organisations may tend to rely on surveys and statistics obtained from larger organisations which are able to afford the expense of conducting comprehensive wage and salary surveys. Some organisations may rely also exclusively on the

⁶George W. Torrence, "Individual vs General Salary Increases", Management Record, XXIII (May 1961), 18-20. Also "Mobil Oil: 1974 Salary Survey" (Cape Town: Mobil Oil Southern Africa, (Pty) Ltd., 1974).

Consumer Price Index as an indicator of necessary adjustments.

However, the method most commonly adopted by larger international organisations for reliable adjustment to the wage and salary structure is that of the comprehensive wage and salary survey. This method is not only useful in determining the effects of inflation on the labour market rates, but further provides a general overview of all practices affecting compensation procedures. Even as early as the 1940's a study found that 95% of all responding organisations utilised the wage and salary survey in their wage and salary administration programs, in the United States of America⁷.

By utilising a wage and salary survey the organisation may ensure against the probability that their pay levels will drift out of line with those of competitive organisations. This type of survey becomes an investigation of current position which should cover the job content and grading of staff within the organisation, and the actual salary and salary range picture of equivalent staff in comparable organisations. Surveys range from large scale studies covering all types and all levels of jobs, to quick telephone checks on current salary levels for a single job.

However, the comprehensive survey becomes a necessary data gathering system for those organisations regarding themselves as being competitive in the labour market. As most organisations operate in a highly competitive market (both labour and product), there is a necessity to attract and maintain a workforce ranging from labourers to highly qualified specialists. Thus, in order to achieve such an objective, the comprehensive wage and salary survey data is utilised to:

1. Gather necessary information from the community or industry concerned for the initial setting of wage and salary levels.
2. Gather necessary information from the community or industry concerned such that these levels remain competitive and in harmony with labour market "going rates".

⁷Richard A. Lester, Company Wage Policies (Princeton, New Jersey: Princeton University, 1948), p. 10.

3. Audit the external competitiveness of the job evaluation system by providing a basis for comparison with regard to its effectiveness as an administrative control of the wage and salary structure by keeping rates in line and relationships between jobs intact.

The meeting of such objectives emphasises the wage and salary survey as a device for establishing an external basis in the process of developing and maintaining the pay structure, and in doing so, provides a solution to the problem of setting actual wage and salary levels.

JOB EVALUATION AND THE SALARY SURVEY : THEIR INTERRELIANCE

The importance of the job evaluation system and the wage and salary survey system in the flow of events determining within the organisation wage payments has already been indicated diagrammatically in Figure 1. However, not only are these two systems invaluable in the setting of wage and salary structures (job evaluation), and wage and salary levels (wage and salary survey), but each such system is reliant upon the functioning of the other for its own efficient functioning.

It is important at this stage to separate the use of present rates versus the use of market rates, in order to underline the abovementioned interreliance. Some organisations rely entirely on the use of labour market rates (as obtained from a wage and salary survey) in order to price the internal pay structure as derived from use of the job evaluation system. Although there is nothing incorrect about such a practice, the disadvantage is that a simultaneous solution to both the problem of wage levels and the problem of wage structures is provided. The danger is that these problems may not be regarded as being separate. Rather, present wage rates (those rates already utilised by an organisation) should be used as points of reference in the pricing of the structure such that the solution to the problem of structure (job evaluation) and the solution to the problem of levels (wage and salary survey) are separated. Solving these two problems separately emphasises the fact that the pay structure (if properly maintained) is a relatively permanent solution, whereas the wage level may change frequently. Thus, a pay structure developed from present wage rates may be raised

or lowered in accordance with changes in the wage level.

If an organisation becomes aware that there is much to be gained by (1) arriving at a relatively permanent pay structure by utilising the job evaluation system, and (2) altering the wage levels of such a structure by shifting the entire structure in accordance with results obtained from a wage and salary survey, wages and salaries will perform their many functions in a much more efficient manner. Alternatively, where the two problems are not recognised as separate and distinct, and solutions provided by two separate and distinct systems, any change in wage rates would require a new solution to both problems. The pay structure, though never a permanent solution, can, if properly maintained, be useful for years, whereas the wage level changes frequently - once a year or even more often in periods of expanding business activity.

Thus, although these problems should be regarded as separate and distinct, the process of solution places emphasis on the interreliance of the systems used in solving such problems. Job evaluation has become accepted as the useful solution to the problem of structures, and divides the solution into two parts: (1) constructing a job structure; and (2) pricing the job structure to arrive at a pay structure. The resulting job hierarchy or job structure when priced becomes the pay structure, and when the average wage in the pay structure is made to correspond to the wage level selected, by utilising the wage and salary survey system to establish community levels, solutions may have been obtained to both the problem of levels and the problem of structures.

Further, as will be discussed in greater detail at a later stage, by providing an initial hierarchy of organisational positions, establishing a method for rating such positions in monetary terms, and identifying benchmark or key positions⁸, the job evaluation system not only provides a basis for a pay structure, but in doing so provides

⁸Positions regarded as being representative of the range of positions falling within a specific salary group, and about which there is little disagreement as to the appropriateness of the current rate of pay.

the basis for establishing survey position comparability in the actual survey procedure, and further provides a method for objective adjustment of data once such comparability has been estimated.

The wage and salary survey, in turn, may not only rely on the job evaluation system for a degree of objective functioning, but provides the data necessary to audit the effectiveness of the internal job evaluation system in maintaining an effective job hierarchy. This is accomplished by the indication as to which individual wage rates are "out of line" when compared with those of the community labour market concerned.

In short then, the wage and salary survey relies on the job evaluation system in order to provide a structure of comparable survey positions, while the job evaluation system relies on the wage and salary survey in order to maintain an effective internal job hierarchy.

The relevance of the interreliance of these two systems may be highlighted by the need to evaluate conditions in the labour market at any given time. In order to deal with the consequences of labour shortage or a shift in values, managements need to evaluate these conditions more effectively, and basic to this requirement is a more representative participation in wage and salary surveys and, within this undertaking, improved methods of identifying and comparing similar positions and functions. A basic requirement for this is the more widespread application of job evaluation systems, resulting in improved methods for the comparison of results, such that the wage and salary survey system may effectively gauge the upward movement of both wages and salaries, as well as living costs.

Basically, then, in conclusion, it may be stated that a good wage and salary administration plan may make the difference between building and retaining a thoroughly competent staff or losing the employees to organisations offering more competitive salaries. In order to prevent this, guidelines for a good wage and salary plan should include the following: (1) Jobs should be based primarily on competitive market values. (2) There should be equitable internal pay levels. (3) The wage and salary administration program should

reinforce a pay-for-performance style of management. (4) The wage and salary administration program should be supportive of the total personnel management function.

In this way, the wage and salary administration program should become market oriented, and utilise the wage and salary survey as a technique in ensuring that this is so. Further, as Gambill⁹ points out, this market oriented plan should be based on a number of key concepts, namely, that the market value of labour relates to the value of jobs based on the wages paid for such jobs by a broad cross section of employers; that market based job evaluation is the evaluating and pricing of each position in the organisation by means of a market based evaluation system; and that it uses actual job-market salary data as the basis for determining proper job slotting. This line of thought is supported by Husband¹⁰ who emphasises that a pay structure is a dynamic entity influenced by an environmental sector made up of constraints on management, the nature of the organisation and the labour market, and an internal factor made up of job evaluations, merit payments, the incentive system, and executive pay.

In the light of these facts, it is imperative that constant effort be made to improve survey procedures. More specifically, as the wage and salary survey must continue to carry a heavy load as a wage and salary administration technique, it is essential to develop and improve methods of obtaining compensation information which is both as objective and as accurate as possible, and in order to facilitate this there is a growing need for an extension of the job evaluation system as a means for providing this meaningful data concerning the pay structure and the labour market as a whole.

⁹Ted R. Gambill, "A Market-Oriented Approach to Salary Administration", Advanced Management Journal, XLIV, No. 3 (Summer 1979), 41-46.

¹⁰Tom Husband, "Payment Structures Made To Measure", Personnel Management, VII, No. 4 (April, 1975), 27-29.

P A R T I I

THE WAGE AND SALARY SURVEY

CHAPTER II

DEVELOPING A WAGE AND SALARY SURVEY SYSTEM

EXISTING WAGE AND SALARY SURVEY METHODS

As discussed in the previous chapter, if the wage policy of an organisation is to remain competitive in the labour market, that is, pay rates that are at least approximately equal to those prevailing in the community, then it must collect accurate wage and salary data and make changes in its pay structure as may become necessary. Wage and salary survey information provides a means by which management can determine whether its entire wage level is proper¹.

Although legislation may aid the organisation in the solution to the problem of wage levels by defining outside limits, a wide range of choice normally still exists. Other criteria must be used to determine where within this range wage levels should be. Although no definite pattern is applicable to all organisations, majority practice appears to be a reliance on "going rates" in the local labour market as an approximation to a workable wage and salary level, on the assumption that it is from this market that employees must be obtained. It further seems fair and equitable to both employers and employees to have wages related in some fashion to wage rates for comparable work in the labour market or industry of which an organisation is a part. The data required to accommodate these necessities may be obtained by utilising the wage and salary survey, which usually provides all participating

¹The comprehensive compensation survey is divided into two sections of data collection, namely, the wage and salary survey and the fringe-benefit survey. The wage and salary survey, however, provides the data which forms the basis for adjustments to the actual pay structure, and it is this area that demands constant research. For a complete discussion of wage and salary surveys, see A. Nash, and S.J. Carroll, The Management of Compensation (Monterey, California: Brooks/Cole Publishing Co., 1975), pp. 74-90, and T.H. Patten, Jr., Pay: Employee Compensation and Incentive Plans (New York: The Free Press, 1977), pp. 162-180.

organisations with information which is in an acceptable manner.

The information collected must essentially be complete, up-to-date, and comparable which provides a difficult task, with many pitfalls, and it is for this reason that such careful appraisal of survey results by consumers of wage and salary survey data may seem overdrawn. With difficulties such as these, it is apparent that existing methods of determining the necessary adjustments to pay structures as a whole, present certain problems of such difficulties and problems, which will be discussed in more detail at a later stage, which demands constant improvement of techniques involved in objective data collection.

Specifically, on the South African scene, organisational participation in wage and salary surveys not only indicates an awareness of the unique problems of the country's labour market in that there is a growing shortage of supply in practically all categories of work, stemming from the fact that the White population is no longer an adequate source of supply, but also a practical effort to solve these problems. However, examination of the number of participants in the national surveys indicates that only a minority of business enterprises does in fact participate². Nevertheless, the awareness of the need to participate indicates a necessity for improved methods and techniques.

Basically, an organisation requiring wage and salary survey data in attempting to maintain competitive wage levels has available several choices, namely:

1. A survey organisation, which conducts comprehensive national surveys on an annual basis, may be used, although a disadvantage attached to the utilisation of such survey organisation information lies in the actual interpretation³ and analysis of the data by the various client organisations.

²D. Sutton, "The Pay Structure", People and Profits, III, No. 12 (June, 1976), 23.

³E. Perlin, I.B. Kaplan, and J.M. Curcia, "Clearing Up Fuzziness in Salary Survey Analysis", Compensation Review, XI, No. 2 (1972), 12-25. Examples of survey organisations within South Africa are Peromnes Salary Surveys (Pty) Ltd., and Urwick International (Pty) Ltd.

2. An informal group of employers may be formed to conduct a survey.
3. Survey results of other organisations within the same labour market/community may be used.
4. An organisation may develop its own comprehensive survey procedure such that it may develop a survey community, and conduct its own surveys on a regular basis.

At present many different methods are used to conduct surveys; however, reliable comprehensive guides are usually developed by the larger national and international organisations. Apart from these internally developed guides, there are generally three different methods of conducting wage and salary surveys, and it is necessary to look at both advantages and disadvantages of such methods, prior to discussing one comprehensive guide. Such methods are: (1) job title survey; (2) job description survey; and (3) job evaluation survey.

I. Job Title Survey

The most common and simplest method is the telephone call or a letter from one organisation to another asking for wage information about specific jobs. An executive of Organisation A might call one at a comparable level in Organisation B, to ask what Organisation B pays for keypunch operators, or labourers, or purchasers, and in this way much wage comparison is carried out purely on a job title basis. This method is quite informal, but because it is used widely, it is necessary to examine it critically for possible inaccuracies.

Belcher and Heneman⁴ point out that different duties may be performed by individuals on the jobs being surveyed in both organisations, so the wages are not directly comparable. Further, a wage rate may be reported including or excluding overtime, shift differentials, and the like. In this way different job titles may be attached to the same set of duties and responsibilities even within the same organisation. Thus, it is impossible to assume that the titles attached to the jobs in one organisation refer to the same jobs in another organisation, even in the same industry.

⁴David W. Belcher and Herbert G. Heneman, Jr., "How To Make a Wage Survey", Technical Report Series, No. 2, Industrial Relations Centre, University of Minnesota (Dubuque, Iowa: Wm. C. Brown Company, July, 1948).

As an example, Belcher⁵ clarifies by explaining that one organisation may have what is called a messenger doing the work which another organisation assigns to the office cleaner. Further, it is equally possible that two organisations may have the same job titles attached to jobs having widely different duties. If wage information is asked for by job title under any of these circumstances, inaccuracies are bound to occur. More specifically, information obtained in this way will almost certainly reveal nothing about the wage levels or pay structures of the reporting organisations. Thus, it becomes futile to collect wage and salary data by job title. Only when jobs are properly defined by defining duties and responsibilities (and perhaps worker requirements) is it possible to obtain sufficient job identity so that wage information may be sought. It is in order to satisfy this necessity that the job analysis process and, more specifically, the job description become basic methods of ensuring job comparability. It is further necessary that precautions be taken to ensure that the job descriptions are used in comparing jobs rather than job titles.

It is as a result of the general inadequacies of this method that surveys based on proper comparisons of duties of jobs determined from well constructed job descriptions were developed.

II. Job Description Survey

A common type of wage and salary survey is to mail job descriptions or job definitions for selected jobs to cooperating organisations. These organisations are asked the wage rates for jobs in their organisations which can be matched with the job descriptions. The rates requested may be rates now paid to each employee, the average rates, the established base rates, the minimum and maximum rates, or base rates plus bonus. Rarely is an attempt made to verify the accuracy of "matching" jobs with the job descriptions.

Utilisation of a job evaluation system to assist in establishing

⁵David W. Belcher, "Planning a Wage Survey", Conducting Wage Surveys, Research and Technical Report IV, Industrial Relations Centre, University of Minnesota (Dubuque, Iowa: Wm. C. Brown Company, 1949), p. 10.

this comparability is impossible as there is no meeting of survey staff on a personal interview basis. Thus, the results of such a survey probably depend upon: (1) the respondent's knowledge and understanding of job analysis; (2) the importance attached to the survey results by the respondent; and (3) the general press of business. ⁶If any of these conditions is unfavourable the information will probably be furnished by job title, thus subjecting the survey to the inaccuracies previously described.

However, the job description approach is a definite improvement over the job-title approach if care is taken in the selection of the "key jobs" to be compared, in the preparation of good job descriptions, in making sure that all ranges of skill are represented, and in matching jobs so that all collected wage data can be safely referred to job descriptions without distorting final figures.

The possibility of obtaining inaccurate information through the use of both the job-title and the job description approaches is such that it is necessary to reveal some of the risks involved, as discussed by Belcher⁷: (1) all or part of an organisation's work force may be lost because a reported job rate is used which refers to widely different duties; (2) consistent wage rate structures (pay structures) may be disrupted (with consequent employee dissatisfaction) as a result of acceptance of an incorrectly reported rate; (3) labour costs may be above competition levels where rates reported are inaccurate; (4) negotiations may break down where one party to a dispute regards incorrect wage data as unalterable facts and refuses to compromise; (5) expenditures for job evaluation plans may be wasted when such systems are installed in conformance with an accurate wage survey; (6) workers may be underpaid for the duties which they are performing.

III. Job Evaluation Survey

In certain cases several organisations use the same job

⁶For a further discussion of such factors see Belcher and Heneman, Technical Report Series, No. 2, 4.

⁷Belcher, Research and Technical Report IV, 11.

evaluation plan or system. It is thus possible for these organisations to survey on the basis of job evaluation points. Since the point values are the same, the organisations have merely to call and ask what an organisation is paying employees on jobs at a given point level. This puts an accuracy in wage and salary surveys that is far superior to the job description method mentioned above.

However, in spite of the fact that some organisations do utilise the same job evaluation plan or system, the majority of organisations are likely to use different systems. This fact tends to limit the number of organisations able to participate in such a survey. Further, many organisations do not have a formalised job evaluation plan, or may not be within the same industry or community, or even compete for labour within the same labour market, which more than likely will be unacceptable to the organisation conducting the survey.

A method to overcome such limitations, for an organisation conducting a wage survey and wishing to use job evaluation as a method of determining job comparability, is to select a number of "key jobs"⁸ ranging from those in the lowest labour grade to those in the highest labour grade in the pay structure. Once such "key jobs" have been selected, trained job analysts visit the participating organisations, select those jobs in these organisations which match the key jobs most closely on the basis of job descriptions, and evaluate such selected jobs by utilising the survey organisation's job evaluation plan. This method thus utilises one job evaluation method in order to establish comparability with all participating organisations.

The major disadvantage of this method is the cost involved, while the major advantage is that it is far more accurate in terms of subjective data collection than other methods. Relying on this idea of accuracy obtained from job evaluation, some organisations utilise the "key job" concept above as a method of surveying. Once the job

⁸As mentioned previously, these are jobs which are commonly understood and about which there is little disagreement as to the appropriateness of the current rate of pay. Selection of key jobs for survey purposes exemplified by William F. Glueck, Personnel: A Diagnostic Approach (Dallas, Texas: Business Publications, Inc., 1978), p. 49

evaluation system has established these "key jobs", they are then utilised as a method of comparability in themselves. This concept is based on the idea that certain positions within every organisation are representative of a cross section of all positions in the pay structure under consideration, i.e., they represent various occupational families, functions and organisational levels. These positions are then utilised as survey positions under the assumption that the nature of the duties of these positions are easy to define and readily found in other organisations in the survey community. This eradicates the necessity to utilise weighting factors, such as job evaluation, to a large degree. This system thus reduces the cost involved in evaluating every position of participating organisations, although the job evaluation plan is still utilised as a weighting technique to a certain degree.

However, the utilisation of this method may only prove successful when used in conjunction with other methods⁹, the major disadvantage being the fact that what is regarded as being a key job by one organisation may not be regarded as a key job by a participating organisation. In this way the number of jobs actually surveyed may once again be reduced by incomparability, thus introducing the necessity for a weighting factor, which in turn creates a vicious circle on the job evaluation plan as a weighting technique.

As mentioned previously then, an organisation requiring wage and salary survey data may utilise any of the above methods apart from utilising other sources of information¹⁰. However, should the organisation decide to develop its own compensation survey method in order to conduct its own surveys on a regular basis, such a procedure necessitates a great deal of research in order to obtain the required level of accuracy and objectivity, and should be constantly evaluated and improved. The surveying organisation accepts the need for

⁹David W. Belcher, Wage and Salary Administration (2nd ed.; New York: Prentice-Hall Inc., 1962), p. 44.

¹⁰Examples of illustrative wage surveys, revealing practical utilisation of the methods discussed may be found in Jay L. Otis and Richard H. Leukart, Job Evaluation : A Basis for Sound Wage Administration (2nd ed.; Englewood Cliffs, N.J. : Prentice-Hall Inc., 1954), pp. 391-430.

considerable time and labour in preparing the necessary information and submitting it in the required form, and offers as consideration to participating organisations to prepare a detailed summary of all information obtained and to distribute this to such participants. This is generally the case in South Africa, where the few large organisations that do conduct comprehensive surveys of their own, usually establish fairly stable survey communities of their own, the number and types of organisations involved varying only slightly from survey to survey¹¹.

Although the steps involved in the development of such a wage and salary survey procedure may vary greatly from organisation to organisation, a basic step by step procedure may be outlined as follows¹²:

I. Planning the Survey

1. Determining the Purpose of the Survey.
2. Determining the Area to be Surveyed.
3. Determining the Organisations to be Included in the Survey.
4. Determining the Jobs to be included in the Survey.
5. Developing a Method of Ensuring Job Comparability.
6. Determining Information to be Obtained.
7. Making the Schedule.
8. Determining the Survey Method.
9. Selecting Survey Staff.

II. Conducting the Survey

1. Ensuring Job Comparability.
2. Collecting Information.

III. Analysing and Presenting Results

WAGE AND SALARY SURVEY PROCEDURES

In order to provide an insight into the complexities involved in the collection and analysis of wage and salary survey data, an examination of the steps involved in developing a comprehensive guide

¹¹"Fact Sheet 59: Salary Administration", People and Profits, VI, No. 3 (September, 1978), 17.

¹²As adapted from Belcher and Heneman, Technical Report Series, No. 2, and Otis and Leukart, Job Evaluation : A Basis for Sound Wage Administration.

will allow a critical analysis of the system as a whole¹³.

I. Planning a Wage and Salary Survey

The planning of a wage and salary survey is vitally important to the success of accurate collation of data. It thus may be necessary for a panel of survey staff to re-evaluate existing methods of gathering and analysing information after each successive survey conducted by the organisation¹⁴.

Determining the Purpose of the Survey: Planning begins with the delineation of the purpose or purposes of the survey. Definition of purpose is the major step in solidifying judgement on the area to be covered, the organisations and jobs to be included, and the type of information required. As an example, the information obtained from such surveys will usually be utilised to: (1) develop monetary limits for base salary groups; and (2) audit the external competitiveness of the job evaluation program.

One author has suggested that wage and salary survey procedures should be a judicious compromise; that is, they should be as simple as it is possible to make them and still achieve reasonably accurate data¹⁵. However, if compromises are to be made, they should be made in the planning stage rather than being forced while the survey is in progress.

Frequency of Surveys: Gradually changes occur in a labour market area and within particular industries. Normally, therefore,

¹³A comprehensive guide to conducting compensation surveys is provided by Robin John Snelgar, "A Guide To Conducting Compensation Surveys" (unpublished Master's dissertation, Department of Psychology, Rhodes University, January 1979). The procedures outlined in this text have been adapted from this guide.

¹⁴Wilbur R. Hanawalt, "So You're Making a Wage Survey?" Personnel, XXIV, No. 3 (November, 1947), 179-185. Also Bruce R. Ellig, "Salary Surveys - Design to Application", Personnel Administration, XXII, No. 8 (October, 1977), 41-48.

¹⁵Ernest Dale, Source of Economic Information for Collective Bargaining (New York: American Management Association, 1951), pp. 84-87.

a wage and salary survey should be conducted at regular intervals of a minimum of three years and a maximum of five years¹⁶.

However, the need to adjust base salary ranges should be reviewed on an annual basis. The decision to make interim adjustments to base salary ranges in the years between comprehensive surveys may be based on "spot check" analysis of the following: (1) general economic conditions; (2) past compensation trends; (3) surveys conducted by other organisations; (4) the movement of competitive pay structures; and (5) a review of competitive compensation for several representative positions with the organisations included in previous comprehensive surveys. If these indications are inadequate, any adjustments in the base salary should be based on comprehensive surveys conducted more often than every three years.

Determining the Area to be Surveyed: This is essentially a matter of finding the boundaries of the labour market. For the typical organisation this is defined as the geographical district providing the market from which the majority of its employees are drawn. In most cases the labour market will be defined as the local community, although larger organisations usually choose wider definitions, even on a national community basis, depending on the type of organisation undertaking the survey.

The survey should usually cover an area or community which contains a reasonable sampling of employers who compete with the survey organisation. Thus, the community may be a town, a city, or, for example, it may be that there is one large geographic area for management, professional, technical and sales personnel, such as a country or a region within a country.

Determining the Organisations to be Included in the Survey: Organisations from which information will be requested should be

¹⁶"Management Report: Survey of the Necessity for Conducting a Comprehensive Compensation Survey on a National Basis" (Mobil Oil Southern Africa (Pty) Ltd., August, 1976), p. 6. (Employee Relations Department Files). R.S. Stockton, Wage Policies and Wage Surveys (Columbus: Ohio State University, Bureau of Business Research, 1959).

carefully selected. The objective in selecting cooperating organisations should be that of securing a representative and balanced sample. As stipulated by French¹⁷, this ideally requires a census of organisations in the community to be sampled. Then a sample should be drawn such that (1) the organisations selected for study are representative of the community; (2) sufficient coverage is assured that the average wages for each job are reliable; (3) the figures of one or a few very large organisations do not unduly influence the total; (4) the organisations selected are regarded as reputable employers in the community being surveyed, and compete with the survey organisation for qualified employees; (5) the organisations selected should, as a group, be representative of the leading industries in the community.

The number of organisations to be included in the survey may vary from ten to eighteen¹⁸. However, where it appears that competitive data will be limited, the reliability of the survey results may be increased by increasing the number of organisations. To the extent that it is possible, the same organisations should be included from one survey to the next to ensure consistency in the data obtained.

Thus, in summary, the following criteria is applicable when determining participating organisations: (1) industry; (2) comparable work; (3) competition for workers; and (4) size.

Determining the Jobs to be Included in the Survey: An important requirement in the planning of the survey is determining which positions (or jobs) are to be compared. Obviously, all of the jobs forming the organisational structure cannot be compared, as this presents a monumental task. It is therefore necessary to establish some form of standard or criteria in selecting a sample of jobs to be surveyed, these jobs being selected for comparison with similar positions in the community to establish competitive compensation

¹⁷French, The Personnel Management Process: Human Resources Administration, 244.

¹⁸See Snelgar, "A Guide to Conducting Compensation Surveys", 73. Martin Patchen, The Choice of Wage Comparisons (Englewood Cliffs, N.J. : Prentice-Hall, Inc., 1961).

data. These jobs then collectively provide such data as a basis required to establish or adjust appropriate base salary structures, and to check the adequacy of position evaluations.

As suggested by Otis and Leukart¹⁹, the concept of "key jobs" as a method of evaluating jobs²⁰ may prove just as useful in the selection of survey positions. The reasoning behind such an idea is that typical wage administration practices are based on a limited number of key jobs, which are classified because of (1) their position in an organisation's job structure; and (2) the importance placed on these jobs by certain groups, causing them to become benchmarks or points of reference. More specifically, key jobs may be regarded as ideal survey positions as (1) they are representative of a cross section of all jobs in the pay structure being studied, i.e., they should represent various occupational families, functions, and organisation levels; (2) the nature of the duties are reasonably easy to define and readily found in other organisations in the survey community; (3) they are relatively free from supply and demand extremes affecting compensation, and are not controversial in terms of appropriate pay levels; (4) they are relatively stable in terms of job content; (5) they are good reference points in job structures as to level of difficulty and responsibility; and (6) they are susceptible to clear, concise description.

However, although Belcher²¹ supports this idea, there are those authors who are not in agreement. For example, it has been pointed out by Bengé, Burk and Hay²² that, by definition, those positions regarded as being key jobs by one particular organisation, may not be regarded as key jobs by other organisations. Although such a criticism may be correct to a certain degree, a basic criterion for the selection of such key jobs for salary survey purposes is the

¹⁹Otis and Leukart, Job Evaluation : A Basis for Sound Wage Administration, 390. Glueck, Personnel: A Diagnostic Approach, 419.

²⁰As utilised in the Factor Comparison Method of job evaluation.

²¹Belcher, Wage and Salary Administration, 48.

²²Eugene J. Bengé, Samuel L.H. Burk, and Edward N. Hay, Manual of Job Evaluation (New York: Harper and Brothers, 1941), p. 442. This argument has been supported by E.L. Reynard, "Updating Salary Information for Scientific and Technical Positions - A Statistical Approach", Compensation Review, VIII, No. 1 (1976), 36-43.

requirement that they have become benchmarks or points of reference in the industry or community concerned, and this in itself will ensure inter-organisational comparability.

The number of jobs surveyed should be large enough to ensure that each participant will have many points of reference for reviewing the pay structure. The indications represented in the survey will influence the number of jobs selected, as will the purpose of the study. To ensure that an appropriate amount of competitive data will be obtained, it is usually desirable to select a number of jobs which will be as representative of the job hierarchy as is possible. Depending on the number of salary groups in the survey, however, the total number of positions may become so large that participating organisations may be reluctant to devote the necessary time to the survey. It has been suggested, therefore, that twenty to thirty jobs be used as an optimum number,²³ but various factors may influence such a decision whenever a new survey is to be undertaken. However, these factors vary from organisation to organisation, as indicated by a study completed by a national oil company, which indicates that the ideal number of jobs to be included in a survey conducted on a national basis should be a selection of four jobs from each salary group or range included in the survey, which may result in a total of up to fifty jobs²⁴. Further, there should be continuity in positions included in the survey with those included in previous surveys, provided the positions still meet the criteria discussed above.

Determining a Method for Ensuring Job Comparability: As stated, the purpose of the survey is to determine whether the compensation paid by the survey organisation is competitive in the community in which it competes for employees. The method used to determine competitiveness begins with a comparison of each survey organisation job/position with comparable positions of the

²³Richard D. Smyth and Mathew J. Murphy, Job Evaluation and Employee Rating (New York: McGraw-Hill Book Co., 1946), pp. 98-99.

²⁴Mobil Oil, "Management Report: Survey of the Necessity for Conducting a Comprehensive Compensation Survey on a National Basis", 7.

participating organisations. Based on this comparison, an assessment is made of the degree of comparability in terms of whether each participating organisation's position is equal to, heavier than, or lighter than the survey organisation's position. The accuracy of this assessment depends upon the reliability of the comparisons made during inter-organisational interviews, and is essential, therefore, that the information sought for each position comparison be planned in advance by making use of job analysis, job descriptions and job evaluation techniques.

Thus the usual method for ensuring comparability is the development of job descriptions through careful and reliable job analysis techniques. Job descriptions, sufficiently detailed to permit comparisons of job difficulty and responsibility, are prepared or adapted from existing job descriptions for use by the survey staff.

The necessity for accurate preparation of such job descriptions for survey positions is emphasised by Harker's²⁵ study on the reliability of wage and salary surveys, in which he found that generalised, ambiguous job descriptions led participating organisations to report widely diverse salary ranges for these jobs in contrast to the "spread" of salaries reported for jobs more clearly and specifically described.

Although the usefulness of the job evaluation system as a method of permitting development and comparison of job-level values when job duties of two positions are not comparable in a salary survey, has long been suggested and utilised²⁶, an effort to reduce the amount of subjective judgement that must be used along with job descriptions in comparing jobs, has been attempted. One author, for example, reported good results from a job content scale developed to pinpoint the level

²⁵ John B. Harker, "Making Sense out of Salary Surveys", *Personnel Journal*, XXXI (September, 1952), 131-134. See also N. Arnold Tolles and Robert L. Raimon, *ibid.*, pp. 290-291, for a discussion of factors which could affect survey reliability.

²⁶ Such a method was suggested as early as 1937. See A.W. Bass, Jr., "How Do Your Wage Rates Compare with Those of Your Community?" *Iron Age*, CXL, No. 25 (December, 1937), 36-39.

of a job encountered in a participating organisation²⁷. A scale was developed for certain jobs included in a survey. Several factors were formulated for each type of job, as well as several degrees of each factor, such that point values for each job could be obtained, and thus comparisons of these jobs could be made in terms of point values.

However, such a job content scale appears to be very similar to job evaluation. It thus seems more appropriate to utilise the job evaluation system in order to establish comparability, as such systems are readily available to all organisations.

A further attempt at reducing the subjectivity of the job evaluation system by utilising a structured job analysis questionnaire as a direct basis for establishing job dimensions and job characteristics, and eventually compensation rates for jobs, thus possibly eliminating completely the necessity for job evaluation procedures²⁸. This system, although thoroughly tested for validity and reliability, is yet to be applied to the salary survey as a method of establishing comparability, and as such remains untested. Thus, the job evaluation system remains the most useful technique of establishing a basis for obtaining position comparability. Some authors have recommended use of job evaluation systems entirely, to establish comparability. Kress²⁹, for example, suggests the use of a uniform job rating plan in all participating organisations in order to attain objective comparability. However, it is not always practical for different organisations to adopt the same job evaluation system to suit differing administration policies, merely for the sake of ensuring survey job comparability. Further, it is not always the case that the same organisations will participate in the same surveys on a regular basis. Survey organisations tend to form a core of regular participants within the same industry, but include different organisations from other industries or labour markets for each survey, such that as competitive a base as possible is maintained.

²⁷Wilbur R. Hanawalt, "Job Content Measurement in Wage Surveys", Personnel, XXIV, No. 5 (March, 1948), 350-359.

²⁸E.J. McCormick, P.R. Jeanneret and R.C. Mecham, "A Study of Job Characteristics and Job Dimensions as Based on the Position Analysis Questionnaire", Journal of Applied Psychology, LVI (1972), 347-367.

²⁹A.L. Kress, "How to Rate Jobs and Men", Factory Management and Maintenance, XCVII, No. 10 (October, 1939), 59-65.

The idea of such a uniform job evaluation system is unnecessary according to Chesler³⁰ whose research suggests that the particular job evaluation system used makes little difference to the evaluated results. The research undertaken by such author established that rates in six different organisations using a variety of job evaluation systems, but the same job descriptions and specifications, obtained essentially the same results. The inter-correlation between the use of different systems varied from 0,89 to 0,97, with an average of 0,94. These results serve to emphasise the idea that it is not necessary for participating organisations to use a uniform evaluation system. Each organisation may have its own system and sufficiently reliable survey comparability is likely to be obtained.

Under such circumstances, employment of a common system of job evaluation would permit development and comparison of job-level values. This could be accomplished by installing identical job evaluation systems in participating organisations, or by providing field survey staff with such a system and instructing them to use it when comparing jobs.

Although it has been suggested by Belcher³¹ that the job evaluation system may prove impractical on both economic and subjective grounds, should the organisation make frequent use of an established system, this same system could then be used as a practical method of establishing comparability in surveys, with a minimum cost factor involved. Another author, Stahl³², emphasises that the job evaluation system is invaluable to the salary survey process, as indicated by the following quote:

³⁰David J. Chelser, "Reliability and Comparability of Different Job Evaluation Systems", Journal of Applied Psychology, XXXII (October, 1948), 465-475.

³¹Belcher, Wage and Salary Administration, 49.

³²O. Glen Stahl, Public Personnel Administration (7th ed.; New York : Harper and Row, 1976), p.102.

"One point is especially clear: it would be next to impossible to carry on anything like the sophisticated survey process set forth if it were not for the existence of position classification (job evaluation). Valid comparisons.....are feasible only through job analysis and description, and,.....,the finding of prevailing pay data for selected job classes can be extended to all other classes only by use of this well established procedure."

Determining Information to be Obtained: Such determination is usually made in broad outline when the purposes of the survey have been defined. Although each organisation conducting such a survey will have its own specific purposes, it can basically be assumed that the survey is undertaken to adjust the pay structure such that compensation rates remain competitive. Thus, the range of information sought may include (1) wage rates; (2) hiring rates; (3) structure rates; (4) actual earnings; (5) wage changes; (6) wage policies and practices; (7) general increases; (8) incentive bonus plan; (9) allowances, etc.

Structure rates are usually those developed through job evaluation although they may simply be range minima and maxima set up informally. An organisation with a formal wage or pay structure may have a single rate for each job or group of jobs, or a rate range³³ for each job or group of jobs.

When an organisation has structure rates these should be requested, as a valuable comparison can be made between actual rates and structure rates. The distribution of actual rates may change quite rapidly with changing business conditions, while structure rates tend to be constant except for changes in wage levels.

It is this concept of rate ranges and the idea that the midpoints of such ranges represent that rate which is usually considered as that salary which is representative of the competitive rate of pay for all positions falling within that range, that

³³A rate range refers to a range of wage rates that may be paid to individual workers on a job; thus a wage and salary structure consists of a number of rate ranges. For a concise explanation of rate ranges, see Galhoon, Personnel Management and Supervision, 297-300.

emphasises the importance of the analysis of these rates as supplied by participating organisations, rather than individual actual rates of pay. As emphasised by Calhoon³⁴ most employers, in collecting survey data, prefer to use wage rate data rather than earnings data. One of the major reasons for this is the multiplicity of difficulties involved in comparing actual earnings. Earnings may vary not only with hours worked, but with payment methods and policies regarding wage supplements such as overtimes, shift differentials, etc.

In brief, the following categories of information are required from participating organisations:

A. General Information. The following general information should be obtained from each participating organisation and recorded on a form similar to Exhibit A, Appendix I. This type of information is usually relevant to the fringe-benefit section of a comprehensive compensation survey, but such information is necessary to the wage and salary survey section in that various of these factors may be taken into account when altering the pay structure.

1. Operational information, such as: (1) type of business activity; (2) number of employees; (3) size of organisation in terms of sales volumes; (4) manufacturing capacity; (5) profits; (6) number and location of major plant or facilities, etc. Operational information should apply to an organisations' operations inside the survey community, that is, the information should relate to the positions in the survey. If an organisation has operations outside the survey area, information related to the organisation's total operations should be recorded separately.

2. Compensation information applicable to the positions being surveyed such as: (1) base salary ranges (or structure rates); (2) recent history of changes in base salary structures; (3) general increases; (4) salary administration policies; (5) incentive bonus plans; (6) allowances; (7) subsidies, and so on.

³⁴Ibid., 297.

The nature and extent of compensation practices will reveal the participating organisations' philosophy toward their employees, and the degree to which they are comparable with those of the survey organisation.

B. Compensation Data. For each participating organisation, the following data should be obtained and recorded for each survey position: (1) base salary range (or structure rate) midpoint; (2) actual salary of each incumbent; (3) additional month payment (bonuses); (4) incentive bonus payments; (5) allowances; (6) premium payments; (7) subsidies, etc.

When a participating organisation does not have an established salary range for a position, as discussed earlier, the survey staff should obtain, in addition to actual salary data, the number of years such incumbent has been in the position (including prior comparable level positions, if any). As in the case of actual salaries, when individual years in position cannot be provided, the average years in position of all incumbents should be obtained. This data is required for the calculation of a hypothetical midpoint for the position³⁵. A form similar to Exhibit B, Appendix I, may be used for recording base salary data and related position information.

Selecting the Survey Staff: Typical tasks of the survey staff consists of collecting the data, and tabulating, analysing and summarising the results. Thus, it is necessary that this work be headed by someone familiar with wage and salary administration, and policies and procedures of the surveying organisation.

However, the most important task to be completed is that of actually collecting the information required, and this emphasises the responsibility for the accuracy of such information. It is this survey staff who must compare jobs, and must thus be fluent with the method developed to obtain comparability. It thus becomes necessary for the survey staff to possess a broad knowledge of the

³⁵Actual calculation of hypothetical midpoints is discussed on page 226.

jobs in the organisation, as well as the wage and salary practices, policies and procedures of their organisation.

It is usually the Personnel Department staff who are assigned primary responsibility for conducting such surveys. Usually it is necessary for such staff to call on other management employees to assist them for reasons indicated below:

1. Line management of the organisation should participate in the personal interviews with participating organisations as their knowledge of duties and responsibilities associated with certain survey positions is usually greater than that of Personnel staff. This is particularly true of management and supervisory positions under the line manager's supervision. The judgement of line management is often helpful in evaluating the similarities and differences in management positions. Further, it allows the line management to participate in the survey process and helps to reassure them about the validity of the results.

2. Compensation staff specialists of the organisation may be asked to participate in conducting surveys because their experience, particularly with respect to management positions, is usually broader than that of the Personnel staff.

Determining the Schedules: Schedules should be constructed so as to permit collecting of required information as conveniently as possible, and to permit tabulation and analysis as quickly as possible. The construction of such schedules is dependent on individual organisational preferences³⁶.

Determining the Survey Method: As discussed, three different ways of obtaining wage and salary information exist: (1) the telephone enquiry; (2) the mailed survey; and (3) the interview or organisation visit. Which of the three is applicable in a given wage study depends principally upon the purpose the survey is to

³⁶For examples of schedules see Appendix I. Also Belcher and Heneman, Technical Report Series, No. 2, and Belcher, Wage and Salary Administration, 53-63.

serve.

However, disadvantages of methods (1) and (2) listed above have been discussed earlier in this chapter. It is most commonly agreed that most productive of accurate wage data is the interview method, and because this method is the most reliable and accurate³⁷, emphasis has been placed on this type of method throughout this text.

The most productive of accurate wage data may be considered to be the interview method, which involves sending out survey staff in order to gather the necessary information from participating organisations. The important point to make is that these field men collect wage and salary data only after personally verifying job comparability by interviewing the necessary representatives of the organisations concerned. Thus, although this method is costly and time-consuming, it is perhaps the most useful in that it is most productive of reliable wage and salary data at present.

II. Conducting the Survey

The actual conducting of the survey may follow certain well defined steps in the process of wage and salary information collection.

Preliminary Contact with Participating Organisations: Once plans for conducting a survey have been completed, and participating organisations identified, they should be contacted to explain the purpose of the survey, and to request their participation. It should be explained that a survey team of the survey organisation is planning to conduct personal interviews for the purpose of exchanging information, that a summary report of the survey data will be furnished to each participating organisation, and that all data will be kept confidential.

After securing the agreement of the individual organisations to participate, it is desirable to send each participating organisation

³⁷Lionel B. Michael, Wage and Salary Fundamentals and Procedures (New York: McGraw-Hill Book Co., 1950), p. 106. Also Glenn Engelke, "Conducting Surveys", in Handbook of Wage and Salary Administration, ed. Milton Rock (New York: McGraw-Hill Book Co., 1972).

a Survey Booklet containing information about the survey organisation, abbreviated position descriptions, and organisation charts. The data supplied should be in the form of Exhibits A and B, Appendix I.

1. Exhibit A. This exhibit should contain survey organisation information to provide the participating organisations with data that will be helpful to them in making job comparisons, and that will serve as a model for the type of information they are asked to supply. Included in the questionnaire should be all questions with regard to fringe-benefit packages which the survey organisation wishes to analyse. This type of questionnaire has often been queried as a method of obtaining reliable information due to the fact that, as pointed out by Belcher and Heneman³⁸, the accuracy of the information reported by respondents depends on a range of factors which may prove invalidators of the reliability of results obtained. However, Dreher³⁹ studied how accurately respondents reported certain kinds of information when responding to a mailed questionnaire. By selecting a sample of managerial, professional and technical employees from a large oil company, and assessing the accuracy of certain responses to a mailed questionnaire related to salary issues, the results suggested that questionnaire data collection does not pose serious methodological problems for data of this type⁴⁰.

2. Exhibit B. This exhibit should contain a concise, yet complete summary of the survey organisation survey positions, and the related data which specifically applies to those positions. Particular care should be taken to ensure that the scope and magnitude data is pertinent to each position, and thus the need for accurate and reliable job analysis, and job descriptions. With respect to this exhibit, the section "salary information" should not

³⁸Belcher and Heneman, Technical Report Series, No. 2, 4. These factors have already been discussed on page 23.

³⁹G.F. Dreher, "Nonrespondent Characteristics and Respondent Accuracy in Salary Research", Journal of Applied Psychology, LXII, No. 6 (1977), 773-776.

⁴⁰For a detailed guide to field research questionnaire construction, see Thomas J. Bouchard, Jr., "Field Research Methods", Handbook of Industrial and Organisational Psychology, ed. Marvin D. Dunnette (Chicago : Rand McNally Publishing Co., 1976), pp. 379-384.

be completed in advance of the personal interview to avoid prejudicing the participating organisations in their selection of comparable positions; salary data should be furnished during the personal interview after position comparisons have been made.

Personal Interview: The purpose of personal interviews is to review tentative position comparisons made by the participating organisations, review the adequacy of data reported, and gather other general information of interest. These visits are helpful in establishing personal contacts which may prove valuable in future surveys and enquiries. The survey staff conducting these interviews should have with them complete position descriptions of the survey positions, and appropriate organisation charts to supplement information supplied.

Recommendations based on the survey results are only as valid as the comparisons of the survey positions. The personal interview, therefore, is an important aspect of the survey, and these interviews should be undertaken with care, and specific criteria used to judge the level of responsibility of participating organisation positions should be thoroughly explored by utilising the job evaluation system⁴¹.

Determining Job Comparability: As previously discussed, before the collection of wage data it is necessary to ensure comparability of jobs in the participating organisations with those selected by the survey organisation. In many ways this is the core of wage and salary survey procedure, and the step on which the accuracy of the final results depend.

In determining job comparability, the following criteria should be considered when making position-to-position comparisons:

1. Reporting Relationship. The relative location of the

⁴¹Ibid., 368-382 for a discussion field research interview methods and construction thereof. See also Gene F. Scollard, "Salary Surveys - How To Make Them Work for You", Management World, VIII, No. 7 (July 1979), 15-16.

survey organisation position, and the participating organisation position in their respective organisational structures is reviewed. The level of the positions to which they report, the number of positions which report to the next higher level position, etc., all have a bearing on which of the two positions is more difficult or more responsible.

2. Functional Responsibilities. The number of business activities for which each position is responsible is examined and evaluated. If, for example, two supervisory positions are being compared and one of them has additional responsibility for the development of work procedures, that position will be judged to be heavier.

3. Scope and Magnitude. Each position whether line or staff, should be described in terms of quantitative data that may be used in determining relative differences. For example, sales supervisory positions may be compared on the basis of sales volumes, realisations, number of employees supervised, number and type of customers, and other similar factors. Although it is more difficult to quantify the scope and magnitude of staff positions, it is possible to do so in many cases. A public relations position, for instance, can be described in terms of (1) the type and complexities of problems encountered and solved; (2) the level of the organisation client or organisation served; (3) the publics to which the work product is directed; (4) size of operating budget, etc.

4. Other. Other factors of significance should be considered, such as (1) limits of authority; (2) degree of functional guidance given and received, etc.

Because the specific criteria under these general headings vary from position to position, the survey staff should develop, prior to the personal interview, a description of the specific criteria for each position which should be used as the basis of comparison. Once the specific characteristics or criteria for each position have been developed, the survey staff is prepared to discuss these criteria with the participating organisations, and to record the comparative

data required to assess the comparability of the participating organisation's positions with the survey organisation's positions.

Thus, bearing the abovementioned criteria in mind, the task of the survey staff depends on the device or method selected to ensure objective comparability between survey positions, i.e., whether they are to make sure of (1) job descriptions; (2) job content scales; (3) job evaluation; or (4) any combination of (1), (2) and (3).

The approach should be one of emphasising job content and/or job requirements and de-emphasising job titles, as previously discussed. It is in this area that the job evaluation method has an additional application in the hands of the survey staff. Where they find it impossible to find a job in the participating organisation to correspond with the submitted job description, they may search for a job that, although it may involve different duties, has a comparable level of difficulty, or responsibility. When such a job is found, a job evaluation scale may be applied to determine whether the two are comparable in terms of job level value.

Obtaining Wage Data: Once it has been decided that similarity between positions is sufficient to warrant inclusion, actual wage data should be obtained from the participating organisations. This data may be obtained from payroll records of such organisations, and the importance of obtaining reliable data rather than estimates is a factor which may affect final results. The concept of the midpoint of existing salary ranges as the recognised "going rate" for those positions included in such ranges, may be utilised at this stage.

As mentioned in detail at an earlier stage of this chapter, the data to be collected may fall under the following general headings:

- A. General Information.
 - 1. Operational Information.
 - 2. Compensation Information.

- B. Compensation Data.

III. Tabulating, Analysing and Presenting Results

This process is undertaken according to systems and schedules drawn up by individual organisations. Should a comprehensive compensation survey be conducted, data may be divided into two tabulations, that is, one for wage data, and another for wage policies and practices.

A method of presenting wage data while at the same time maintaining confidentiality with regard to individual organisation figures, is the identification of data by organisation code, that is, each organisation is given a code which applies in survey reports, such that an organisation may compare its wage data with that of other organisations individually or collectively, without being able to actually identify other organisations.

The several possibilities for tabulating and presenting wage data from salary surveys may be roughly classified into: (1) classification by job; and (2) classification by job structure. A given report may use both methods. However, tabulation and analysis of data is dependent on individual organisational preferences, and practices vary from organisation to organisation⁴².

With regard to analysis of data, mention may be made, once again, of the midpoint concept. Although it is useful to have wage information applicable to specific jobs, what is needed most often are wage data applicable to wage and salary structures. If an organisation is to use going rate wage data in determining whether the level of its structure is in need of adjustment, it is this latter information which is needed. In this way midpoints of each salary group are obtained, and thus the actual "going rate" structure of each organisation may be compared.

This type of analysis is thus facilitated by the use of the job evaluation method. In this case the method is not utilised to determine job comparability, but rather to ensure a standardisation of each organisation's wage data by permitting use of a point scale

⁴²Examples of data tabulation, analysis and presentation may be found in Belcher, Wage and Salary Administration, 69-78.

in graphical plotting of wage data for comparison purposes.

It has been suggested by Stahl⁴³ that such a method of analysis would be greatly facilitated by participants making use of a similar job evaluation method, such that the completed analysis could be submitted to all participants for adjustment purposes. However, the disadvantages of a uniform job evaluation method have already been mentioned, while common practice is to submit a summary report of collected information to all participants such that they may apply their own methods of analysis.

This approach is very similar to the one suggested by Bass⁴⁴, whose plan calls for wage lines calculated and plotted for each participating organisation, as obtained from survey midpoint rates for each individual organisation. Wage lines for each organisation and the community average wage line are then plotted on graphs.

Although these methods are based on the assumption that the participating organisations use an identical job evaluation system, this is not a requirement for utilising such methods. As mentioned earlier, all that is necessary is for the organisation conducting the survey to have a job evaluation plan that has numerical values which may be applied for graphical comparison purposes.

As far as presentation of wage policy and practice data presentation are concerned, variations depend on the organisations conducting the surveys. Data may be presented in narrative form, or tabulated in a question-by-question form, or combined into a single table for easy comparison.

Preparation of Summary Report to Management: The salary survey findings and recommendations as regards adjustments to wage and salary structures may be submitted to management in a report which incorporates the following format and content:

⁴³O. Glenn Stahl, Public Personnel Administration, 100-102.

⁴⁴A.W. Bass, Jr., "How do Your Rates Compare With Those of Your Community?" Iron Age, CXL, No. 25 (December, 1937), 36-39.

1. Proposal. This is a summary statement that includes:

- (1) Recommendation that the proposed structures be adopted.
- (2) The effective date for implementation.
- (3) The average percentage by which the proposed structure differs from the existing one. (Exhibit N, Appendix I).
- (4) Reference to an exhibit in the Summary Report which contains the proposed structure. (Exhibit L, Appendix I).

2. Background. In this section the pertinent events that have taken place since the previous formal survey should be outlined:

- (1) Date of last survey and salary groups included.
- (2) The chronology and details of any interim adjustments that were made in the survey organisation including the compounded percentage increase in ranges since the previous survey.
- (3) The chronology and details of range changes made by participating organisations since the previous survey.
- (4) The chronology and details of general increases granted by the participating organisations and the survey organisation.
- (5) A statement of general economic conditions and trends, including any pertinent indicators, such as consumer price index.

3. Scope of Survey. This section should include:

- (1) Definition of geographic area covered by the survey.
- (2) List and description of participating organisations including an explanation of any variations from previous surveys.
- (3) Date of competitive data.
- (4) List, by salary group, of the survey organisations included in the survey.

4. Survey Techniques and Findings. This section may include:

- (1) A statement of the staff and line employees who were involved in the preparation of the job descriptions used in the survey, in the personal visits to the

participating organisations, in the analysis and review of data, in the review of the validity of job matches and adjustments, and in the preparation of the report.

- (2) Explanation of the techniques used in adjustment of competitive data, calculation of competitive salary group averages, construction of the competitive trend line, and calculation of the survey organisation base salary structures.
- (3) Reference to supporting exhibits.

Summary Report of Survey Data for Participating Organisations:

A summary of the survey data may be prepared and forwarded to participating organisations. To ensure confidentiality, data for each organisation may be identified by code only, i.e., by Company "A", Company "B", etc.

Survey data may be summarised for each survey position in a manner similar to that shown in Exhibits E and F, Appendix I, with the exception that competitive averages for the survey positions should not be included. Since these averages include data for the participating organisation positions and exclude data for the survey organisation, they are meaningless to the participating organisation.

SCOPE OF SURVEYS

Depending on factors such as size of organisation, type of operation, number of subsidiaries, placement of subsidiaries, diversification, numbers of employees, etc., the organisation conducting a salary survey must decide on whether to align wage levels (1) with the local labour market; (2) with the industry of which they are a part; or (3) with industry on a national basis.

Obviously, smaller companies and firms need only adjust according to the local labour market, but some organisations need to align wage levels according to the industry of which they are part. This is due to the fact that competition for experienced and qualified personnel in such an industry will be greater, the larger the number of organisations within that industry.

However, an additional set of problems is faced by organisations

with numerous installations in different sections of the country. These organisations may either (1) adopt the level of the industry of which it is a part, on a national basis; or (2) adjust levels according to community levels in the various areas where installations are located. This practice can be logically justified in terms of the trend towards decentralisation.

In cases where the organisation is made up of numerous small installations, Dean⁴⁵ suggests a thorough study of (1) the effect of city size; (2) regional influences; and (3) skill differentials in order to decide whether such local installation should be authorised to set their own wage and salary structures and levels.

It is thus a wide range of factors which influence the organisation's decision as to the scope of the salary survey, and thus the importance of adequate methods of obtaining reliable information.

EXECUTIVE COMPENSATION SURVEYS

The majority of wage and salary surveys are aimed at all positions up to top management level, excluding positions which fall at a higher level in the structure. In some cases, comprehensive survey staff may collect and analyse data for these higher positions on a separate schedule basis. The reasoning behind this is that the difficulties and pitfalls inherent in obtaining job comparability at executive levels are far greater than for those for lower levels, and thus involve a more involved process of establishing such comparability. It is this difficulty in obtaining job comparability at executive levels which highlights a major limitation of the job evaluation system, which is not well suited to determining relative worth of such professional jobs as those held by engineers, scientists and top management.

The reason behind this fact is that these jobs are far more difficult to describe and analyse in terms of the usual job content

⁴⁵ Joel Dean, "Geographical Salary Administration", The AMA Handbook of Wage and Salary Administration (New York : American Management Association, 1950), pp. 277-294.

and job factors. Research has been undertaken in an attempt to provide a method which adequately analyses these high-level managerial positions. Hemphill⁴⁶ approached the problem by factor analysis in order to try to determine the essential dimensions of executive positions. Prien⁴⁷, in a study similar to Hemphill's, managed to identify seven such dimensions, while Palmer and McCormick⁴⁸, also utilising factor analysis, managed to reduce this number by identifying four major dimensions.

However, agreement on a single method of executive position analysis is still to be reached. Job assignments to many professional and executive people are given on the basis of their individual professional qualifications and knowledge, and only in the very large organisations is it possible to describe broad categories of engineering, scientific, and executive jobs. Pigors and Myers⁴⁹ go so far as to state that it is pointless to talk about evaluating an executive job, when the real evaluation relates to what an individual has made of his job, compared with what others have made of their jobs; thus, in the final analysis, the executive is worth what his superiors believe he is worth.

However, bearing in mind that the basic objective of the job evaluation system is to evaluate the job and not the man, it is still possible to conduct executive surveys by utilising the same principles applicable to all other positions, with one major proviso, namely, that all executive positions be surveyed by a staff member who is involved with executive remuneration, in conjunction with the executives concerned.

Usually such executive compensation data will be collected by a member of the survey staff who is intimately involved with the remuneration of the executives within his organisation, and job

⁴⁶J.K. Hemphill, "Job Descriptions for Executives", Harvard Business Review, XXXVII, No. 5 (September-October, 1959), 55-67.

⁴⁷E.P. Prien, "Development of a Supervisor Position Description Questionnaire", Journal of Applied Psychology, XLVII (1963), 10-14.

⁴⁸G.J. Palmer, and E.J. McCormick, "A Factor Analysis of Job Activities", Journal of Applied Psychology, XLV (1961), 289-294.

⁴⁹P. Pigors, and C.A. Myers, Personnel Administration (New York : McGraw-Hill Book Company, Inc., 1951), p. 242.

comparability is established by him and similar counterparts from participating organisations. The nature of such compensation practices is thus kept on a confidential basis for each participating organisation.

This problem of executive compensation surveys was studied by the American Management Association who found that if organisations were classified by (1) industry; and (2) profit positions, reasonable figures could be obtained for executive positions⁵⁰. More recently, large survey organisations have begun to utilise their own job evaluation systems in order to establish some form of job comparability, such that executive surveys may be included under the same methods and conditions as those applicable to other positions, the only difference being that such surveys are undertaken on a far more confidential basis⁵¹. This is the case because the general approach when undertaking such surveys is to (1) described clearly the functions of each job; (2) establish status; (3) allow each organisation to establish which jobs are likely to be comparable, irrespective of job title; and (4) rely on an objective method of establishing job comparability. The attitude adopted is that these factors apply to all positions, including executive and professional levels.

However, it is clear that the problem of how to analyse and describe the functions of executive positions is a unique one which deserves added attention and research. Although survey organisations tend to adopt the attitude that the executive position may well be analysed on a similar basis as all other positions for survey purposes, the question with regard to adequacy of such analyses remains to be answered, and it is with these factors in mind that attention is paid to the development of both job evaluation and job analysis techniques, at a later stage of this text.

It is nevertheless necessary at this stage to mention the fact

⁵⁰ See Arch Patton, "How Much Should An Executive Be Paid?", Executive Compensation : Company Policies and Practices, Financial Management Series, No. 97 (New York: American Management Association, 1951), pp. 16-22.

⁵¹ For example, Peromnes Salary Surveys (Pty) Ltd., and Urwick International (Pty) Ltd.

that recent research into job evaluation methods has been completed with a view to incorporating executive positional analyses on a similar basis to that utilised in analysing all other positions within a single organisation. For example, Paterson⁵² has developed a job evaluation system which relies on levels of decision making within an organisation as a common factor in evaluating all positions, and naturally such a system accommodates the executive level, as the decision making process, rather than a number of physical and mental factors, is of primary importance at such levels. This approach will be discussed in greater detail at a later stage. Further, Berg⁵³ focuses his attention on the concept that "job contribution" rather than "job content" should be instrumental in the designing of a wage and salary survey program which includes executive compensation. He believes that content-oriented systems measure and reward job activity rather than job results and the contribution that jobs make to the success of the organisation. The critical factor in this approach is job evaluation, and thus Berg has devoted much of his writing to the structuring of a job evaluation system which is pertinent both to the wage and salary administrator as well as those responsible for executive compensation.

The development of a system which takes into account professional and executive salary problems thus becomes a vital factor in the effectiveness of the wage and salary survey program. Preferable would be a system which analyses executive compensation according to the same principles and techniques applicable to all other positions, and yet effectively analyses the job content factor for comparability purposes⁵⁴.

THE "NON-WHITE" FACTOR

Due to the uniqueness of the South African labour market it is necessary to mention the affect of Non-White salaries on the analysis

⁵²T.T. Paterson, Job Evaluation, (London: Pitman Press, 1972), Vols. I and II.

⁵³J. Gary Berg, Managing Compensation, (New York: American Management Association, 1976).

⁵⁴A Comprehensive study of executive compensation is provided by G.S. Crystal, Executive Compensation : Money, Motivation, Imagination, (2nd ed.; New York : AMACOM, 1978).

of survey data, and the adjustments of pay structures as a result of such analysis. However, in order to discuss the affects of the Non-White salary it is necessary to once again refer to the role of job evaluation in the determination of the organisational pay structure.

As mentioned in previous chapters, the realisation that job evaluation is a vital tool in both the internal structuring of positions within an organisation according to relative worth, as well as the pricing of such a structured hierarchy according to internal and external factors, has resulted in an increasing necessity for the organisation to utilise as objective a technique as possible. The necessity for a reliable determination of competitive external rates, regarded as "going rates" in the labour market, has thus led to the development of the wage and salary survey which in turn has led to the reliance on the job evaluation method as a means of obtaining necessary job comparability. Essentially it is in fact this utilisation of job evaluation principles in determining the pay structure through establishing the internal hierarchy and obtaining job comparability as a basis for surveying salaries of identical positions which has vital consequences to the comparison of actual White versus Non-White salaries within the South African context.

According to Livy⁵⁵ the important finding from the application of job evaluation principles to the determination of the pay structure is the apparent logarithmic relationship of existing salary rates to the different salary grades, or ranges; pay differentials between each range increase exponentially, i.e., when current pay rates are plotted on a log scale, the scatter points on the graph do not form a perfect straight line, but fall sufficiently close to indicate that the line of best fit is straight. In effect, this means that the percentage differential between the major job grouping will be constant.

However, in practice the line is rarely ever straight, as there

⁵⁵B. Livy, Job Evaluation (London: George, Allen and Unwin, 1975).

will have to be some departures from the straight line due to the forces of the labour market, as exemplified by the pay rates of computer personnel which have distorted many organisational pay structures. Similarly, the pay rates applicable to certain Non-White categories have the potential to distort more organisational pay structures than any other single set of employees. The important point to make is that these inflated or deflated pay rates should not be built into the basic structures as permanent values, but should rather be treated as separate and distinct problems which should not affect the competitive pay structure as such, a factor which has been emphasised by Husband⁵⁶ in his analysis of the Paterson job evaluation system.

Thus, it is clear that the South African organisation's pay structure may well be affected by labour market forces which may, due to various factors, initiate distorted pay rates for certain categories of employees. Therefore, where there are marked deviations from a straight line, or where the slope (differential) is excessively steep or shallow, problems can be expected on the pay and industrial relations fronts. Problems can also be expected where there are marked changes in slope from one salary range to another, and with these points in mind, organisations attempt to structure their pay systems in such a way that the curve which turns out in effect will represent what is perceived to be fair - hence the importance of salary survey data, which may be regarded as reliable in terms of the surveying of competitive representative rates rather than actual salaries.

As a result, and due to this uniqueness of the South African labour market situation, careful attention must be paid to the abovementioned factors when undertaking a wage and salary survey. A study undertaken by Cogill and Pearson⁵⁷, in which data from a sample of 370 jobs, 23 000 employees across a spectrum of 357 organisations, 10 industrial sectors and 10 geographic locations relevant to the

⁵⁶T.M. Husband, "How To Evaluate Jobs", Management Today, VII (1968), 59-61.

⁵⁷Charles Cogill, and Maggie Pearson, "The Wage Gap : Job Evaluation and Pay Structuring", People and Profits, VI, No. 4 (October, 1978), 5.

South African market was applied to the Paterson model, revealed that the differential in pay between White and Black males, compared on the basis of equivalent skill, is in the region of 50% for those falling within a "skilled" category. Further, the 1978 and 1979 Urwick International survey figures show that the wage gap is still very much in evidence though concerted efforts have been made by employers to increase salaries of their Non-White staff, and in actual fact although Non-White employees are enjoying a quicker rate of pay increases in Rand terms, the wage gap has actually widened slightly⁵⁸.

The significance of this wage gap to the wage and salary survey is important in that there is a tendency to survey actual salaries, and to further utilise such actual salaries as the basis for an analysis which provides the community averages which in turn are utilised to adjust entire pay structures. Clearly the existence of such a gap between White and Non-White salaries tends to distort such community averages, and this distortion undoubtedly affects the pay structure adjustments.

The argument behind the surveying of actual salaries in this case is that meaningful comparisons between White and Non-White salaries can only be made where comparisons are between identical positions, and therefore the actual salaries applicable to such jobs. However, such arguments are not accepted by Britain or America today, and pressure has thus been applied to South African subsidiaries to determine pay structures independently of race, and according to principles of job evaluation, which in turn requires a basis of jobs being grouped according to similar levels of skills or decision making.

These job evaluation principles requiring the grouping of jobs according to skills or decision making should, therefore, logically predetermine the necessity to survey salary data on the basis of such groups. In other words, survey guides should aim at the gathering and analysis, not of actual salaries, but of those pay

⁵⁸As revealed by surveys conducted by Urwick International (Pty) Ltd., 1978, 1979.

rates representing the competitive rates for each group of such positions. Such competitive pay rates are regarded as being the midpoints of salary ranges representing the various groups of jobs or positions.

The Non-White factor thus presents a problem to the wage and salary survey field in South Africa which requires careful attention, and the development of a guide or system which effectively neutralises such problems as potential distorters of the pay structure.

Such problems, as well as previously discussed problems, are considered and discussed in the development of a new approach to the wage and salary survey in the following chapters, taking into account the work being done on wage and salary surveys in this area.

CHAPTER III

THE RATIONALE FOR A NEW SYSTEM

Although the complexities involved in developing a wage and salary survey system have been underlined, the importance of the role of such a system in the administration of wages and salaries serves to underline the necessity for the development of a system which utilises techniques which are as objective as possible.

Although the role of the wage and salary survey has been emphasised as being one of aiding the organisation in setting wage and salary levels, further purposes may be defined in the fulfilling of organisational objectives.

A most important and frequent use of the wage and salary survey is to validate and update the wage and salary structure of the organisation, such that rates of compensation remain competitive in the labour market applicable to the particular organisation concerned. Even though these structures are developed within the organisation, it is necessary to continually check the slope and setting of the structure against the market. In this way it may be discovered that certain jobs within the organisation structure are paid at much different rates than the community average, and if this is the case, the reasons for such discrepancies can be uncovered by survey procedures.

More specifically, an organisation, through the use of the survey system, seeks to control wages and salaries in the organisation to ensure that these prices are serving their proper function and are neither too high nor too low; to maintain consistency throughout the organisation by establishing standard wages and salaries for standard occupations; to adjust wages and salaries with changes in labour markets; to pay more money for more difficult and more responsible jobs than for less difficult and less responsible jobs, thus

maintaining equity in wages; to recognise the principle of merit in compensating individual employees according to proficiency as members of respective occupational groups; to provide incentive both on a specific job and by making promotions attractive to employees; to improve and provide rational methods of adjusting wage issues¹.

In general then, the salary survey may be regarded as a control mechanism in the administration of wages and salaries. Data on community wage levels, structures, progression, payment methods, and fringe-benefits, together with internal data are the essentials with which this control mechanism operates.

As suggested, prevailing wage and salary patterns have an important impact on the wage and salary structure and the overall level of wage payments within most organisations. Even those organisations which do not undertake wage and salary surveys are affected by these environmental pressures, and it thus becomes necessary to respond to signals from either the internal or the external environment that all is not well with existing wage and salary structures. It thus becomes vitally important for the larger, more competitive organisation to gauge the upward movement of wages and salaries, and living costs, and it is in this important area that the wage and salary survey may be regarded as an essential mechanism.

It is in the light of the above facts it may be stated that, due to the important role of the compensation survey in the administration of wages and salaries, it is imperative that constant effort be made to improve survey procedures. Obviously, the most important aim of such procedures should be to obtain compensation data which is as accurate as possible, since the decision to adjust an organisations' entire salary structure will be based on the analysis of such data. It is therefore necessary that such procedures incorporate data gathering techniques which are as objective as possible, and it is precisely the fact that existing systems necessarily incorporate

¹For a discussion of the uses of wage surveys, see Stanley P. Farwell, "The Use of Wage Survey Data", Conducting Wage Surveys, Research and Technical Report IV, 1-8. Also Albert L. LeDuc Jr., "Salary Surveys : Use Them, Don't Abuse Them", Data Management, XVI, No. 7 (July, 1978), 68-72.

subjective techniques which has led to the questioning of the reliability of such systems in terms of data collection and analysis.

DISADVANTAGES OF EXISTING SURVEY PROCEDURES

Although existing procedures, as discussed in Chapter II, minimise disadvantages with regard to subjectivity involved in data gathering and analysis techniques, a system is yet to be developed which effectively eradicates all, or at least the major disadvantages involved. Such disadvantages are in actual fact potential invalidators of the final data analysis, and therefore of the system as a whole:

1. Under existing procedures, a number of "key positions" are selected from the position hierarchy and the job descriptions/specifications of these positions are utilised to establish a basis for position-to-position comparisons with similar positions of participating organisations. These position comparisons are made at all levels, taking into account specific job content, employees supervised, levels of responsibility, and other related aspects. These comparisons are made in order to establish an average competitive rate of pay for each position, and collectively provide the basis for appropriate wage and salary structure and level adjustment for the organisation as a whole.

In order to achieve such comparisons, a method of ensuring comparability must be utilised, which, in many cases, involves salary data adjustment on a necessarily subjective basis. Not only does certain position monetary salary data require adjustment in order to account for intra-organisational positional variations in scope and magnitude of the abovementioned factors, which results in cumulative adjustments on a subjective basis, but the initial comparison basis of such positions requires reviewing after subsequent surveys.

2. The use of "key positions" as a basis for adjusting an entire organisational wage and salary structure indicates that only up to fifteen percent of the positions contained in the hierarchy are selected for comparison purposes. Thus, the data obtained from such comparisons provides the basis for a decision on the adjustment of an

entire structure, which once again indicates a cumulative effect in the possibility of inadequate data collection. Not only is the entire job hierarchy represented by a fraction of the total, but the salary data of a number of this representative group of jobs requires adjustment on a subjective basis in order to obtain comparability, due to the fact that perfect intra-organisational position-to-position match is seldom obtained.

3. Further, even though an average of fifteen percent of positions contained in the position hierarchy are selected for comparison purposes, unless careful adherence to key position criteria is observed, the actual choice of such positions becomes arbitrary, and as such, subjectivity as regards such choice is precipitated. Once again, the importance of such a choice is evidenced by the fact that the data obtained from comparisons of these positions provides the basis for a decision on the adjustment of existing wage and salary structures.

4. A factor which further aggravates the question of comparability is that participating organisations vary in their approaches to both analysing and evaluating their jobs, which indicates that evaluation factors taken into account in the drawing up of job descriptions/specifications undoubtedly vary from organisation to organisation. This creates a problem in the re-evaluation of those positions requiring adjustment and weighting in order to achieve comparability, due to the fact that these positions are re-evaluated according to the job evaluation system, or plan, of the survey organisation. Thus, unless a uniform job evaluation system is utilised by all participating organisations, which is unlikely, existing job descriptions have to be utilised for re-evaluation purposes, and these descriptions may not contain factors vital to the survey organisation's job evaluation plan.

5. The facts that each organisation has a different wage and salary structure, a different number of salary ranges within this structure, a different percentage spread between maximum and minimum rates of ranges, and different group-to-group progression rates, adds to the complications involved in salary data weighting for comparability purposes, which in turn adds to the level of

subjectivity involved. This is further aggravated by the fact that participating organisations may be operating within different fields of the economy, and within different industries, which may result in a difference in what may be regarded as competitive rates of pay for key positions.

6. Under existing systems, most organisations make position-to-position comparisons on an actual salary basis, which does not, because of human potentials, reflect the true value an organisation plans on its levels of responsibility. The surveying of actual salaries has the effect of surveys chasing surveys. The basic problem in this regard is that certain individuals within the organisation are compensated according to what management feels they are worth, rather than according to their efficiency and effectiveness in relation to the job description/specification and the job evaluation techniques. Thus surveying these positions will result in a reflection of subjective rather than objective worth.

7. The surveying of actual salaries is of particular disadvantage to the South African situation due to the problem of Non-White salaries and the "wage gap". Surveying actual salaries within the South African community setting may have undesirable effects on the analysis of survey data due to the gap between White and Non-White earnings, assuming that such analysis compares actual salaries on an identical position-to-position basis, and not on the basis of being grouped according to similar levels of skills or decision making. The analysis of actual salaries in this case would provide inaccurate average community pay rates due to the marked difference in pay rates applicable to Whites as opposed to those applicable to Non-Whites having the same skills, etc. These community average rates thus derived would not represent the competitive community rates applicable to the relevant levels of skill and decision making for that particular group of positions.

8. Those positions regarded as key positions by the survey organisation may not be regarded as key positions by participating organisations due to factors mentioned in (5) above. This further complicates comparison and adjustment factors.

9. Most important, present systems are both timeous and costly. The time factor involved in the completion of a comprehensive survey utilising procedures outlined in Chapter II may vary from five to six months, and involves great cost².

10. Existing systems do not allow for an adequate survey of data relating to executive positions. The problems involved in executive level surveys have already been mentioned, and although attempts have been made to overcome these problems, existing procedures still incorporate executive positions under the same analysis, evaluation, weighting and survey procedures as those utilised for all other positions.

THE BASIS FOR A NEW SYSTEM

The vital factor which is revealed by the aforementioned disadvantages is that the unavoidable subjectivity involved in the basic techniques utilised in survey procedures tends to have a cumulative effect on both data collection and analysis, and therefore, interpretation. As each technique is utilised, whether it be to obtain job comparability or to adjust salary data, the overall level of subjectivity is increased, which results in a cumulative increase in the margin of error involved in data collation.

Although systems have been developed to effectively minimise such effects, for example the Midpoint System³, the problem with regard to effective elimination of such factors, such that the cumulative effect, not only in present surveys but in utilisation of these techniques in subsequent surveys, is yet to be solved. The practical solution to this major problem necessitates the development of a system which initially minimises the utilisation of such techniques, and eventually

²See R.J. Snelgar, "A Guide to Conducting Compensation Surveys" as an example of time and cost involved in the utilisation of such procedures.

³Ibid., 70. Another example of such a system which relies on the surveying of a relatively few key jobs in order to determine organisational and labour market wage relationships is supplied by Leonard N. Persson, "A Method for Determining What the Job is Worth." Administrative Management, XXXVIII, No. 3 (March, 1977), 57-60.

eliminates their necessity altogether, while at the same time obtaining survey results which are both valid and reliable in the light of community practice.

The basis for the development of such a system should therefore be one which relies on wage and salary structural comparisons rather than individual positional comparisons which require subjective adjustment. In other words, the survey organisation relies on comparisons of complete wage and salary structures (pay structures) of all participating organisations, such that an average survey community structure may be developed and analysed. In this way a structural comparison method of gathering and analysing salary data may be developed such that complete job hierarchies, or wage and salary structures are utilised to determine to what extent the survey community as a whole has adjusted its pay scales and ranges.

In order to make comparisons on such a basis it is necessary to standardise the salary structures and ranges of all participating organisations according to the structure of the survey organisation in such a way that each organisation's groups of salary ranges are readjusted on a group-to-group comparison basis. In short, the wage and salary structures of participating organisations are adjusted according to one standard format, namely, that of the survey organisation, such that salary ranges rather than individual positions may be compared. An important factor to note, however, is that although the complete structures may be altered to a standardised basis, actual salary ranges remain unchanged in terms of minimum, midpoint and maximum salary levels. This point is important in that group range comparisons form the actual crux of the rationale behind such a method. Those midpoints of ranges which represent that rate of pay which is regarded as being the competitive "going rate" by particular organisations for that group of positions falling within such a range, thus remain unaltered for comparison purposes.

The aim behind this structural comparison method is to replace the timeous process of position weighting and monetary data adjustment necessary under existing survey procedures, and thus eliminate the cumulative effect on the margin of error introduced by subjective

techniques. However, in order to standardise participating organisation wage and salary structures, it is necessary to establish which salary ranges are in actual fact comparable. In other words, the standardisation process necessarily involves the establishing of certain matching "key ranges", which will be regarded as those base salary ranges which, by definition, can be perfectly matched with one of the survey organisation's ranges. These matched ranges will then provide a basis for a standardised readjusted wage and salary structure. In order to establish such "key ranges" it is necessary to utilise the job evaluation and job analysis techniques of the survey organisation on a one-time basis, but, most important, on as objective a basis as possible.

Thus, in order to establish a structural comparison basis, the technicalities of which will be discussed at a later stage, it is necessary to establish salary range-to-salary range (or group-to-group) comparisons according to midpoints representing the competitive rates of pay for job description requirements of the groups of jobs within those ranges. This requirement necessitates the meticulous analysis and evaluation of the groups of jobs represented by these "key ranges" such that satisfactory midpoint comparisons may be established. This in turn indicates the necessity to establish a uniform job analysis and evaluation process which will prove both reliable and valid, and which will thus provide as objective a basis as possible for salary range comparison purposes.

Once such a structural comparison process has been established it will no longer be necessary to utilise job evaluation, job analysis, job descriptions or any other techniques necessary for adjustment and weighting purposes, due to the fact that standardised wage and salary structures would have been developed by using these techniques on a one time basis only. All further surveys may be completed utilising these same standardised structures for salary data comparison purposes, as the only alterations that may be required would be in the case of an increase or decrease in the number of ranges constituting a total structure of any particular participating organisation.

This structural comparison method in effect eliminates the cumulative effect of subjectivity in that it eliminates the necessity for salary data adjustment and positional weighings. In short, the following advantages are apparent:

1. Comparisons may be made of all jobs at all levels and not only of a selected few key positions. This is so, due to the fact that entire job hierarchies are represented by the midpoints of the standardised structures being compared.

2. The adjustment of an organisations entire wage and salary structure will now be based on as broad a base as possible, in that a community average structure may be established from the initial total structural comparisons.

3. There is no necessity to select key positions according to strict criteria as position-to-position comparisons fall away, which indicates that subjectivity in this area is eliminated, alongside all other disadvantages attached to the utilisation of these key positions.

4. Subjectivity is effectively eliminated as positions do not require evaluation and weighting factors.

5. Human elements, for example, good performance, qualifications, etc., have a limited effect, if any, on the salary data, and thus on the resultant structure. Structural comparisons involve comparisons of range midpoints, and exclude totally the concept of surveying actual salaries.

6. A comparison of pay structures rather than individual positions eliminates the tendency to survey actual salaries, a factor which is particularly relevant to the South African setting. As mentioned, certain analysts argue that meaningful comparisons between White and Non-White salaries can only be made where comparisons are between positions which are identical - for example, between White truck drivers and Non-White truck drivers, and thus the tendency to survey actual salaries. However, due to the potential danger of the wage gap in such a situation there is a necessity for a movement

away from surveying actual salaries, and surveying by structural comparison provides the basis for comparing total pay structures determined according to principles of job evaluation, and on the basis of positions being grouped according to similar levels of skills or decision making. This effectively eliminates the problem of the wage gap distorting competitive average rates in the South African setting.

7. A structural comparison method effectively incorporates positions at both professional and executive levels in that midpoints of the representative ranges are incorporated in the overall comparison. Thus, the difficulties involved in the analysis and evaluation of these positions are not applicable since position comparisons and salary data weighting is not applicable.

8. The time needed to conduct a survey on this basis would be minimal in relation to the present system, and accordingly, the cost factor would be proportionately reduced.

As previously mentioned, in order to establish the basis for such a system, it is necessary to make use of certain concepts presently incorporated in existing systems, but on a one time basis, and with one exception, namely, techniques should be tested and utilised with absolute attention to detail such that the lowest possible level of subjectivity may be established and maintained.

Most important of such concepts are those utilised by the Midpoint System⁴:

1. The midpoint concept. Where participating organisations have established salary group ranges, i.e., a minimum and a maximum salary for each group of positions within the structure, the midpoint salary of the range is usually considered as that salary which is representative of the competitive rate of pay for positions within that salary group. It is this salary which should be used for comparison purposes in order to eradicate the problem of subjective rather than objective worth of positions being surveyed.

⁴Ibid., 67.

2. The key position concept. As suggested, the idea of position-to-position comparisons according to key position selection does not apply in the case of structural comparisons. However, in order to initially establish standardised structures, the concept of key positions must necessarily be utilised in order to provide a foundation for standardisation. The utilisation of this concept will thus reduce the problem of arbitrary selection of positions. An important distinction to make between existing system and structural comparison system utilisation of this concept is that existing systems compare key positions in order to establish approximate comparisons, while in order to justify the base for the structural comparison system, key positions must be utilised to establish exact comparisons.

3. The job evaluation concept. Once again, utilisation of the job evaluation concept for evaluation of all key positions will be used on a one time basis, the only distinction between existing system usage and structural comparison system usage being that a uniform job evaluation plan should be utilised to evaluate key positions concerned, and not necessarily to adjust or weight salary data according to existing job descriptions. Such a system further provides an adequate identification and selection of key positions in terms of the basic job evaluation principles of the plan to be used. It is thus through the careful application of an adequate evaluation technique that groups of comparable jobs, and thus ranges, may be identified on a uniform basis, which ultimately leads to identification of comparable midpoints.

Once such concepts have been carefully applied to establish a basis for the structural comparison method, their application is no longer necessary and they become redundant as useful techniques, thus ensuring that there is no cumulative effect of subjectivity in both the short and long term, due to continued application.

The application of the structural comparison method thus aims at effective and competitive adjustments to wage and salary levels and scales on a long term basis. In short, this method attempts to meet four basic aims of an efficient and effective salary survey system:

1. Minimisation of time needed to conduct a wage and salary survey, and thus minimisation of the cost factor.

2. An adequate basis for comparison of all positions in the hierarchical structure.

3. Elimination of subjectivity by elimination of the necessity for position data evaluation and weighting.

4. Elimination of the effect of "subjective worth" on the data gathering and analysis system.

P A R T I I I

DEVELOPING A BASIS FOR A STRUCTURAL COMPARISON SYSTEM:
THE ELEMENTS OF JOB EVALUATION

CHAPTER IV

JOB EVALUATION SYSTEMS/METHODS

THE NECESSITY FOR JOB EVALUATION

Previous chapters have stressed the importance of job evaluation in the flow of events determining within the organisation wage and salary payments. However, not only is such a system invaluable in the setting of wage and salary structures, but it is relied upon by existing wage and salary survey methods as an aid to setting and adjusting wage and salary levels, and as such has been developed as a most important technique in the administration of remuneration.

As wages serve to determine their relative worth within the organisation as well as their standard of living in society, employees tend to be sensitive about the amount they are being paid for their work. It is essential, therefore, that wages of employees be determined on a basis which is as objective as possible, and that will ensure them equitable treatment and enable them to recognise this fact.

Several systems have been developed by which the relative worth of jobs may be measured objectively for purposes of wage determination. Data pertaining to the evaluated worth of each job, when combined with that obtained from wage and salary surveys provide the basis for a pay structure into which these jobs may be classified. This structure may establish a rate range for each of the job classes in order to provide rate increases for employees. Employers must take cognisance of such factors as prevailing wage laws, conditions of the labour market, trends in living costs, and economic conditions when objectively determining the amount to be paid for each job.

It is precisely the necessity for a high degree of objectivity in wage determination which has led to the interreliance of the job evaluation and existing wage and salary survey systems. However, as

discussed in the previous chapter, it is also this interreliance which has led to a cumulative effect on levels of subjectivity involved in undertaking wage and salary surveys. This situation has evolved due to the fact that, as the job evaluation system is the process of determining the relative worth of the various jobs within the organisation, so that differential wages can be paid to jobs of different worth, the system naturally assumes that there is a high degree of consistency between the resulting rate structure and the rate structure in the broader community, and is thus utilised as a technique in both internal and external wage determination. Conversely, without the wage and salary survey as a method of determining the community structure, the internal organisational rate structure could not possibly relate to the external community rate structure. Thus, interreliance of the two systems has led to cumulative levels of subjectivity in the adjustments of internal structures.

Although an attempt is made to eliminate the reliance of the wage and salary survey on the job evaluation system, and thus eliminate cumulative subjectivity factors, it is important to state that in the development of a new survey basis, namely, the structural comparison basis, the job evaluation system is initially required as a very significant tool in establishing a foundation on which the complete system may be built. Thus, although job evaluation falls away as a useful technique, once such a system has been established, the relevance of the initial usage of such a system warrants a detailed study of available systems and/or methods and plans such that one particular method may be chosen and utilised.

However, the job evaluation plan alone does not provide a sufficiently broad base for data gathering in the wage and salary survey. Although the job evaluation plan is utilised to re-evaluate positions for comparison purposes, and weight salary data accordingly, it is the flow of events in the job evaluation system as a whole which provides the basic elements necessary for positional comparisons. Looking again at FIGURE 1 in Chapter I, we note that a complete flow of events is involved in the job evaluation process, and it is basically this flow of events which has been grafted into existing survey procedures.

The further technique in this process which is extensively used is the job analysis system which provides basic data necessary to draw up job descriptions and specifications of key jobs chosen for comparison purposes during surveys. Without such a system of analysis, the job evaluation plan would be almost worthless as a weighting technique. However, job analysis also lends itself to subjectivity, as will be discussed in further detail at a later stage, and this factor adds to the disadvantage of the utilisation of such a flow of events in the survey procedure.

Thus, in an attempt to eliminate the usage of this flow of job evaluation elements, and thus eliminate cumulative subjectivity in the undertaking of successive wage and salary surveys, it becomes necessary to carefully study the techniques and methods involved, such that careful attention may be pinpointed on those areas involving higher degrees of subjective judgement. This is necessary, as mentioned in the previous chapter, such that a carefully selected flow of these events may be used on a one time basis so as to provide a foundation for a structural comparison method of undertaking wage and salary surveys.

Although the flow of events in this process is initiated by the process of obtaining job facts such that job descriptions and specifications may be drawn up for eventual evaluation purposes, it is in actual fact the job evaluation method which may predetermine which job factors are to be emphasised in the job analysis process, and it is thus the different job evaluation methods which deserve initial attention.

CONVENTIONAL METHODS OF JOB EVALUATION

Job evaluation is the process of analysing and assessing the content of jobs in order to place them in an acceptable rank order which can then be used as a basis for a remuneration system. In other words, job evaluation becomes the process of deriving indices of relative job values within an organisation on the basis of judgements about the jobs. In turn, the indices of relative job values are utilised as the basis for determining wage rates of the jobs that are covered by the system. Job evaluation, therefore, is

simply a technique designed to assist in the development of new pay structures by defining relativities between jobs on a consistent and systematic basis.

This contrasts sharply with the practice in many organisations of making arbitrary judgements often based on short term expediency about the payment of particular jobs, with no reference to common criteria and inadequate reference to the effect of pay decisions on other jobs within the organisation. The development of sound pay structures is more likely to be achieved using job evaluation than "rule of thumb" methods. However, such a system cannot be completely accurate, since it depends on judgements of evaluators concerned, but these are informed judgements based on detailed studies of the jobs and comparisons of their contents, and for this reason relative evaluations are likely to be more reliable and acceptable to employees than are haphazard determinations. Thus, an important fact emerges, namely, that job evaluation is not a technique of exact measurement; nor is it, as some have claimed, "scientific": there is no method of job evaluation which has the exactitude of a mathematical technique. It is a process of assessment based on a series of judgements which contains, therefore, an essential element of subjectivity.

Properly used then, job evaluation can provide the means of achieving a job or base rate structure, and by the development of suitable procedures, can additionally provide a means of keeping the base rate structure up to date as jobs alter in scope and content and as new jobs appear.

Bearing such factors in mind, the organisation is faced with the problem of selecting a single method from the many which have been developed over the years. Although some methods differ significantly from others, there are, within each, elements common to all. The four methods which are most commonly used are the conventional basic methods from which numerous other methods have been developed. The four basic methods are: (1) the ranking method; (2) the classification method; (3) the factor-comparison method; and (4) the point method, which is by far the most widely used¹. It is

¹Bureau of National Affairs, Job Evaluation Policies and Procedures, Personnel Policies Forum Survey No. 113, (Washington, D.C. : Bureau of National Affairs, 1976), pp. 2-3. For a comprehensive critical-analysis of various job evaluation methods, see Paterson, Job Evaluation, I.

further possible to distinguish non-analytical and analytical methods among these four conventional methods. Non-analytical methods include classification and ranking. Their strength lies in their simplicity, while their weakness lies in the fact that they are best applied where the job population is small or unifunctional, thus inhibiting application in large, complex organisations. Analytical methods include factor comparison, and the point methods, the basis of such methods being to analyse the content of each job in terms of elements, and then to assess the degree of each element or characteristic demanded by each job, which has proved an overall strength.

However, over the last few years the tendency has been for organisations to develop newer methods which have either been some combination or adaptation of the four basic conventional methods, or, in an attempt to move away from subjectivity, to develop new approaches. In South Africa the tendency has been to adopt these newly developed methods, and a number of these methods are presently in use, for example, the NIPR Q Method, the Hay Guide Chart Profile, Peromnes, Urwick Profile, and the Paterson systems. It is not intended here to provide a critical-analysis of all these methods, but rather to choose those systems which are most commonly used in South Africa in an attempt to establish which method may most suitably supply a comprehensive but adaptable basis for establishing a structural comparison method of conducting wage and salary surveys.

Whether to use a ready-made system or a custom-built system, however, depends mainly on whether a ready-made system can be found that has as its basis compensable factors identical to those selected by the survey organisation. Otis and Leukart² feel that there are advantages to be gained by using a system operating successfully in a number of organisations, the most important being the ease of comparing wage data and standardisation of job titles. In any case, the job evaluation system finally applied to the survey organisation must be based upon the compensable factors determined by the

²Otis and Leukart, Job Evaluation : A Basis for Sound Wage Administration, 48.

organisation to be applicable to its jobs³, and, therefore, to the groups of jobs selected for "key range" comparison purposes.

As a basis for the decision on the method of job and range comparison to be employed, and the job evaluation system to be utilised, it is necessary to briefly critically-analyse the four basic methods prior to discussing those methods which are at present most commonly used in South Africa.

I. The Ranking Method

A single ranking is made of the relative worth of various jobs examined. Usually a committee ranks the jobs in the organisation from highest to lowest in terms of the estimated relative worth. No attempt is made to determine the critical factors of the jobs; only an overall judgement of the relative worth of the job is made. It is the simplest of the job evaluation methods, and the easiest to explain. Another advantage is that ranking takes less time to accomplish than other methods.

A major disadvantage is the fact that there are usually no agreed-upon guides as to what elements or aspects of jobs the organisation considers to be of value, and this leads to the danger that ranking will be done in a very subjective fashion on the basis of impressions rather than fact. Further, it is highly unlikely that a committee will be familiar with all the jobs to be evaluated. Further disadvantages are attributable more to the way the method is used than the method itself⁴. For example, the ranking method has often been employed without first securing job facts. The lack of job facts has made it essential to find individuals in the organisation who know all or many of the jobs well, and the difficulty of finding such people has been mentioned as a disadvantage. Further, rankers are asked to keep the "whole job" in mind when given instructions to rank the jobs, and this results in differing bases of comparison between raters, and influence by

³J.S. Gray, "Custom Made Systems of Job Evaluation", Journal of Applied Psychology, XXXIV, No. 6 (December, 1950), 378-380.

⁴Belcher, Wage and Salary Administration, 165.

such factors as present pay rate, competence of job incumbents, and prestige value of jobs.

II. The Classification Method

This method involves defining a number of classes or grades of jobs and fitting jobs into the classes provided. The primary task is providing one paragraph descriptions of a number of these levels, grades or classes of jobs so that no difficulty is experienced in fitting each job into its proper niche. These descriptions feature verbal gradations of job responsibility, skill required, etc. Jobs are then classified by comparing each job to the descriptions provided.

This method of comparing jobs has the major advantage that most organisations and employees as well, tend to classify jobs, and with this fact as a beginning point, it is relatively easy to secure agreement about the classification of most jobs. Another advantage is that it promotes thinking about job classes among both executives and employees.

A disadvantage is the difficulty involved in writing grade descriptions. In practice, many classification systems have been based on job duties and responsibilities rather than compensable factors, and it is not a simple matter to write a grade description sufficiently general to include different types of duties and sufficiently specific to permit classification of jobs. Riegel⁵ initially suggested using supervision, cooperation, probability and consequence of errors, initiative and resourcefulness, and minimum experience and educational requirements as compensable factors in writing grade descriptions, although choice depends on organisational requirements.

Other disadvantages of the classification method may result when grade descriptions are written in terms of duties and responsibilities. First, this fact may encourage employees and supervisors to use "high-sounding" words in job descriptions in an effort to obtain a

⁵ John W. Riegel, Wage Determination (Ann Arbor: Bureau of Industrial Relations, University of Michigan, 1937), pp. 63-64. Raymond Jacobsen et al, "Specific Job Evaluation Systems in Action", in Handbook of Wage and Salary Administration, ed. Milton Rock (New York: McGraw-Hill Book Co., 1972).

higher classification for the job. This, according to Shartle⁶ occurs frequently in the classification system used in the United States Federal Service. Second, it often happens that a job has tasks that fall at several levels. Thus, grade descriptions written in terms of duties and responsibilities require a decision on whether one duty requiring high skill is sufficient to place the job at a higher level, or whether the duty must occur several times a day, and so on.

The main advantage of the overall non-analytical methods (ranking and classification) is that results can be obtained more quickly and cheaply than by analytical methods. The main disadvantage is that they do not quantify differences between jobs and therefore the true significance of job changes cannot, at times, be adequately assessed. These methods tend to be the ones incurring the greatest subjectivity where, particularly in ranking, the individual could be assessed rather than the job. As quantitative differentials are not achieved, difficulty is sometimes experienced in deciding where to draw the line that defines a grading difference.

III. The Factor-Comparison Method

This method compares jobs by making judgement concerning which jobs contain more of compensable factors than others. Jobs are compared to one another, one factor at a time. Original judgements pertain to key jobs which are ranked in relation to other key jobs on the basis of each of several factors. These judgements permit construction of a job comparison scale to which other jobs may be compared. The compensable factors used in the method are usually (1) mental requirements; (2) physical requirements; (3) skill requirements; (4) responsibility; and (5) working conditions. It is apparent that the authors of the method⁷ consider these to be "universal factors" to be found in all jobs. Thus, one job comparison scale applicable to all jobs in the organisation would be possible.

⁶Carroll L. Shartle, Occupational Information (New York : Prentice-Hall, Inc. 1952), p. 30.

⁷Benge, Burk and Hay, Manual of Job Evaluation.

A major advantage of this method is the requirement that a custom-built installation be made in each organisation. This practice of tailor making a job evaluation system tends to make the results more useful to the organisation. The flexibility permitted by the custom-built nature of installations has been cited as an additional advantage of the method⁸. Limiting factors to five or less is another advantage of this method, as this tends to reduce the possibility of overlapping, with consequent overweighting of factors. Research into job evaluation practices⁹ suggests that a limited number of factors yield similar results with much less time and effort. Still a further advantage is the ease with which the resulting job comparison scale can be used. Once employees have become familiar with a job comparison scale covering one type of job, evaluating other types of jobs may be simplified because of the agreement made possible by understanding.

A major disadvantage of the method is the use of "universal" factors. It is important that each organisation determine compensable factors; these factors may differ from organisation to organisation, and even for the various types of jobs in the organisation. Use of the same factors for all organisations and for all jobs in an organisation may violate this principle. Another disadvantage concerns the use of key jobs. Key jobs are selected using several criteria, of which the major one for this purpose is that the wage rate is accepted as correct. Making use of existing rates as an aid in setting up wage and salary structures would seem to be based upon questionable logic. These key jobs form the basis of the job comparison scale, and the usefulness of the scale depends upon the anchor points represented by these jobs. However, all jobs change in terms of content or tasks performed, sometimes slowly and imperceptibly. To the extent that one or more key jobs change over time either without detection or correction of the scale, users of the job comparison scale are basing decisions on a faulty foundation.

⁸William Gomberg, "Joint Union-Management Evaluation", Job Evaluation Practices, Research and Technical Report IX, Industrial Relations Centre, University of Minnesota (Dubuque, Iowa : Wm. C. Brown Company, 1951), pp. 21-28.

⁹This subject will be discussed in detail at a later stage. For a summary of research in this area, see Milton L. Blum, and James C. Naylor, Industrial Psychology : Theoretical and Social Foundations (2nd ed., rev.; New York : Harper and Row, 1968), pp. 503-506.

IV. The Point Method

This method features the examination of several factors common to the jobs to be evaluated, giving each job a numerical score on each of these factors by rating each job along a scale of each factor, and summing these scores to obtain the value of the job. It is similar to the classification method in that a scale is set up against which jobs are measured. The difference between the two methods is that, whereas one scale is developed for the classification method, a scale for each compensable factor is developed in the point method.

The point method makes every attempt to be objective. A carefully worded rating scale is constructed for each compensable factor, which includes a definition of the compensable factor, several divisions of each factor carefully outlined, and a point score for each such degree. For example, if it is determined that "skill", "responsibility", "effort", and "working conditions" are four important factors in determining relative job worth, a scale is devised which assigns different numbers of points to different divisions, or degrees, of these factors¹⁰.

In applying these scales to different jobs, the points are tallied up for each job to determine relative worth. A wide variety of additional factors is found in common usage in this method as well as in others. As few as three factors and as many as twenty-four are found in use. However, a series of studies has been conducted which was designed to indicate the fallacy of using many factors to rate a job. Viteles¹¹ points out that the general tendency seems to favour the use of many rather than few factors, while in actual fact the number should never be greater than ten and can in most instances be limited to five.

¹⁰A concise explanation of the application of these degrees is supplied by Otis and Leukart, Job Evaluation : A Basis for Sound Wage Administration, 123-146.

¹¹Morris S. Viteles, "A Psychologist Looks at Job Evaluation", Personnel, XVIII, No. 3 (February, 1941), 165-176. Also Joy R. Schuster, "Job Evaluation at Xerox: A Single Scale Replaces Four", Personnel, XLIII, No. 3 (May-June, 1966), 17.

This point of view is supported by Lawshe and Satter¹², whose study showed that a classification based on only two factors would closely resemble a classification based on eleven factors. A further study by Lawshe¹³ concluded that a simplified scale consisting of three or four items would probably yield results which are practically identical with those obtained by a more complex system. According to this author the differences between point ratings assigned by a longer, original scale and those assigned by an abbreviated scale are unimportant, partly because of the probable unreliability of the point ratings.

These studies are very useful in that they assist in the selection of the most important factors for use in a scale, and also help in determining the relative value of each factor if an abbreviated scale is to be derived from a longer one. Most important however, they assist in the overall reduction of subjectivity, by reducing the number of factors requiring subjective evaluation.

A major advantage of the point plan is the stability and relative reliability and validity of the rating scales devised and used. The scale lends itself to the evaluation of jobs because the degree definitions are usually written in job terms applicable to the type of job being evaluated, and this causes the agreement among raters to be quite close¹⁴. Agreement among raters is close even when ratings of employees, supervisors, and personnel executives are compared¹⁵.

Because the point rating method permits development of a scale for each compensable factor adjudged to exist in the organisation,

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C.H. Lawshe, Jr., and G.A. Satter, "Studies in Job Evaluation: I. Factor Analyses of Point Ratings for Hourly-Paid Jobs in Three Industrial Plants", Journal of Applied Psychology, XXVIII, No. 3 (June, 1944), 189-198.

13

C.H. Lawshe, Jr., "Studies in Job Evaluation: II. The Adequacy of Abbreviated Point Ratings for Hourly-Paid Jobs in Three Industrial Plants", Journal of Applied Psychology, XXIX, No. 3 (June, 1945), 184.

14

Otis and Leukart, Job Evaluation : A Basis for Sound Wage Administration, 121.

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See Alice Mary Jones, "Job Evaluation of Nonacademic Work at the University of Illinois", Journal of Applied Psychology, XXXII, No. 1 (February, 1948), 15-19.

acceptance of results by all parties is likely. The fact that point values obtained for each job show the relative differences among the jobs in numerical terms makes it possible to assign monetary values to the numerical values in a consistent manner.

In the point rating method the influence of human judgement is minimised. As rating scales are developed, every effort is made to provide the rater with aids in reaching decisions. Factors and degrees are carefully defined. Judgements are not eliminated; therefore subjectivity is not eliminated, but careful steps are taken to reduce errors to a minimum.

A major disadvantage of the method is that the system is difficult to construct. Subjectivity is introduced in the writing of degree definitions as well as factor definitions which have the same meaning for each job analyst who uses the system, and which demands a considerable amount of skill. The system is also difficult to explain. The concepts of factors, degrees, relative weights, point values, and pricing thereof are not easy to demonstrate to workers or supervisors. All these factors indicate that the evaluation of jobs by means of the point system is a time consuming process.

The point method of job evaluation is probably the most commonly used method of job evaluation, and there are countless variations of it in use¹⁶. Practically every frequency study made shows that the point system, or some variation thereof, is the most commonly used. However, there is a belief that any evaluation system, when correctly applied, will result in approximately the same classification, although there is need for careful research to substantiate this belief. Such research should not only compare the two analytical systems; it should also compare the many modifications of these systems so that their differences and similarities when applied will be made known.

The necessity for research into these analytical methods (i.e.

¹⁶ Franklin G. Moore, "Statistical Problems in Job Evaluation", Personnel, XXIII, No. 2 (September, 1946), 128-129. Also Shartle, Occupational Information, 142, and Henry Sargent, "Using the Point Method To Measure Jobs", in Handbook of Wage and Salary Administration, ed. Rock.

the point and factor comparison methods) was initially as a result of the basic disadvantage of the non-analytical methods (ranking and classification method), namely, that they do not quantify differences between jobs and therefore true significance of job changes cannot be adequately assessed. Even though these certain systems are known broadly as non-analytical there is really no such device. All systems are in actual fact analytical. Some systems do not rely on a factor-by-factor analysis, but all depend on some form of written job description, and inevitably the descriptions follow some sort of analytical form.

Nevertheless, the two conventional methods known as ranking and classification methods seek to deal with whole jobs, and as such have become known as non-analytical, or non-quantitative. It is due to this basic disadvantage, plus many others which have been discussed, which ushered in the analytical or quantitative methods as those being regarded as more reliable and valid.

However, the subjectivity, complexities, lengthy analysis procedures, and cost factors led to a spate of research in an effort to overcome the difficulties of these conventional methods. Much of this research may be attributable to Viteles' statement¹⁷ that job evaluation was ignoring the "law of parsimony" in using too many factors, which led to methods, particularly the analytical methods, being subjected to close scrutiny. Studies into the possibilities of reducing the number of factors involved in evaluating a job have already been mentioned, undertaken by Lawshe and his associates¹⁸. In further studies Lawshe and his associates pursued the matter of an abbreviated scale, and this scale, which only included four factors, was found to be (1) more reliable in total than other longer scales; (2) more reliable in each factor than counterpart scales; and (3) more reliable on skill factors than other scales¹⁹. These conclusions on the adequacy of an abbreviated scale were

¹⁷Viteles, Personnel, XVII, No. 3, 166.

¹⁸Supra, pp. 78, 79.

¹⁹C.H. Lawshe, Jr., and A.A. Maleski, "Studies in Job Evaluation III: An Analysis of Point Ratings for Salary-Paid Jobs in an Industrial Plant", Journal of Applied Psychology, XXX, No. 2 (April, 1946), 117-128.

independently confirmed by others²⁰. It must be noted, however, that in all these studies the abbreviated scales developed statistically have different factors even when applied to the same types of jobs. Studies of plans covering salaried workers like those covering wage earners, show the applicability of an abbreviated scale, but the factors differ for each installation.

Although these studies did indicate the reliability of an abbreviated scale, the general consensus in practice was that, even though certain factors carry little weight, should these factors help make the system more acceptable to the parties using the system, then they should be retained²¹. However, the extensive research studies completed in this area of simplified scales indicated in summary, that (1) a limited number of factors will provide a workable system; (2) applicable factors vary from one job series to another; (3) sufficient factors to satisfy the desires of the organisation appear preferable. These conclusions suggest that a job evaluation system tailor made to suit the organisation and the jobs under study is superior to a ready-made system.

Further, several further studies confirmed this viewpoint. Gray²² found that factors in ready-made systems do not differentiate between jobs, and thus some ready-made systems result in inaccurate evaluations of jobs²³. However, later studies did indicate that many of the analytical evaluation methods, when applied to the same jobs, produced highly similar results, which indicates that, irrespective of the number of factors included in the method, whatever method is chosen by an organisation will produce substantially the same results as those that would be obtained by utilising any other

²⁰R.C. Rogers, "Analysis of Two Point Rating Job Evaluation Plans, Journal of Applied Psychology, XXX, No. 2 (December, 1947), 579-585. David J. Chesler, "Reliability of Abbreviated Job Evaluation Scales", Journal of Applied Psychology, XXXII, No. 6 (December, 1948), 622-628.

²¹John A. Oliver, and Alexander Winn, "An Abbreviated Job Evaluation Plan for Salaried Personnel", Personnel, XXVIII, No. 3 (November, 1951), 225-229.

²²J.S. Gray, "Custom Made Systems of Job Evaluation", Journal of Applied Psychology, XXXIV, No. 6 (December, 1950), 378-380.

²³J.S. Gray, and Marvin C. Jones, "Ready Made Versus Custom Made Systems of Job Evaluation", Journal of Applied Psychology, XXXV, No. 1 (February, 1951), 11-14.

analytical method²⁴.

With regard to reliability of actual job evaluation ratings, Ash²⁵ found a high degree of reliability among raters and concluded that such consistency of rating is a function of the factor rated and the job information available. Jones²⁶ found that the reliability of ratings of employees, supervisors and members of the personnel department agreed closely, and shows that rater reliability can be improved by statistically seeking out rater bias and informing raters of their tendencies.

The numerous studies conducted in the area of job evaluation thus served to stress the importance of the need to develop a highly efficient system of establishing a basis for the internal wage and salary structure, which would be both reliable and as objective as possible. However, there are many problems yet to be solved both in the internal and the external organisational application of the job evaluation method, and thus job evaluation is a fruitful field for further research. Although the initial research covered a large problem area in the striving to improve the various methods available, later years have indicated a heavier reliance on the job evaluation system as a wage and salary structure building technique, and thus research headed toward the development of newer and bolder methods of evaluation.

TRENDS AND DEVELOPMENTS : NEW METHODS OF JOB EVALUATION

The trend in more recent years has been towards simplification, but too often the process of simplifying has been completed at the expense of comprehension. Subsequent to the research into the possibility of abbreviated factor scales, there was a swing toward simplification. However, this led to the reduction of the number of written down factors in the job description, which in turn led to

²⁴David J. Chesler, "Reliability and Comparability of Different Job Evaluation Systems", Journal of Applied Psychology, XXXII, No. 5 (October, 1948), 465-475. See research analysis in Chapter VI, p. 167.

²⁵Philip Ash, "The Reliability of Job Evaluation Rankings", Journal of Applied Psychology, XXXII, (June, 1948), 313-320.

²⁶Jones, Journal of Applied Psychology, XXXII; Joseph M. Madden, "The Effect of Varying the Degree of Rater Familiarity in Job Evaluation", Personnel Administration (November-December, 1962), 42-46.

further mental analyses on the part of the assessors, or evaluators; thus, an increase in subjective judgements.

On the other hand, too fine an analysis leads to confusion between overlapping sub-factors, too coarse to subjective attempts to bridge the gap between them. Ranking with its single factor system of job importance gave way to multi-factor systems which perhaps went too far. Thus, there was a swing of the pendulum back too far again with the development of newer single factor systems such as the "decision band theory" of Paterson, which will be discussed shortly. Thus, the tendency has recently been to modify multi-factor systems to somewhere in the region of eight to ten.

What is needed then, is an easy-to-understand system which will resolve the equation of supply and demand in terms of acceptable assumptions. As Walker-Morris²⁷ explains, there will have to be a clearer understanding of the demands of the work as opposed to the characteristics of the workers before this is possible.

Thus, it is the type of misgiving such as subjectivity, arbitrary methods of analysis and inability to compare unlike jobs with theoretical validity which prompted people like Paterson and Urwick, Orr and Partners (Management Consultants) and many others to question such techniques and the assumptions on which they are based. As Paterson²⁸ explains, in one degree or another, the four conventional methods of job evaluation, namely, ranking, classification, points, and factor comparison, fail to satisfy these demands: (1) setting equitable wage differentials within an organisation's own wage structure; (2) setting equitable wage differentials between its own wage structure and those of other organisations within the community; (3) setting equitable wage rates for new jobs within the organisation; and (4) responding rapidly in pay practices to technological change. These older systems rely for their evaluation to a great extent on purely subjective measures of essentially personal factors (for example, education, experience, initiative) and ignore real assessment

²⁷J. Walker-Morris, Principles and Practice of Job Evaluation (London : William Heinemann Ltd., 1973), p. 180.

²⁸Paterson, Job Evaluation, I.

of the characteristics of the job itself. It may be suggested that the greatest shortcoming is that the conventional methods cannot compare unlike jobs. Organisations using conventional methods invariably have separate pay plans for blue-collar and white-collar employees. Further, the conventional methods do not lend themselves to evaluating middle and senior management jobs.

There is thus an obvious need in industry today for a job evaluation plan which can determine the equitable pay for all employees, from shop floor to boardroom, i.e. a common yardstick for determining relative worth is needed. The logic behind such a concept is based on how much better disposed employers should be to a pay plan if they know that the same plan is being applied in exactly the same manner at all levels, including top management.

In short, a method is needed which approaches the problem of equitable payment objectively, yet without any need for elaborate committees to discuss subjective degree definitions and the weighting of mental skill against physical skill, as is so typical of existing techniques. There is no need to have a staff salary plan separate from an hourly paid wage scheme along with a top executive payment scheme; a single criterion is the basis for a comprehensive wage and salary system, and this idea has formed the trend of development for new systems.

Thus a number of job evaluation systems were developed to overcome the disadvantages of the older conventional systems, a number of which are presently in use in South Africa. However, it is not intended here to provide a critical analysis of all of these systems, as this would prove to be a monumental task. Rather, those systems which are most commonly used in South Africa will be discussed in an attempt to compare feasibility, comprehension of principles and acceptability by industry in general.

I. The Paterson Decision Band Method

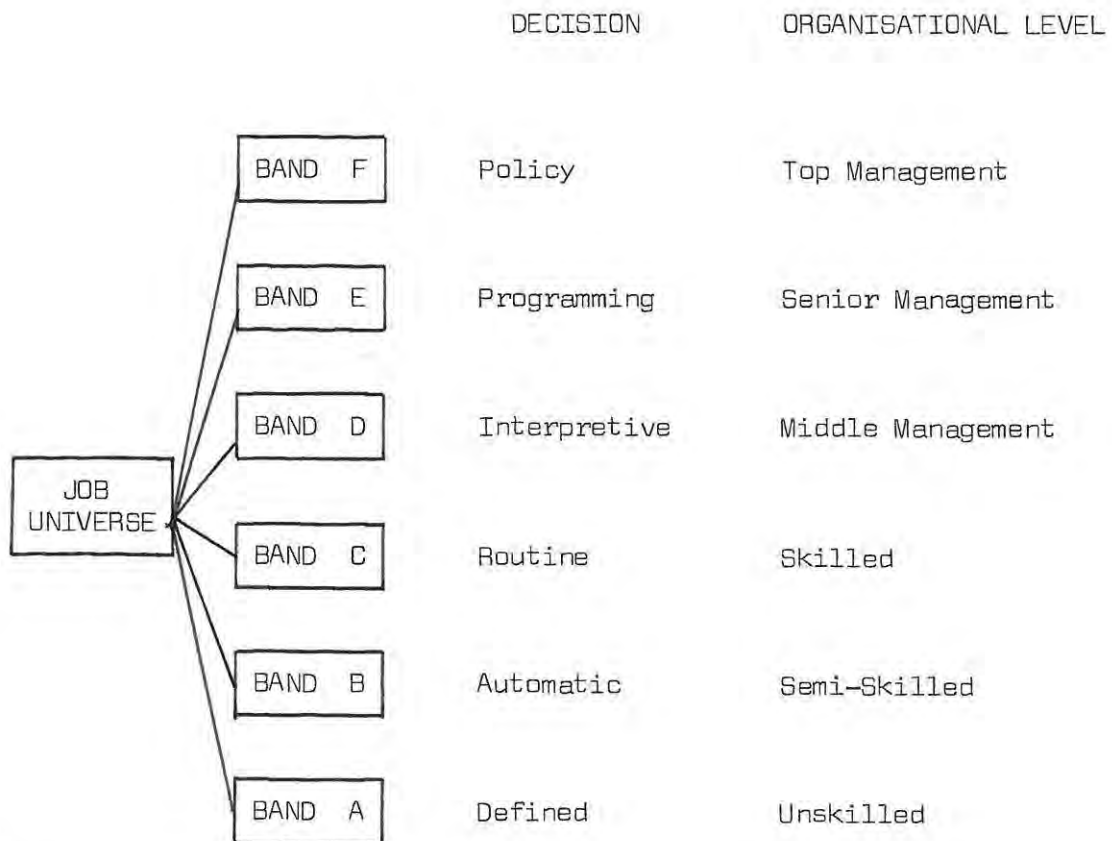
Paterson proposes a scheme which uses a single factor, namely, decision making, emphasising that "The common denominator from tea

boy to chairman is quality of decision"²⁹. The assumption is thus that a common factor in all jobs is the making of decisions, and that therefore the same system may be used for evaluation right across the employment range, across race and sex groups and across firms and industries.

Work is analysed into six basic kinds of decision, ranging from the highest "policy-making band" to the lowest "defined band". In the defined band the worker is told what to do and makes only very limited decisions. In each of the bands except the lowest, there are two grades, upper and lower, making eleven grades in all. The upper level job holder in any band coordinates the work of workers in the lower grade of the band, so that the lowest band obviously needs only one grade. FIGURE 3 below illustrates the decision band concept.

FIGURE 3

DIVIDING THE JOB UNIVERSE IN A FIRM, INDUSTRY OR ECONOMY INTO DEFINED BANDS



²⁹T.T. Paterson, Management Theory (London: Business Publications Ltd., 1967).

It is claimed that grading by decision is just as appropriate to staff workers as it is to line functions. Each job can be divided into operations. A worker makes the type of decisions of the band to which his job belongs, and also bands below, but never in the bands above. Tasks are analysed and graded quickly and quite objectively, since the kind of decision in each cannot be mistaken.

However, when it comes to grading a job within a decision band the process becomes much more subjective. There is the comparative nature of the decisions within the band to influence the grading, plus the number of tasks themselves. According to Paterson all jobs can be graded objectively, and so assessed on this grade scale of payment, but within grades, for sub-grades, the sub-division is by the very nature of work subjective to some extent. This is so because for this sub-grading there are techniques to be used which increase subjectivity, namely: decision-counting, count-ranking, ranking by Castellion, straight ranking, and points; but all are contained within the objectively defined framework of the grades.

This method claims to provide only a framework of grades of decision difficulty, and excludes factors like skill, length of service, working conditions, etc., because such factors apply to the individual and not the work; and thus effectively excludes subjective judgements by assessors.

However, according to Livy, the most important finding from the application of the Paterson method is that "Pay differentials between grades increase exponentially - the percentage increase in average basic pay between each grade being more or less constant"³⁰. In other words, when current rates of basic pay for jobs evaluated by the method are plotted on a log scale on the vertical axis, and on the horizontal axis, the line of best fit which emerges as a straight line. In effect, this means that the percentage differential between the major bands will be constant. However, in practice the line is rarely ever perfectly straight. Paterson postulates that where marked deviations from a straight line occur,

³⁰ Livy, Job Evaluation. Supported by H.W. Charles, "Installing Single Factor Job Evaluation", Compensation Review, III, No. 3 (1971), 9-24

problems can be expected from the pay and industrial relations fronts. Paterson further observes that some departures from the straight line relationship are due to labour market pressures, and thus, in order for organisations to structure their pay systems in such a way that the curve will represent what is perceived to be fair, there is a basic necessity to take cognisance of salary survey data. However, as Walker-Morris observes "But are not all the levels of pay affected by pressures of the labour market in one direction or another over the whole of industrial history?"³¹ The argument with regard to the labour market is taken a step further when one analyses one of the basic assumptions of the Paterson theory, namely, that there is some relationship between the decision band level and the value of the job to the organisation. The question to be asked is whether this is the same as the value of the work to the community at large (who eventually reward the worker for his work). "Surely if one establishes certain criteria for evaluating work and then the evaluation is used to determine the value to the enterprise, it would be strange if the criteria did not also match the assumed value to the enterprise"³².

The Paterson system claims a number of distinct advantages when compared with other systems of job evaluation: (1) It can be introduced and implemented in one tenth or even less time than most other systems; (2) the principles on which it is based are easily communicated and understood; (3) it is based on theory which logically links it to what is happening in the market place or what is a fair wage or rate for the job.

However, research conducted by Cogill³³ in the South African situation reveals that (1) the system is more easily implemented and accepted in mechanistic or bureaucratic organisations where hierarchy is clearly defined, and function clearly specified than in organic organisations where the opposite tends to hold; (2) the system is more easily implemented and accepted in non-diversified

³¹ Walker-Morris, Principles and Practice of Job Evaluation, 182.

³² Ibid.

³³ Cogill and Pearson, People and Profits, VI, No. 4.

firms than it is in highly diversified or highly divisionalised organisations where value systems between divisions may differ significantly. There is no sense in forcing a unified system or pay structure on an organisation which has within its system highly differentiated structures; (3) the system is more easily implemented and accepted in the lower and mid levels of the organisational hierarchy than in the upper levels; (4) subgrading in the senior management levels cannot be achieved satisfactorily where an elaborate and extensive management arena exists; (5) the system does not provide an effective mechanism for dealing with corporate divisional relationships in, for example, holding companies, highly diversified firms or conglomerates.

Thus, whereas Paterson tested his theory in Europe, India, Rhodesia and to a limited extent in single firms in South Africa, and powerful empirical support has been supplied by a recent study in South Africa³⁴, which indicates that the theory with regard to the exponential increase of pay differentials between grades is correct, he has not tested its validity in South Africa across organisations and industries, and is yet to use large samples. The fact that the system has not been tested across industries and organisations is extremely important with regard to the use of such a system as an objective technique in obtaining job comparability, since such a necessity requires reliability across industries involved in wage and salary surveys. Further, the fact that there are problems in implementation of such a system at upper management levels tends to indicate a potential difficulty in the surveying of executive levels. Finally, although this system seeks to eliminate subjectivity as indicated, the reliance on subjective techniques in sub-grade evaluations causes a throwback onto older methods, which, to a certain extent, overrules its usefulness for survey purposes, as it is comparison at this level of subdivision rather than the whole which is initially important.

However, on a national basis, the Paterson system may, and has been, successfully applied in order to compare movements of wage and

³⁴Ibid., 6.

salaries on an organisational level basis. The applicability as far as the individual organisation wishing to undertake a wage and salary survey and compare individual jobs within a particular labour market or industry, is concerned, is yet to be researched.

Mention must be made of the fact that the Paterson method is finding increasing favour with many concerns, both private and public, both in the country and abroad, the ease and speed with which it can be applied being among its claimed advantages over other methods. The first organisation known to have implemented this system in South Africa is Afrox. Subsequently some 15 major organisations in South Africa have implemented the system, and is now in operation in the Gold, Coal and Diamond mining industry as well as the Forestry Industry, and has been implemented across differing industries, organisational structures and organisational climates.

II. The Urwick Profile Method

The need for more consistent job evaluation techniques during the 1960's was to a large extent due to dissatisfaction on the part of both management and workers with each of the following critical stages: (1) design of a system specifically to meet "local" needs; (2) application of the system; and (3) maintenance of the system.

As a result Urwick, Orr and Partners Ltd., developed the Profile Method, based upon the assumption that acceptability of the final job structure will increase if the process is carried out participatively, and if it is understood by those concerned. This method attempts to overcome certain of the problems associated with participative job evaluation such as: (1) obtaining the involvement of a large number of assessors, whilst at the same time ensuring consistency of results; (2) reflecting existing organisational job values, and at the same time applying logical and objective analyses; (3) achieving a balance between having a simple, standard scheme and offering a choice in job factors; and (4) implementation within a reasonable timespan.

Whilst in detail the Profile Method is tailor-made to suit a particular situation, there are the following common features:

1. A comprehensive group of clearly defined job characteristics, from which the organisation can select those appropriate to both the range of work and the level of jobs to be evaluated.

2. A framework of reference, or benchmark (key) jobs against which all other jobs in the organisation can be consistently assessed.

3. Weighting of characteristics which reflects the organisation's own technical and social values.

4. A committee and communications structure which enables employee participation in the job evaluation process.

In typical applications of Profile job evaluation the following six main job factors are assessed: (1) responsibility; (2) knowledge; (3) mental skills; (4) social skills; (5) physical skills; (6) work environment. As there is difficulty in assessing consistently the total value of each main factor, it is necessary to break each factor into its constituent parts, the precise nature of this breakdown differing from application to application. Thus, one of the first tasks is to agree upon the sub-characteristics applicable to the range of work being evaluated. Due to the fact that it is difficult for assessors to measure small differences consistently when dealing with subjective data, assessors are required to identify only four different levels of demand of the characteristic, namely, low, moderate, high or exceptional, for each of the sub-characteristics used. It is this process of evaluating each job in terms of the four levels of demand on each characteristic which is known as "profiling" the job.

In order to place jobs in rank order, the next step is to give a numerical value to each job profile. Weightings of characteristics or sub-characteristics are determined by matching the assessed benchmark (key) job assessment profiles with the perceived rank order of the jobs from a paired comparison exercise. The rank order represents attitudes towards the jobs and their relative value, whilst the profile scores represent a logical analysis of the job content. It is in the matching of the data that the employees' views of the relative worth of jobs is incorporated in the evaluation.

An advantage of this system is thus the fact that it recognises that (1) the acceptability of a solution to any problem is closely related to the degree of involvement of the group concerned or affected by the solution; and (2) most managers and employees hold rather strong views regarding the traditional relationships between the various jobs in their organisations. Any job structure, therefore, that ranks jobs in a manner too widely counter to those accepted relationships, would most likely prove unacceptable.

This system has had considerable success in applications in many kinds of organisations and over a wide range of occupations, but, unlike Paterson, it suggests that across-the-board comparisons are undersirable, and that there should be separate applications for managerial, technical, supervisory, clerical, and shop floor types of work.

A number of criticisms can be levelled at the Profile Method:

1. An objective of such a method is to overcome the criticism applicable to points systems, namely, that usual characteristics of such points systems tended to overlap. However, there is surely a danger that "responsibility", "knowledge", "skills", etc., will also overlap.

2. In the striving to reduce subjectivity, such a method does not reduce significantly such subjective judgement in the need to "profile" jobs according to levels of demand on characteristics. Thus, there is no tangible difference in rating according to factors, or according to levels of demand, since both require application of a points rating on a subjective basis.

3. To quote Walker Morris: "Is it easier to assess whether job changes affect the level of skill required when fewer points are used? Surely with fewer points all that can be said is that such changes do or do not affect the level as far as one can see. Perhaps with fewer points it is just harder to see."³⁵

³⁵ Walker-Morris, Principles and Practice of Job Evaluation, 187.

4. The Profile Method depends upon the acceptability or otherwise of the basic assumptions and the criteria against which the work is to be evaluated. For example, it depends on the assumption that each successive level of demand is twice as much as the one immediately below, but this figure is an arbitrary choice.

5. The system further depends upon the proper choice of benchmark or key jobs, and the provision of suitable, though relatively simple, job descriptions. These factors reintroduce subjective judgement, and place the method on the same level of criticism as applied to the conventional methods.

This method has been applied to various organisations in South Africa, and more recently to a mining organisation in South West Africa, with considerable success. The immediate advantage of applying this participative method to the mining organisation was that it brought an acceptable logic to the wage structure in that ranges came to reflect differences in job demand, rather than reflect length of service, or individual manager's views regarding the merits of particular jobs or jobholders³⁶.

III. The Castellion/Permones Method

This method has its origins in South Africa, generally known as the Castellion System as it was developed in the S.A. Breweries Group, and used in salary surveys by that name. This method is still, albeit in a modified form, used in the Peromnes Salary Survey, with which the Castellion Survey was eventually merged.

The method is based essentially on the differentiation of kinds of decision in terms of the thinking required. "Decision-making involves the exercise of a choice between alternative lines of action. This choice is the central point of decision-making".³⁷ In the light of the decision-making process jobs are evaluated on several factors, namely, the kind of decision itself, how often it is exercised, kinds

³⁶Andrew Templer, "Participative Job Evaluation : The Profile Method", People and Profits, V, No. 1 (July, 1977), 11-12.

³⁷Paterson, Job Evaluation, I, 86.

of computation involved, comprehension required, vigilance exercised, the consequence of errors, experience and controls exercised.

The assumption is that all jobs, from highest to lowest levels, regardless of functional content, involve effort of some sort, responsibilities and some competence or other. Effort is seen as the outcome of complexity of decision-making, and the time stress subject to which decisions have to be made, i.e., pressure of work. From the basic wage for purely manual work, compensation advances to the extent that decisions have to be taken, and it can in fact be shown that even the most lowly jobs involve some elementary decision, or choices, which form the base line for the compensation system³⁸.

The second variable, Responsibility, is broken down into two sub-factors, namely, Controls and Checks, and Consequence of Error. The burden imposed by a job depends, to a large extent on delegation of responsibility, or referral of decisions to higher authority, and also on the loss that will be suffered or the blame that will be incurred if one's decisions are wrong.

The third variable, Competence, refers to levels of qualification and experience necessary for acceptable performance on the job. Both are implicit in complexity of decision-making, as it is not possible to do so effectively without the necessary qualifications and experience. Much significance has been attached to these two job requirements by management, and thus they are necessarily included as evaluation factors, even though they may overlap with decision-making.

The measurement of sub-factors is done by means of scales, which indicates points to be awarded for defined levels at which the factor can be observed to be operating according to the description and analysis of the job. By adding scores of sub-factors, total points value for each job evaluated is obtained. Grades are empirically established by means of cut-offs on the distribution of points resulting from the application of the system.

³⁸G. Biesheuvel, "Job Evaluation : An Outline of The Castellion Method", Business Management, VIII, No. 4 (1977), 21.

The actual Castellion System structure of ranges is divided into fifteen groups or grades of jobs, from labourer to top executive, with further differentiation right at the top based on additional considerations which are unique to the most senior executive positions. Special characteristics concerning the man, the company and the market place can influence compensation, and the grade no longer suffices as a guide.

The particular merit of this system is that it measures the value of all jobs by means of a common set of yardsticks. In view of the importance attached by all employees, regardless of level, to equitable differentials, it is important that these should be consistently determined. Further, this system has operated satisfactorily in a large and diversified corporation, and the grades relate consistently to market values, both factors indicating validity of the system which rests primarily on its demonstrated practical usefulness.

This system emphasises justice through a sense of equality not only in that the jobs of all members are graded and assessed in the same way, but in that the method applies to a big across-section, horizontal and vertical, of the organisational structure as possible. This is most important in terms of acceptability, both on the part of management and on the part of employees. Further, most factors suggest that the major grouping, the decision-making factor, is basic to most of them, which is an advantage in terms of the Paterson system rationale.

However, Paterson³⁹ criticises the Castellion System in terms of obscurity in meaning of factors inasfar as definitions or degrees of sub-factors are concerned, all of which tend to increase the level of subjective judgement. Further, the simple fact that these factors require subjective interpretation tends to increase the amount of "committee work" time by reason of their need to reach agreement.

³⁹Paterson, Job Evaluation, I, 86-96.

IV. The Hay Guide-Chart Profile Method

This system is concerned essentially with analysing and measuring the importance of jobs relative to one another, the relative importance being determined primarily by the purpose of the organisation or institution within which the jobs operate, i.e. structure is a function of purpose, and Guide Charts are built to represent the structure of the organisation in which the jobs are being measured.

Answerability for consequence of decisions, degree of freedom to take decisions and bring them to fruition, the degree to which there is prime accountability, as compared with shared or contributory accountability in a job, are elements which are measured in the Guide Charts.

The Guide Charts thus cover three principle areas:

1. Input of know-how. The technical, scientific and professional knowledge, skill and experience required in the job, plus the managerial scope of the job in terms of planning, organising, evaluating, developing and coordinating, plus the human relations skills involved in influencing people.

2. Output of accountability. The significance of the results to be achieved in the job in terms of freedom to act in pursuance of results, the value of resources controlled, and the degree of impact of the job on the organisation's objectives.

3. Output of problem solving. The nature, depth, quality frequency of problems to be solved. The degree to which problems in the job involve creative, analytical, or merely repetitive thought processes.

Also of significance is the "profile" of a job, i.e. the degree to which it is advisory as distinct from decision-making, the degree to which it is concerned with analysis of problems as distinct from making decisions about alternative courses of action. Thus, job profiles measures two relationships:

1. The relationship between input of know-how into the job, and the output of problem solving (advice) and accountability (active results) expected in the job. Input and output must be in proper relationship if a job is to be viable.

2. The relationship between the problem solving (advisory) content of jobs and the accountability content. A balance between "think" and "do" is established in each job, and between problem solving (think) jobs and accountability jobs in the total organisation.

Each job is rated on each separate factor which determine the value of different jobs. Points in geometric progression, are arbitrarily allocated according to scales developed for individual organisations on a copyright basis, the points span varying according to each organisation. Subsequently, all jobs are compared in relation to their total ratings, and when such jobs are plotted on the Guide Charts they illustrate in quantitative terms the job structure of the organisation.

An advantage of this method is that it is concerned with providing a common language to describe the relationships which exist between different roles in any organisation, and this common language allows people who are knowledgeable about the roles under consideration to come to a consensus judgement of the relative significance of the different roles in that particular environment.

Once again, this system is significant in that its basic premises, reduced to their simplest, imply that kind of decision is a fundamental criterion for differentiating jobs. As in recent years the importance of the involvement of the decision-making process as an overriding influence over the majority of factors used in evaluation has been brought to the fore, it is important that such methods take cognisance of this fact.

However, as with the Castellion Method, the criticism which is most applicable to this system is the subjective interpretation of rating factors. The system tends to be restrictive in that degrees of depth and breadth in measurement of factors for points allocation

tend to be dimensions of the same kind in that they are closely correlated, i.e. an increase in one must be followed by an increase in the other.

A further disadvantage of this system is the relative complexity of the system and its application. The application of individual factor "length" and "breadth" degrees for points allocation purposes on a matrix basis requires in depth knowledge of all jobs to be assessed, which further enhances subjective judgement. This factor further aggravates the cost implications.

V. The Time Span Method

This method differs in a number of respects from other systems because, instead of considering all the human attributes and characteristics required to meet successfully the physical and mental demands of a job (for example, skill, mental and physical requirements, responsibilities and working conditions), it emphasises two different aspects of the work situation.

Under normal conditions of employment no one has absolute freedom of action as all activity is approved within certain limits, explicitly or implicitly, set by a superior and accepted as part of his job by the individual. Within these constraints the individual has to make decisions which involve elements of choice. Work activities are therefore divided into elements that are: (1) prescribed (i.e. laid down so that there is no authorised choice); (2) discretionary (in that judgement and decision-making are called for).

All work, even routine tasks, requires exercise of some discretion, and no exercise of discretion is indefinite without at some point being checked and reviewed by a superior.

The time span of a job is defined as "the longest period of time which can elapse before a manager can decide that his subordinate has been exercising marginal sub-standard discretion in balancing

the pace and quality of his work."⁴⁰ Gross errors of judgement or flagrant mistakes are normally readily and quickly perceived, but what are termed to be marginally sub-standard decisions would take longer to detect. A point in time is reached, however, when the manager has to ask himself whether the quality of the judgements and decisions made is acceptable. The longer the organisation, through the manager, is prepared to allow the individual to commit his resources without being able to ascertain whether the commitment has been effective, the higher will be considered the level of work in the role occupied.

Basically, then, the Time Span Method points out that the higher in the hierarchy of organisational structure of jobs, the longer the period (time span of discretion) before the results of a decision are scrutinised for adequacy. The procedure for time span measurement can be shown as a number of distinct steps:

1. Discussions with the immediate manager of the person whose level of work is to be measured, in order to ascertain the means by which any sub-standard discretion exercised by the job holder would come to his attention. The immediate manager is accountable for knowing, or being able to discover, the kind of tasks he is assigning as authorised by his own manager. The essential objective of this analysis is for the immediate manager to define target completion times of a multiple task role, or quality standards in the case of a single role, beyond which he would not be prepared to allow his subordinate to progress without criticising him for sub-standard work.

2. Discussions with the job holder to obtain his views of the information supplied by the immediate manager, and to compare this with (or supplement) the information supplied by himself. Any variations should be resolved by reference to the next level of line management.

⁴⁰E. Jaques, Time Span Handbook (London : William Heineman Ltd., 1964), p. 17.

3. Determine whether the job is "multi-task" or "single-task". Distinction has to be made between the physically delegated tasks and general responsibilities. A single-task role indicates that the job holder never has more than one task to work on at a time, and he continues until completion thereof, while a series of single tasks may be completed one at a time in particular sequence. A multi-task role involves a mixture of tasks with no particular order and with discretion exercised as to how and when the tasks should be completed.

4. Multi-task roles involve ascertaining the longest extended task, as the level of work relates to the time span of the target completion time of the longest task.

5. In the case of a single-task role, the longest task or task sequence must be determined, as the level of work relates to the time span of the target completion time of the task or task sequence.

6. Confirmation that the immediate manager is authorised to delegate the level of work being undertaken by the job holder. This is done by reference to the manager once removed from the job holder, and thus the time span measurement is authorised.

Payment is related to the level of work as reflected by the time span measurement. This time span appears to have a correlation with that pay felt by the incumbents of jobs to be "fair pay"; hence an analysis of time spans for different jobs yield a scale of pay felt to be fair. This fact solves the problem of employee participation in the determinants of equitable and competitive pay levels, which tends to be neglected by the majority of analytical points systems.

In practice, time span is likely to be found more immediately useful for the measurement of general staff and managerial roles, although it can be applied equally to manual as to staff roles. Those who have had experience of its application have been impressed by the results obtained and the remarkable correlation which seems to exist between them and those derived from other systems of job evaluation. Cortis⁴¹, for example, correlated the Time Span method

⁴¹L.E. Cortis, "Psychological Factors in Job Evaluation", South African Journal of Psychology, II (1972), 55-66.

with the Castellion and the Paterson methods, and found a rough correlation of the kind illustrated in TABLE 1 below:

T A B L E 1

COMPARISON OF CASTELLION DECISION LEVEL, TIME SPAN RANKING
AND DECISION BAND

CASTELLION DECISION LEVEL	TIME SPAN		PATERSON DECISION BAND
	RANK	TIME SPAN	
1 - 10	1	(11 sub-ranks but no consistent time span)	O, A and B
11	2	Up to 6 months	Sb)
12	3	1 year to 15 months	Sc) C
13	4	Up to 3 years	D
14	5	Up to 10 years	E

This correlation is striking in that the difference in time spans between the Time Span ranks and the Castellion levels are of no real moment compared with the sequence; thus, the ranking by time span must be a ranking of decision-making. This would indicate reliability in terms of application when compared with other systems which have met with considerable success in the industrial setting. Once again, the important decision-making process is utilised as a basis for evaluation purposes, by the Time Span method, which has been practically applied in order to establish reliability.

A major factor which has been emphasised as an advantage of the Time Span method is its objectivity, the absence of subjectivity covering the high degree of consistency in the results obtained by

different people undertaking the analysis⁴². However, the method shows many of the aspects of subjectivity encountered in the analytical and non-analytical methods of job evaluation. For example, the definition of "marginally sub-standard discretion" indicates work done "just too slowly", or "just not quite good enough", or "just outside the standards of time or quality set". These definitions certainly allow for subjective judgement of what may be regarded as "just too, just outside", etc. Further, actual interviews with managers and incumbents may also show considerable subjectivity simply due to the interpretations of, for example, successive approximation of output per week from a particular section.

A further disadvantage involves the difficulty in description of technique, even though it has been reduced to its simplest by Jaques⁴³, and this increases the difficulty of application within any particular organisation, which once again increases the time/cost factors.

According to Jaques⁴⁴, the usefulness of time span measurement derives from two facts: (1) time span measurements of jobs appear to correlate closely with such important matters as the intuitive sense of individuals about fair differential payment for work and for the level of intensity of responsibility carried in a job; and (2) these measurements give a systematic and comprehensive picture of the time characteristics in organisation of executive work. Although in his original books Jaques⁴⁵ pointed out the value of a thorough knowledge of job content in tasks and completion times from which a better organisational view of the organisation could be obtained, in his latest work⁴⁶ job descriptions and specifications are no longer considered necessary, which indicates that the organisational value of

⁴² Jaques, Time Span Handbook, 66.

⁴³ Ibid.

⁴⁴ E. Jaques, Measurement of Responsibility (Cambridge, Massachusetts : Harvard University Press, 1956), p. 23.

⁴⁵ Jaques, Measurement of Responsibility, and E.E. Jaques, Equitable Payment (William Heineman Ltd., 1961).

⁴⁶ Jaques, Time Span Handbook.

the method has been evaded, which is a disadvantage in many ways.

The emergence of this factor has important implications with regard to the setting and maintaining of equitable wage differentials between the organisations own wage structure and those of the community. The implication is that unless the organisations taken into consideration during the undertaking of a wage and salary survey all utilise a similar basis for evaluating jobs, difficulty will be encountered when job descriptions and specifications are required for adjustment and weighting purposes.

CHOOSING A JOB EVALUATION SYSTEM

The previous section supplies a concise critical analysis of a number of methods of job evaluation in order to gain some insight into the complexities involved in the range of choices available to an organisation. Such an analysis allows for background to the actual choice of a method which is needed to supply information for the basis of the structural comparison method of conducting salary surveys. In the light of the advantages and disadvantages of each method discussed, one may outline the basic requirements of any method required to satisfy the objectives of a structural comparison method. These basic requirements may predetermine to a certain extent the type of system or method which is most applicable to the survey procedure in a South African situation:

1. The techniques of the method must be simple enough to be readily understood, not only by members of the organisation conducting the survey, but also by the relevant members of those organisations participating in the survey. The method should be simple enough to reduce the time factor involved in assessing and adjusting position data information to a minimum, while at the same time being acceptable to those involved. One of the drawbacks of the Factor Comparison, Time Span and Hay Guide-Chart Profile Methods is their complexity, both in application and understanding.

2. Because the subjective element cannot be excluded from any job evaluation method, members of the organisation should be involved in the actual application of the method, as this tends to balance the

level of subjectivity. In other words, subjective judgements with regard to tasks involved in a certain job as interpreted by the immediate supervisor may be offset by interpretation of the same tasks by the actual employee involved.

3. Application of the method must be possible at all levels of the organisation such that there is a sense of equality in that the jobs of all employees within the organisation may be graded and assessed in the same way. If a method gives a greater sense of equity it will be more acceptable to organisations participating in the wage and salary survey. The importance of the acceptability of the methods involved in determining community competitive pay rates for job content assessed on a similar basis cannot be stressed enough. Thus, a method should apply to as big a cross-section, horizontal and vertical, of the organisational structure as possible; the Time Span and the Castellion methods are the only existing methods which do this.

4. The method must produce a general guide line for change to a pay structure that is not too far from the existing structure. Bearing in mind the fact that the purpose of the wage and salary survey is to adjust the organisational pay structure on as competitive a basis as possible, it is essential that the job evaluation method provide a basis for adjusting the structure which is reliable, while at the same time retaining the logic behind the method. It is difficult to alter a pay structure in this way based on the Point Method without manipulating factor degrees and their weighting and thus the logic. Similarly, the method must permit assessments leading to adjustments to the pay curve which are realistic in terms of economic reality. Obviously management will not accept a proposed adjustment to the pay structure which is economically impossible or difficult to implement. The Factor Comparison method is the best of those described to ensure this.

5. As previously mentioned, it is difficult to determine which jobs may be regarded as key jobs throughout a survey community due to differing job content from organisation to organisation. It is thus important that the job evaluation permits quick assessment of such differences in job content, i.e. it must allow for adjustability.

This is best achieved by reducing subjectivity as much as possible - objectively determined criteria are usually faster in acceptance. To extend the reasoning behind this point, it is important that such a method cannot be easily manipulated such that arbitrary changes to points scores may be made in order to facilitate data weighting and adjustment. The non-analytical, and particularly the Point methods lend themselves to these arbitrary adjustments.

6. An important factor to consider when undertaking a wage and salary survey is that there may be shortages or excess of particular kinds of labour in the labour market under consideration. The job evaluation method should ensure that payment for these anomalies, over and above the job evaluated pay, remain separate and are not built into the structure, and thus not automatically taken into account when surveying such positions. Labour market conditions often change in this respect; and if, in the quantitative methods, a certain factor is given a heavy weighting of points in order to account for the shortage of a particular type of skill, this will be built into the pay structure, and an incorrectly evaluated pay level will be surveyed.

7. As a corollary to factor (6) above, it is important that job content is what is evaluated, not the incumbent and what he/she brings to the job. This is essential in that competitive rates of pay for job content are to be surveyed, and not what may be regarded as a competitive rate of pay for what an incumbent is worth; thus, the surveying of actual salaries is to be avoided. This tendency to evaluate the incumbent rather than the position has been exemplified by the necessity for legislation aimed at curtailing possible discrimination in pay and employment practices in the United States. As an example, a study of a specific point factor evaluation system by Meek⁴⁷ revealed that there were differences between an organisation's pay policy and its practice which could leave the organisation open to Equal Employment Opportunity legal charges.

⁴⁷Catherine M. Meek, "Auditing Your Job Evaluation Plan - A Case Study", EEO Today, VI, No. 1 (Spring, 1979), 67-72.

Further studies⁴⁸ were aimed at emphasising the necessity for the development of a job evaluation system which would involve evaluation according to accurate job descriptions, neither inflated by subjective judgements, nor artificially constructed so as to screen out certain groups of incumbents.

The Ranking and Classification methods do not give a measure of job content in that they involve subjective guesses about relative importance or difficulty of jobs without definition of importance and difficulty. Quantitative or Analytical methods are more objective in that they rely on criteria which is related to job content. For example, skill is recognised as the major factor in quantitative methods. In the Guide-Chart Profile method points for Know-How and Problem-Solving constitute two-thirds of the total. However, Paterson⁴⁹ questions whether these factors in actual fact do measure job content rather than what is brought to the job by the man. The advantage of the Castellion, Time Span and Guide-Chart Profile methods over the conventional Analytical methods is that there emerges in the three methods a common factor which determines job content in one way or another. All have one thing in common, in that they are concerned with decision-making as the basic criterion of job comparability. The Time Span method is essentially a one-factor method, that factor being a time span distinction of kinds of decision. The factor Decision-Making in the Castellion method itself could give the same result in up to ninety-seven percent of job comparisons as could the use of all the others⁵⁰. The Guide-Chart Profile method is wholly concerned with problem-solving, the decisions made, accountability measured as depending on results to be expected from these decisions, and know-how the distinction of decisions made in terms of kinds of thinking capacities required. The Paterson method, however, concentrates on distinguishing jobs by the single factor kinds of decision, and thus has the advantages of the other methods and not their disadvantages and anomalies.

⁴⁸ Lee Smith, "The EEOC's Bold Foray into Job Evaluation", Fortune, IX, No. 5 (September, 1978), 58-60, and Marah W. Botes, and Richard G. Vail, "Job Evaluation and Equal Employment Opportunity - A Tool for Compliance - A Weapon for Defence", Employee Relations Law Journal, I, No. 4 (1976), 535-546.

⁴⁹ Paterson, Job Evaluation, I, 122-124.

⁵⁰ Cortis, South African Journal of Psychology, II.

8. The method must be time saving in itself, not only in terms of simplicity for purposes of understanding, but in actual application of the evaluation process. Many existing methods require an inordinate time in committee work by reason of their subjectivity and the need to reach agreement.

These basic requirements all stress the primary factor in the consideration of the selection of a job evaluation system, namely, its acceptability to those involved in the actual wage and salary survey. Advantages and disadvantages are found more in the work required in installing and administering a system than in the final accuracy of the system which is judged to be appropriate for the kind of job being rated.

Thus, the problem involved in the selection of a method or system as a method in establishing a survey procedure basis is three-fold:

- (1) The method should prove to be acceptable in terms of application to a number of diverse organisations. In short, due to the fact that each participating organisation utilises a different job evaluation system, the actual method chosen for weighting and adjustment purposes should supply approximately the same classifications as those supplied by another evaluation method, when applied to a series of jobs.
- (2) The method itself should be reliable in terms of consistent results obtained from assessment of jobs according to job content factors relevant to that particular method. The degree of reliability may then be indicated by the extent to which different assessors provide consistent ratings on each factor when rating a number of jobs.
- (3) The simplicity and adequacy of the method in terms of the scale of job content factors must be both reliable and acceptable. This involves testing the independence of the sub-factors utilised for assessment purposes.

In order to select a job evaluation method from the large number of existing methods, not only in order to establish the pay structure, but in order to maintain the competitive level of that structure, thus presents a formidable task. However, as it is beyond the scope of this text to individually test each job evaluation method in order to establish which method is most suitable for wage and salary survey purposes specifically in terms of objective evaluation, a particular

method has been selected on the basis of the abovementioned requirements and in the light of previously discussed methods and their advantages and disadvantages. To gain an insight into comparability of such methods in terms of practical application, however, a number of job evaluation methods were utilised to rate the same series of jobs as based on carefully compiled job descriptions and job specifications. On the basis of the results of this study, reported in Chapter VI, an initial justification was provided for the selection of a particular method. Mention may at this stage be made of the fact that, for purposes of salary survey data weighting and adjustment, it has been found that those job evaluation methods which utilise a number of evaluation factors (usually between six and eight) which are carefully defined in terms of degree points application, are more suitable for, and easily applied in the wage and salary survey procedure, than the more complex single factor methods⁵¹.

Although the details of the particular method chosen for the purposes of this text are not discussed at this stage, such method has been thoroughly researched and tested for reliability and validity factors in the context of the wage and salary survey procedure. The results and discussion of such studies are outlined in detail in Chapter VI. Further, the predetermined assessment factors and sub-factors are utilised in the discussion of job analysis in order to aid in the development of a particular job analysis procedure. The analysis of such factors and the arguments in favour of such a method over other methods are thus discussed in the light of results obtained from studies of reliability and sub-factor independence.

Finally, although there has been contention over whether the job evaluation system should be adopted as a ready-made package, or whether the organisation should predetermine compensable factors and select a method on this basis, for purposes of developing a job analysis procedure for wage and salary survey procedure, the former choice is preferable as predetermined sub-factor degree definitions allow reliable development of job analysis as a process for collecting detailed and relevant job information.

⁵¹Walker-Morris, Principles and Practice of Job Evaluation, 179.

CHAPTER V

JOB ANALYSIS

The previous chapter has emphasised the necessity for a job evaluation method which is as valid and reliable as possible, as a technique in establishing a basis for the wage and salary survey procedure. However, fundamental to the job evaluation process is a further technique relating to the accurate collection of job facts, which of necessity is as important as the job evaluation method as such.

The job evaluation process begins with securing facts about jobs, a step which must be taken if the salary structure developed is to meet the needs of the organisation. Failure to secure complete job facts has been cited as a primary reason for job evaluation failure¹. In addition, carrying out later steps in job evaluation procedure is virtually impossible without these facts, as a decision regarding what the organisation is paying for compensable factors resting on any other basis must be considered questionable, nor can an applicable system of job evaluation be developed or chosen without complete job information.

Job information is obtained through a fact collecting process known as job analysis. Job Analysis may be defined as "the process of determining, by observation and study, and reporting pertinent information relating to the nature of a specific job. It is the determination of the tasks which comprise the job and of the skills, knowledges, abilities, and responsibilities required of the worker for successful performance."² This process of job analysis as an element of job evaluation has been illustrated in FIGURE 2 of Chapter

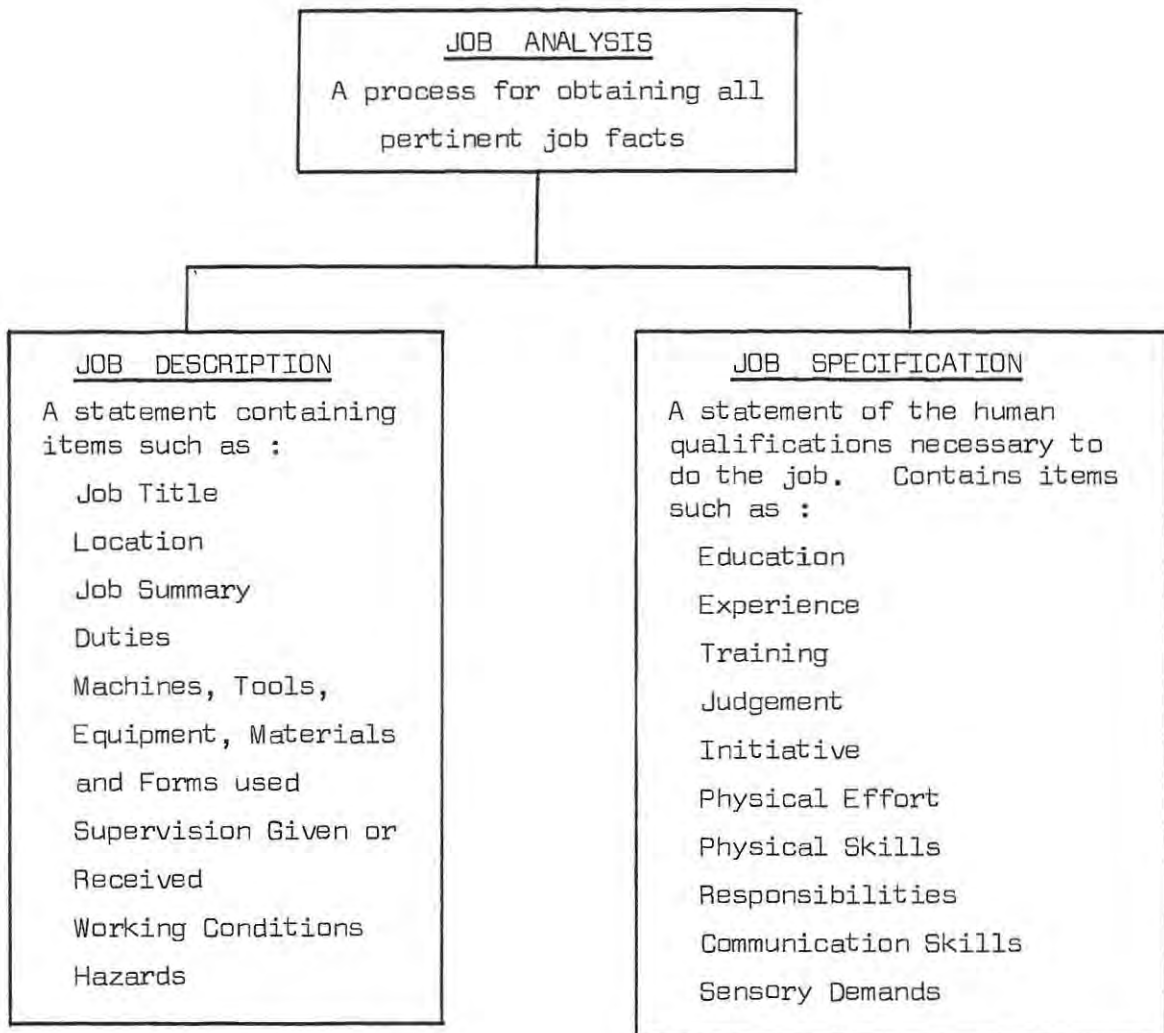
¹John A. Patton, and Reynold S. Smith, Jr., Job Evaluation (Chicago : Richard D. Irwin, Inc., 1949), p. 259.

²Department of Labour, U.S. Employment Service, Occupational Analysis and Industrial Services Division, Training and Reference Manual for Job Analysis (Washington : U.S. Government Printing Office, June 1944), p.1.

1. However, a more detailed breakdown of this process is necessary at this stage, and is illustrated in FIGURE 4.

FIGURE 4

THE ELEMENTS OF JOB ANALYSIS



Thus, the pertinent information is of three types: (1) the identity of the job; (2) a complete and accurate description of the tasks involved in the job; and (3) a specification of the requirements the job makes upon the worker. Job Analysis is a tool of many uses, of which job evaluation is only one. One of these

uses of job analysis, that of determining, in conjunction with the job evaluation method, job comparability in wage and salary surveys, is of overriding importance in the establishment of a sound survey basis.

As discussed in Chapter 2, after the jobs to be included in the wage and salary survey have been selected, it is necessary to develop a method for ensuring job comparability before wage information is collected. The usual method of ensuring job comparability is the development of job descriptions and specifications through job analysis. Job descriptions and specifications, sufficiently detailed to permit comparison of job difficulty and responsibility, are prepared for use by the survey staff. However, and most important, the necessity for job analysis in establishing a basis for a structural comparison method of salary surveys is taken a step further in that a reliable process of obtaining job facts is essential for the initial determination of key jobs, on a one time basis. Further, as indicated at a later stage, such job facts will be used in conjunction with the job evaluation system already chosen, in order to adjust and weight salary data where necessary. Thus, once again the necessity for an objective technique is immediately underlined.

It is thus important at this stage to distinguish clearly job analysis as a technique from the applications or uses of job analysis. Job analysis and job evaluation are not synonymous. A job breakdown for training purposes, which may be developed by the job analysis technique, is not a job analysis; likewise a hiring specification for use in selection is a product of job analysis. Job analysis, then, is not the end result but is the technique or procedure by which specified job facts are discovered and recorded. Thus, the items of information which are obtained, and the manner in which this information is presented, will be determined by the uses that will be made of the end product developed by the technique of job analysis.

The job description and job specification, then, which are the end products of job analysis in job evaluation, determine the kinds of information that must be obtained in job analysis for the purpose of job evaluation, and in the case of the wage and salary survey, it is the job evaluation sub-factors which predetermine which job

information must be included in the job description and specification.

Fundamental to any given purpose that requires job related information is the need to make some determination as to the type of information to be obtained and the method of doing so. Thus, as one takes something of an overview of the field of job and task analysis, it is appropriate to consider the processes of collection of job and occupation information, including some of the pros and cons of various such approaches.

JOB ANALYSIS IN JOB EVALUATION

With some notion as to the purpose of a job analysis program in mind, there is need to make a determination regarding each of various aspects of the approach to be used in the actual collection of job related data. There are at least four such aspects, these being set forth in the form of questions as follows:

1. What type of information is to be obtained?
2. In what form is the information to be obtained and presented?
3. What method of analysis will be used?
4. What agent will be used?

In preparing for the collection of facts through job analysis as the basis for the evaluation of jobs, it is necessary to determine how the job analysis technique will be used. If we understand clearly that job analysis is a method or technique, we are then in a position to decide what information is going to be obtained by this method and just how this whole procedure will operate. The analyst who thoroughly understands job analysis procedure, and who is well grounded in the techniques of obtaining, analysing, organising and recording facts, can adapt his methods to obtain those facts necessary for a particular end use and apply these methods to develop a particular end product that has been designed for the purpose at hand.

The end product in job evaluation is usually a job description and a job specification; thus, the information obtained by job analysis must be adequate to prepare a job description in sufficient detail to

meet the specified standards, and a job specification adequate to arrive at an evaluation of the job and substantiate the ratings assigned.

Thus, the principal function of the job description will be to identify and describe the job so that it will carry the information obtained by the application of the what, how and why of the job analysis formula, while the purpose of the job specification is to establish the position of each job in relation to other jobs for the purposes of determining the rate of pay, and so carries primarily the information relating to skill and physical demands. The broad outline, then, of what facts to secure by job analysis in order to evaluate jobs is as follows:

1. Identification of the job : title, department.
2. Description of the job : duties and responsibilities.
3. Specifications of the job : worker qualifications and requirements.

Whatever outline, form, work sheet, or data sheet may be used by the job analyst as a guide in analysing jobs and organising the information he obtains, should be developed on the basis of this broad outline. Bearing these facts in mind, determination of the four aspects of the approach to be used in collection of job related data may be considered in the light of the Peromnes job evaluation method.

I. Type of Information - The Job Analysis Technique

Essentially, the information to be obtained by job analysis fits into three categories: (1) identification; (2) work performed or duties; and (3) worker requirements. The application of a standardised procedure which includes the above categories will result in the collection of accurate information, complete in all pertinent details. However, it is the second of these three categories which is outstandingly important, namely, the complete and accurate describing of job tasks. Without this the rest of the analysis lacks meaning. If we return to the logic of job evaluation, we must remember that we are seeking job facts from which to select a factor or several factors that we are paying for, and it is only through

accurate job task description that degrees of such factors may be determined for points allocation purposes.

Job Identification: Proper identification requires that the information given must distinguish the job in question from all other jobs in the organisation, and must also indicate clearly the scope of tasks which are encompassed by the job.

Here, such information will be provided as will serve to identify the job under study. The job title as actually used on the job should be used, i.e., the title that would be used by the employer in requesting referral of an applicant. If more than one title is used, the alternate titles should be listed.

Work Performed: This section is intended to present a clear, concise and accurate statement regarding the tasks performed by a worker in accomplishing the purpose of his job. The technique for discussing the facts that are necessary to describe the tasks of the job and to indicate the worker qualifications necessary for successful performance, has been outlined in a number of texts, most of which rely on a "job analysis formula", which may be summarised as follows:³

1. What the worker does.
2. How he does it.
3. Why he does it.
4. Skill involved: Responsibility
Job Knowledge
Mental Application
Dexterity and Accuracy

An additional area of information about jobs which has been considered essential to job evaluation by some analysts, but which has been severely criticised by approaches adopted by utilisers of more recent methods has to do with the physical effort required by

³Department of Labour, U.S. Employment Service, War Manpower Commission, Division of Occupational Analysis, Guide for Analysing Jobs, Analysts Handbook (Washington : U.S. Government Printing Office, 1944).

the job, the surroundings or conditions under which the work must be done and the hazards of injury or disease to which the worker may be subjected. However, due to the fact that the Peromnes method does take into consideration, to a certain extent, physical demands, this area of information may be included:

- 5. Physical demands: Physical activities
 - Working conditions
 - Hazards

However, the physical demands information is not integrated with the basic job analysis formula but is outlined separately, as these facts have rather specialised uses as in the evaluation of jobs. The important point to emphasise is that information in this category, although not essential for all jobs, is critical in those operations in which it is used. Thus, on the evaluation factor of Physical Effort the job analyst describes the activities of the worker which require physical effort, but these facts must be used as the basis for judgement as to the physical effort required on this job in relation to (1) jobs in general; (2) jobs in the establishment; and (3) the scale set up in the Peromnes manual to estimate the relative physical effort requirements of the jobs covered in the particular evaluation.

In short then, the "work performed" section should give a correct portrayal of the purpose, content, and requirements of each job, consisting of a summary statement that gives an overall identification to the job in as few words as possible, followed by an ordered series of statements which describe each step of the job. The primary consideration in organisation of task information is to present the material so that the uninformed reader can obtain a clear picture of the work performed on the job. The tasks may be limited in number with each broad task spelled out in narrative form⁴, or a more detailed breakdown may be used⁵.

⁴Otis and Leukart, Job Evaluation, 237 suggest that three to eight tasks suffice for most jobs.

⁵John W. Thompson, "Functional Job Descriptions", Personnel Journal, XXX, No. 10 (March, 1952), 380-388. Ernest McCormick, "Job and Task Analysis", in Handbook of Industrial and Organisational Psychology, ed. Marvin Dunnette (Chicago: Rand McNally and Co., 1976).

In writing the body of the work performed section to obtain the clearest presentation, the job is divided into its major tasks and one numbered statement devoted to each. Each task is introduced with a "flag" statement which shows generally what is being done, followed by a detailed account of how and why it is being done. In this way each sentence and phrase of the work performed section should be measured when written against the job analysis formula; should what has been written not answer each of the three questions (what, how, why); the statement should be revised to supply the deficiency.

Worker Requirements: Although not all job evaluation systems require the information, the job analysis process usually secures information on worker requirements. It is this section which supplies an explanation of job difficulty.

This portion of job analysis requires that the analyst be more than an observer, as judgement becomes necessary⁶. In arriving at and reporting these judgements, the analyst makes a detailed analysis and interpretation of the basic minimum skills, knowledges, abilities and responsibilities required of the worker for successful performance of the job⁷.

Careful review of each task will allow identification of attributes the worker must possess, while analysis and interpretation permit a decision not only on presence or absence of the factor, but on the degree to which it is present.

II. The Job Analyst - The Agent

Obviously, job analysis requires people to accomplish the process, and on this matter there tends to be much variation in practice. However, the trend which has developed alongside the more scientific job evaluation approach is to have job study conducted by specialist job analysts.

⁶Otis and Leukart, Job Evaluation, 219.

⁷Department of Labour, U.S. Employment Service, Training and Reference Manual for Job Analysis, 1.

In support of this Shartle⁸ states that persons with various educational backgrounds have been successful job analysts - that persons with engineering training are no better than any other group of equal intelligence and interest. He found that after a week of intensive training on purposes and procedures, it takes at least six months under close supervision for most analysts to become reasonably proficient. Trained job analysts then know what to look for and what questions to ask.

What, then, are the skills and techniques which the job analyst must employ to produce accurate, complete job analysis information? In general, it may be stated that there are three primary parts to his job: (1) obtaining information; (2) analysing this information; and (3) organising and recording facts. There may be a fourth part, but this task will be in addition to his actual job analysis function. However, as job evaluation is of primary importance to this study, it may be stated that as a fourth task, he may make judgements, on the basis of his job analysis facts, to construct a tool for a particular purpose, namely, the evaluation of jobs. It may be emphasised at this stage, that this fourth task is not essentially a job analysis task as such - a fact finding function - but rather one of arriving at estimates on the basis of the facts which have been gathered by job analysis. However, due to the fact that job evaluation ultimately relies on the process of job analysis as a means for obtaining sub-factor related information, this process may be regarded as an integral part of the job evaluation process as a whole.

On the basis of such facts, it is possible to examine the specific functions of the job analyst in continuing our examination of the aspects involved in the collection of job related data which forms the core of the job analysis process.

III. Obtaining Information - The Method of Analysis

Although there are many variants of job analysis procedures that

⁸Carroll L. Shartle, Occupational Information (New York : Prentice-Hall, Inc., 1952), pp. 43-44.

have been used, it is not feasible to discuss various procedures in detail, but rather to discuss those most applicable to the job evaluation method under study. Tiffin and McCormick mention five such procedures⁹, but the three most important are: (1) questionnaire; (2) observation; (3) interview. Various combinations of these methods have also been used, while it is usually agreed that a combination of observation and interview is the best method¹⁰. The second most frequently used technique is the interview alone.¹¹

The Questionnaire Method: A technique which has seen limited practical or research application is the job activity questionnaire. Questionnaires which require the worker to construct the response have been extensively used, but not in situations where normative description is needed. The questionnaires which will provide the type of information required and in the form desired have the characteristics of objective psychological inventories. A number of variations of these inventories have been developed with the essential common feature being a comprehensive set of statements. These statements are sufficiently general to be applicable to related job families yet are also specific enough to differentiate jobs.

The optimum questionnaire technique for describing jobs remains an unanswered question. However, McCormick, Cunningham and Gordon¹² suggest that the worker oriented questionnaire technique is more inclusive of occupational areas; however, such technique is of limited value to evaluation requirements. Further, factor analytic studies focussing on job oriented questionnaires have generally been limited to a single position or organisation and sometimes a single position in one organisation¹³, and this fact reduces the

⁹Tiffin and McCormick, Industrial Psychology, 60.

¹⁰Erick P. Prien, and William W. Ronan, "Job Analysis : A Review of Research Findings", Personnel Psychology, XXIV, No. 3 (Autumn, 1971), 376.

¹¹Ibid.

¹²E.J. McCormick, J.W. Cunningham, and G.C. Gordon, "Job Dimensions Based on Factorial Analyses of Worker Oriented Job Variables", Personnel Psychology, XX (1967), 417-430.

¹³Prien and Ronan, Personnel Psychology, XXIV, No. 3, 377.

applicability to the survey situation.

In the profusion of research studies pertaining to the questionnaire method, only a small proportion are relevant in providing basic generalisable information particularly relevant to the job evaluation process. The basis for factor analytic studies which led to a job description checklist was provided by Lawshe¹⁴, and this later led to a number of studies seeking to utilise this questionnaire approach to describing work and an interim step of one or another personnel technique¹⁵.

However, in spite of the initial attempts at obtaining the optimum questionnaire technique, this method has given consistently undersirable results, and according to Otis and Leukart¹⁶ those who have had experience with attempts to accumulate usable information by this method have found that the principal objections are as follows:

1. It is almost impossible to design a questionnaire which will bring forth the essential information.
2. The average employee will not take the time necessary to make out the questionnaire correctly.
3. If the worker does this while on the job, production is held up.
4. Shop workers particularly are rarely skilled at reducing to writing what they do, let alone how they do it, why they do it and what skill is involved.

Davis¹⁷ has pointed out that the questionnaire method has been

¹⁴C.H. Lawshe, The Job Description Check-List of Office Operations (Lafayette, Indiana : Occupational Research Centre, Purdue University, April 1952).

¹⁵Prien and Ronan, Personnel Psychology, XXIV, No. 3, 377-378.

¹⁶Otis and Leukart, Job Evaluation, 220-221.

¹⁷Ralph C. Davis, Industrial Organisation and Management (New York : Harper and Brothers, 1940), p. 570.

used successfully in connection with selling jobs in department stores, clerical jobs in offices, and executive positions, but all these responses should be followed by personal interviews. Scott, Clothier and Spriegel¹⁸ state that although the questionnaire method seems to offer the simplest and least expensive method of obtaining facts, it usually yields data that is misleading and involves careful reanalysis and study.

In spite of the general validity of such objections, there are those who use the questionnaire as the first step in the job analysis program. The logic behind this may rest on the research that has attempted to establish the questionnaire method as a reliable method of task analysis in recent years. Notably, the Position Analysis Questionnaire (PAQ)¹⁹, which was primarily developed to provide for the analysis of jobs in terms of worker-oriented job elements, has been refined to such a degree that it has been proposed as a method of "evaluating" jobs. Such an approach would be predicated on the identification and use of behaviourally related labour market "values" resulting from supply and demand factors. Thus, the total "value" of a given job might be "built up" on the basis of the particular combination of such common denominators and their individual implicit values. Several studies are reported which use questionnaires to predict salaries. Champagne and McCormick²⁰ used a worker oriented questionnaire, and Prien et al²¹ used a job oriented questionnaire to predict salaries. Neither studies show results which at all approach the predictability of salaries using conventional point evaluation plans. Mecham and McCormick²² predicted compensation using the PAQ

¹⁸Walter D. Scott, Robert C. Clothier, and William R. Spiegel, Personnel Management (5th ed., New York : McGraw-Hill Book Company Inc., 1954), p. 148.

¹⁹E.J. McCormick, P.R. Jeanneret, and R.C. Meacham, "The Development and Background of the Position Analysis Questionnaire (PAQ)" (Lafayette, Indiana : Occupational Research Centre, Purdue University, 1969).

²⁰J.E. Champagne, and E.J. McCormick, "An Investigation of the Use of Worker-Oriented Job Variables in Job Evaluation" (Lafayette, Indiana : Occupational Research Centre, Purdue University, 1964).

²¹E.P. Prien, G.V. Barrett, and B. Svetlik, "Use of Questionnaires in Job Evaluation", Journal of Industrial Psychology, III (1965), 91-94.

²²R.C. Mecham, and E.J. McCormick, "The Use in Job Evaluation of Job Elements and Job Dimensions Based on the Position Analysis Questionnaire" (Lafayette, Indiana: Occupational Research Centre, Purdue University, June, 1969).

for three sets of data and obtained correlations of 0,83 to 0,90. They pointed out that accuracy of prediction was better for lower level jobs. It would seem that salaries are based partially on considerations other than those measured by the questionnaires or that the questionnaires themselves are inadequate as measuring instruments for this purpose.

For higher level jobs, Boshoff²³ used an Executive Position Description Questionnaire to predict a conventional job evaluation ranking for ninety four insurance company management level personnel, and this questionnaire method correlated 0,65 with the conventional ranking. In this same vein, Marshall²⁴ identified twenty three items in the same questionnaire which correlated with job level thus providing a normative index of relative managerial position level. These results generally suggest the possibility that, with additional research, it might be possible to develop an operational job evaluation system based on questionnaires such as the PAQ that might have reasonable validity as a predictor of monetary compensation.

This line of research has indicated that reliable and valuable information can in fact be gathered by utilising the questionnaire method, provided care is taken in the compilation of such a questionnaire. Further, and most important, the information thus obtained is not only reliable, but in itself may be a predicator of monetary compensation, in other words, the questionnaire itself may be regarded as a job evaluation process of sorts. These suggestions have further been supported by studies undertaken by Madden, Hazel and Christal²⁵ who indicate satisfactory reliability of incumbent responses to job activity questionnaires, and Palmer and McCormick²⁶

²³A.B.A. Boshoff, "A Comparison of Three Methods for the Evaluation of Managerial Positions", Psychologia Africana, XII (1969), 212-221.

²⁴Gordon L. Marshall, "Predicting Executive Achievement", Personnel Psychology, XX (1967), 417-430.

²⁵J.M. Madden, J.T. Hazel, and R.E. Christal, "Worker and Supervisor Agreement Concerning the Worker's Job Description" (Personnel Research Laboratory, Aerospace Medical Division, United States Air Force Systems Command, 1964).

²⁶G.J. Palmer and E.J. McCormick, "A Factor Analysis of Job Activities", Journal of Applied Psychology, XLV (1961), 280-295.

who report a median correlation of 0,75 between raters applying a one hundred and thirty item checklist to conventional written job descriptions which have practical usefulness for job evaluation requirements.

It may be stated that the use of questionnaires in the future of describing jobs and an aid to the analysis of tasks appears to be uncertain. However, until further research into the development and reliability and validity of the "ultimate" questionnaire method has been completed, it is necessary to utilise such a method of job analysis in conjunction with other methods in order to obtain satisfactory results. Such questionnaires might be useful to the job analyst in identifying the individual with a tentative job title, and obtaining a general idea of the duties of the job as a starting point for collecting his information.

Actual observation of the work is readily admitted to be necessary if all job facts are to be obtained. Probably only in this way can the relative importance of the various tasks be properly adjudged. Likewise, an interview with the employee and with his supervisor is essential to complete information²⁷. Often the importance of tasks can be determined only through the interview method. Thus, although at present the questionnaire may also be used, observation and interview are also essential to securing facts about jobs.

Observation and Interview: According to Otis and Leukart²⁸ the most direct, the most practical, and by far the most common method of obtaining job information is through observation and interview by a trained job analyst. These techniques available to the analyst are almost always combined and are used to check and supplement each other. With background information obtained by observation, the analyst can obtain additional facts in detail by interviewing the workers on the job, the supervisors in the department, and others who may have reliable information.

²⁷Belcher, Wage and Salary Administration, 141.

²⁸Otis and Leukart, Job Evaluation, 223.

It is probable that observation of the worker at his job will provide information principally on the what, how and why of the job, as well as the physical demands, with respect to skill involved it will serve to mainly highlight those operations which should be investigated more closely to determine, by other means, just what skill is demanded of the worker. Most important is the opportunity for the analyst to determine the general nature of the job, its scope and limitations, and the essential purpose of the job in relation to other jobs. In other words, the analyst begins at this stage to orient himself with respect to the job he is beginning to analyse.

The mechanics of observation are quite simple but are nevertheless important. It may be advisable to take notes unobtrusively while observing the worker in order to avoid distracting the worker. On the other hand, Bengé²⁹ states that it is preferable for the worker to see the notes made by the analyst such that he may have an opportunity to amend them, and to call attention to anything he considers important. When the analyst has completed his observation of the job, he should look over his notes to fill in and expand additional facts and questions which have been brought out by the observation.

The observation will be most successful in those jobs which involve relatively little skill and where the work cycle is relatively short. In those cases where the work cycle is somewhat irregular or extends over a period of time, the observation will be somewhat difficult. In these jobs where very little can actually be learned by observation, the primary source of information must be the interview. However, experience has shown that it is essential that each job being analysed actually be observed, in order to determine at first hand those facts which can be observed, in order to provide the analyst with some background to assist him in obtaining the necessary information by interview.

The interview technique used in the analysis of jobs has two

²⁹Eugene J. Bengé, "Job Evaluation in a Paper Plant", Personnel Journal, XIX, No. 2 (June, 1940), 43. Also William F. Glueck, Personnel: A Diagnostic Approach (Dallas, Texas: Business Publications, Inc., 1978), p.106.

main purposes: (1) to obtain information which cannot be gathered by observation of the job, and (2) to verify and augment those facts which have been collected by observation. Usually the most reliable, complete and accurate information may be obtained by questioning the worker himself and the immediate supervisor of the worker on the job being studied.

The customary fundamental rules of interviewing apply to this part of the analysts job. Those skills which are peculiar to the job analyst as an interviewer are concerned with (1) the facts he is trying to obtain and the way in which these facts will be reached; and (2) his preoccupation with factual information as against judgement, interpretation, impression, and evaluation of the person he is interviewing.

The items of information which the analyst is to obtain are basic not only to the interview but to the observation as well. All the information which the analyst picks up is retained or discarded on the basis of whether it is required by the outline which he is following in analysing the job. With respect to the problem of confusing facts with interpretations, it is necessary to refer to the point that the analyst may evaluate facts as well as secure them, but he will be a successful analyst only if he is able to tell the difference between a fact and a judgement, or interpretation, or evaluation of fact. It is further the analyst's task to distinguish between a verifiable observation or fact, and an inference or interpretation based on fact. In other words, the analyst must follow scientific methodology if he is to do a precise job analysis. In discussing this scientific accumulation of fact Dockeray and Lane³⁰ point out that the chief characteristic of the scientific method is the requirement that the observer be trained to distinguish what he observes from what he would like to infer.

IV. Securing, Analysing and Presenting Job Facts.

Securing Job Facts: The analyst will be able to work more

³⁰Lloyd C. Dockeray, and G. Gorham Lane, Psychology (2nd ed.; Englewood Cliffs, New Jersey : Prentice-Hall, Inc., 1950), p. 12; Herbert G. Heneman III, et al, Personnel/Human Resource Management (Homewood, Illinois: Richard D. Irwin, Inc., 1980), p.89.

quickly and his information will be more complete and accurate if he is provided with an outline or guide to follow in analysing jobs. Many examples of analysis outlines have been supplied by different authors; however, the procedure and outline adopted by a specific organisation for a specific function will basically depend on that function - in this case for job evaluation purposes. The actual procedure utilised for job evaluation according to the survey system for purposes of establishing the basis for a structural comparison method of wage and salary surveys, will be outlined at a later stage.

For general purposes, an excellent example is supplied by the Training and Reference Manual for Job Analysis³¹ which explains and interprets the exact scope and meaning of each item to be included in a job analysis schedule, which in itself is an excellent outline to follow in analysing a job.

The general procedure suggested is for the analyst to obtain his information by observation and interview, taking notes as he does so, and then complete the job analysis schedule in first draft form from these notes. This data may then be rearranged at a later stage, and adapted to prepare job information in various forms, such as the job description, and the job specification for evaluation purposes.

It is extremely important to emphasise at this stage that the analyst should take care in the phrasing of his analysis statements. Even where the job evaluation manual, with the detailed definitions of degrees under each sub-factor is available to the analyst as a guide to collecting and recording information, it is easy to ignore actually stating the facts about the job which would justify the application of terms such as minor, severe, seldom, occasional, same, to the attributes being covered. In other words, care should be taken to record facts as they exist on the job, rather than judgements based on observation.

In the discussion of adapting or constructing a job evaluation

³¹Department of Labour, U.S. Employment Service, Training and Reference Manual for Job Analysis.

method, it was emphasised that perhaps the best results may be obtained in any organisation, if the job evaluation method is tailor-made for that organisation, and takes into account the significant factors which make that company or that industry different from others. The same reasoning can be applied to a form or outline for collecting job facts, since the items of information covered and the way in which the information is organised and presented will depend to a great extent on the characteristics of the job evaluation system being used, as reflected in the job evaluation manual. It is possible, however, to list some general characteristics which any form for gathering information should have:

1. Identification facts. All facts which serve to identify the job and differentiate it from other jobs in the organisation are a prime requisite of any form for collecting and recording job facts.
2. Completeness of coverage.
3. Space for writing in information.
4. Check lists. These lists may be used as a guide to preparing statements under each attribute or job evaluation sub-factor.
5. Order of items. The order in which items of information are listed can be of great assistance, both as a guide in the analysis, and as an outline in writing job descriptions and job specifications.
6. Suitability for permanent filing. If the report or record is to be a permanent one, the job analysis form must be suitable for permanent filing.

Where a simpler form is desired and will adequately meet the requirements for job evaluation, the forms on which the final job description and job specification are to be written can be used as note sheets. Thus, all identifying information and description of work performed can be recorded on the job description form and all notes and statements regarding skill and physical demands can be

recorded on the job specification form in spaces allotted to each of the attributes to be evaluated.

If the original job analysis report is not to be retained as a permanent record, another possibility is to prepare an outline of the items to be covered in the analysis which can be used in obtaining facts and making notes³². These notes can then be used to prepare the job description and job specification. To be mentioned at this stage is that these methods will not yield as complete and accurate job information as will the more thorough approach based on a comprehensive form.

Analysing and Presenting Job Facts: On the basis of his background information, the analyst will be able to understand facts with which he is presented, and to analyse each item properly, and fit these facts together in a meaningful analysis. The inexperienced analyst may omit important job facts, or may search for additional facts which are not pertinent. In short, the analyst "should be able to sift the facts of each occupation, setting aside those which are unimportant and unessential and retaining those which are pertinent to the description of the occupation....."³³

Analysis and organisation of the information obtained by observation and interview is most important when the analyst segregates from the total job information those facts which bear upon one particular aspect of the job. In recording the information on each subject of this type, the analyst must in effect reanalyse the entire job by studying his basic factual information and weighting each fact which bears upon the particular subject. This information must then be organised into a statement clearly describing all the features of the job that are significant to an evaluation of that subject and that shows relative importance of the facts covered in the statement.

The final essential skill of the analyst is his literary ability in organising and recording the information which he has obtained and

³²Shartle, Occupational Information, 34-38.

³³Scott, Clothier, and Spriegel, Personnel Management, 148.

analysed. In effect, the job analyst, in reporting his analysis of the job, is the key link between the facts as they exist in the job and subsequent work based on these facts, as given in the analysis report. Where a verification of the facts in the job analysis report would be extremely difficult or consume a great amount of time, the skill as well as the integrity of the job analyst in organising and presenting job information in writing a report is of primary importance.

Since in job evaluation the skill of organising and recording job information is based primarily in writing job descriptions and job specifications, a fact which is most important as far as the wage and salary survey procedure is concerned, the techniques involved for presentation purposes are discussed more specifically under separate sub-titles.

THE JOB DESCRIPTION

Job description and specifications are aimed at recording information obtained on each job in a standard fashion such that these job facts may be utilised for rating and evaluation purposes. In preparing these end products of the job analysis for the evaluation, the analyst organises the job facts obtained and analysed in the process of job analysis.

The analyst himself does some appraising and evaluating of the job facts in preparing the statements on the various attributes to be evaluated in the job specifications. In preparing the job description and job specification, then, the writer takes the facts on each job from the report of the job analysis, presents this information in a precise description of the job, and sorts out and records on the job specification the facts bearing on each of the attributes to be evaluated.

The descriptions and specifications on all jobs constitute the basic data of the job evaluation, the wage and salary survey, and also of the salary and wage administration in general, based on the evaluation. It is essential, therefore, that this information be as accurate and complete as is necessary to evaluate jobs, and further to

allow accurate position-to-position comparisons in the wage and salary survey.

As mentioned previously, to meet these needs the record of job information must (1) identify the job by standardising titles, departments, codes, etc.; (2) establish content and scope of the job by describing it; and (3) establish the level of difficulty of the job by specifying job requirements and worker qualifications under each of the attributes to be rated.

I. Job Titles

In those organisations which do not have an organised method for titling jobs, the job titles are usually inaccurate and misleading, are not descriptive, do not indicate uniformly the skills of jobs, and are not used uniformly. Thus, a well considered plan for titling jobs can systematise all job nomenclature and aid in classification of all jobs.

The standardisation of titles becomes a necessary part of the precise definition of jobs in the organisation, and therefore it is logical that the first step in this sequence should be to establish scope and content of the job, the second to define the job within its established limits, and the third step, to select an appropriate title.

Although a standard titling system in an organisation, if used properly, can speed up and make more accurate all matters regarding jobs, it is important to realise that the job title itself does not define the job. This point has been emphasised in our discussion of wage and salary survey methods, as job titles used in order to establish position and wage comparisons can be extremely misleading and result in inadequate data collection and analysis.

The important factor is that titles are attached to jobs only to serve as convenient tags, and this process must never be reversed by inferring job duties and specifications from the job title. In order to avoid difficulties of this sort, it is necessary to (1) standardise job terminology; (2) define the standardised titles; and (3) see that all references to jobs by title follow this standardised, defined

terminology.

II. Preparing Job Descriptions

The purpose of the job description in the evaluation of jobs is to identify, define and describe clearly the job to be rated, and thus to give a detailed picture of the duties and responsibilities of the job, and it thus becomes of major assistance in providing full understanding of the statements regarding each of the factors to be evaluated, as detailed in the job specification. The identification information on such job description provides a basis for interpretation of the job specification statements on each item that is to be rated.

The job analysis report will supply the information which forms the basis of the job description, such information being rephrased and improved in summary form. If the job analysis has been prepared carefully and completely, writing the job description will be primarily a matter of copying the necessary identifying information, improving, rephrasing and editing statements regarding work performed.

Generally speaking, there are three levels of detail which might be used in job descriptions for job evaluation purposes³⁴:

1. Job identification: all information necessary to identify the job without describing the duties in any detail.
2. Job identification plus job summary: detailed identification plus a definition of the job describing the scope, purpose, and content briefly.
3. Job identification plus job summary plus work performed: similar to (2) above with the addition of a detailed description of the work performed covering the what-how-why of the job.

Thus, the outline of the job description is comprised of three principal parts: (1) job identification; (2) job summary; (3) work performed. The job identification will include the various

³⁴Otis and Leukart, Job Evaluation, 263.

identifying facts which are considered necessary for this purpose, the minimum identifying facts being job title, department, and the last date on which the information contained in the description was verified as correct. The job summary will state briefly the significant facts regarding duties of the job, the overall purpose being "to give the reader an overall concept of the purpose, nature, and extent of the tasks performed and how the job differs generally from other jobs"³⁵. In this way the job summary can be used as a definition of the job for quick reference, by giving a brief of the entire job—supplying information as to the scope and purpose of the job as well as an overall statement of the duties. Finally, the work performed section will describe in necessary detail the what, how and why of the job, the most important feature being the organisation of all the facts about the job for an orderly presentation of this information in the description of the duties. This involves determination of the major tasks, steps and parts of the job such that some logical organisation of facts may be presented in a chronological order of importance, the reason for the importance of this organisation being that it should be presented such that it does not require reorganisation on the part of the job evaluation panel in order to understand the job clearly. "The primary consideration is to organise the statements so that the uninformed reader can obtain a clear concept of the work performed on the job"³⁶.

Thus in short, the facts which are to be secured under the heading of "job description" are those which tell the what, how and why of the job, the extent of detail to be covered being the principal variable. Detailed information on job duties and responsibilities has a major advantage over the briefer job definition in that a rather complete description of the job contributes to an understanding of the job as a whole when the evaluation is being considered or challenged, in that it facilitates organising the facts on the job specification and often substantiates and reinforces the statements and conclusions given in the job specification. Where the organisation plans to adapt its basic job information to a number of different uses, a very

³⁵ Department of Labour, U.S. Employment Service, Training and Reference Manual for Job Analysis, 13.

³⁶ Ibid.

thorough and complete description of the work performed on the job should be part of the basic record, although it may be abbreviated and condensed in constructing the job description for pay purposes.

The argument for a more detailed and carefully compiled job description is further supported by the many uses of job descriptions. Of importance to the wage and salary survey in general, while the description has important uses in the rating of the jobs, it is also to be used continually in the maintenance of the job evaluation system. Frequently, a job changes enough so that it is judged to be different from what it was before, perhaps sufficiently different to place it in another wage bracket, a fact which is often uncovered by the wage and salary survey. It is essential to know not only the details of the job as it is at present but, equally important, what the details of the job were before it changed in order to make a comparison and analysis of the change. Further, should there be some question as to whether the job actually has changed, it is important that the description be complete enough to serve as a measuring stick for such a determination. This is an important, even vital feature of the entire wage and salary administration based on the job evaluation, for jobs do change over time. However, what is more difficult to handle is the fact that they tend to change gradually, by small degrees, and it is necessary to decide when the job has changed sufficiently in content, skill, and responsibility to justify a revision of the job description and a re-evaluation of the job.

If job descriptions are to be useful in the situations suggested above it is obvious that they must contain considerable pertinent detail in order to be conclusive. However, in deciding how much detail is going to be included in the job information collected by job analysis, and how comprehensive the record of this job analysis will be, it is necessary to weigh the cost, the time, and the technical difficulties involved in accumulating complete job analysis information against the long term advantages of having this information at hand for use in meeting the many problems where these facts will be of assistance.

Reference may be made at this stage to a problem affecting

factor evaluation systems such as the Conventional systems, namely, that some factors and sub-factors are basically abstractions and cannot be readily grasped, let alone quantified. Skill, for example, is difficult to define and understand, along with certain other human characteristics. In order to make assessment easier, certain substitute factors may be used, such as the training period or previous experience required to perform the work. Such factors are quantifiable, whereas skill is not, and useful information may be available from past records.

However, care should be taken when using substitute factors to ensure that they are in fact representative of the factor in question. Where such substitute factors are necessary, the job description must be fully informative without being at the same time speculative with regard to any difficulties involved. In fact there would seem to be nothing fundamentally wrong with these substitutions, provided that their significance and effects are understood. Nevertheless, the recently developed evaluation systems have been aimed at combatting such problems, and thus exclude the necessity for job descriptions to take into account such anomalies by moving away from systems relying on arbitrary factors. On the other hand, the tendency to use fewer and fewer factors means that some of the criteria that might have been included in a system may be left out by the newer systems. The real danger is where the job analyst decides that a particular feature has become insignificant, whereas it should be for the assessment panel to make such decisions. This fact once again stresses the importance of the skill of the job analyst. Fortunately, any shortfall or ambiguity in the job description is likely to be revealed in a difference of opinion at the assessment stage, when the deficiency can be corrected.

THE JOB SPECIFICATION

One use to which the job description may be applied is as a basis for a complete job specification, which is not only a statement of the kind of work involved in the job, but also includes a description of the kind of person needed to do the work. Essentially, they are the basis and the justification of values that will be assigned to each job factor used in the evaluation of the job, and are primarily written

descriptions of skill involved and physical demands of the job. Specification statements on each factor used in the job evaluation must describe the extent to which that factor is present in the job, and the degree of difficulty of that factor as it is found in that job. This emphasises the need for very specific job information in the specification with emphasis on quantitative facts and judgements which will aid in establishing the level of difficulty on each factor.

Job facts and judgements recorded in the job specifications are subsequently compared to the standard degree of difficulty definitions on each factor in the job evaluation method being used. As a result of these comparisons, the degree of difficulty of each factor in a given job is determined in relation to the standard scale represented by the evaluation manual.

I. Data Sources

As mentioned, the primary source of information on the basis of which job specification statements are to be phrased is the job description. Where the job description has been prepared quite thoroughly at the time of the job analysis, the writing of the job specification will be primarily a matter of rephrasing, editing and improving the statements of fact which have already been recorded in space allotted to each of the job evaluation factors on the data sheet.

However, in addition to these sections on each of the job evaluation factors in the job description, there are other important sources of data. For each task covered in the job description there should be some corresponding statement in the job specification indicating skills involved in those tasks, and thus the job description as a whole is invaluable in specification formulation. The job evaluation manual may also be used to check the completeness of information on the job specification. The specification on a particular factor may be compared to the description of levels of that factor in the job evaluation manual to determine whether the facts as given in the specification statement are complete and sufficiently specific to place this job on the levels described

under that factor. If this cannot be done accurately, the specification statement on the job may have omitted some significant detail, or the descriptions of the levels given in the job evaluation manual may not be sufficiently detailed and complete. However, it must be emphasised that extreme caution be used in referring to the job evaluation manual while writing specifications, as there should be no possibility of phrasing specification statements in such a way that the level or degree assigned to the factor on that job is predetermined by the fact that language identical with that of the job evaluation manual has been used in the job specification statement.

II. Content and Method of Content Outline

The outline of the job specification is composed of two main parts: (1) identifying facts; and (2) job evaluation factors to be rated. Job identification information will be similar to that carried in the job description except that it may be less complete. The major portion of the specification should be organised by headings to include specification statements on each of the factors on which the job is to be rated in the job evaluation. Regardless of what particular factors are to be evaluated on each job, however, the information contained in the specification under the general term of "skill" should cover responsibility, job requirements, mental application and accuracy. The overall organisation of the specification should obviously then be completed according to the basis of the job factors to be evaluated, the purpose being to supply specific and detailed reference data rather than an overall picture of the job.

It has been emphasised that the job analyst, while analysing jobs, is concerned only with factual information about the job. Within this limitation the job analyst also may write the job description. However, should the analyst also prepare in final form the job specification, it should be emphasised that some skills and requirements in addition to those which he exercises in job analysis are necessary in writing the specification. While the job specification has to do largely with factual information about the job, some analysis and evaluation must necessarily be used in arriving

at judgements which are to be included in the specification statements.

In some situations, these judgements may be made on a very superficial basis, while in other cases they may be made by some systematic procedure on the basis of considered judgement. Thus, the validity of such judgements can vary a great deal from situation to situation, depending on the individual making the judgement, the method used in making the judgement, and the specific type of human characteristics in question. When specifications are established on the basis of judgement, the individual making the judgement is, in effect, making an inference, based on his knowledge of the job activities, about the human characteristics that would be required for successful performance. It has been suggested by Trattner, Fine and Kubis³⁷ that the inferences generated are mediated through a system of concept, and it is in effect these concepts that are rated.

In this connection it is reasonable to suggest that the more adequate the available job information, the better would be the judgements in question, an argument which supports the standardisation of job analysis terms and expressions.

However, these judgements should be based on facts about the job and, furthermore, these facts should be included in the specification as a substantiation of judgements. It should be recognised that in preparing the job specification, the writer is actually performing the first stages of the evaluation of the job, a fact which introduces the question of reliability of the judgements being made, since the aim is to achieve an eventual evaluation which is as objective as possible. It is possible to confine the job specification writer to statements of fact only, so that in the rating process which follows it will be necessary to make all of the judgements which are involved in the job evaluation. However, according to Otis and Leukart³⁸, this is drawing a fine line, as for all practical purposes it would appear far

³⁷M.H. Trattner, S.A. Fine, and J.F. Kubis, "A Comparison of Worker Requirement Ratings Made by Reading Job Descriptions and by Direct Job Observation", Personnel Psychology, VIII (1955), 193-194.

³⁸Otis and Leukart, Job Evaluation, 287.

better for the person writing the specification, being thoroughly familiar with all the details of the job, to make his own judgements backed up by a listing of the facts which led to those judgements; thus, both the judgements of the job specification writer and the facts on which he based his judgements may be taken into account and reviewed in the process of rating the job.

The reliability of judgements of job specifications can be thought of as the degree of agreement between judges, or the consistency of judgements made by the same judge on two or more occasions. Some indication of the reliability of ratings of jobs in terms of aptitudes comes from the study by Trattner, Fine and Kubis³⁹, who had ten jobs rated on ten different aptitudes by job analysts in each of two groups, one group rating the jobs on the basis of their job descriptions, and the other group rating corresponding jobs by direct observation. Two types of ratings were made, one being an estimate of the degree of the aptitude required by the job, and the other being a selection of the aptitudes that were considered to be most important for success in the job in question. Indices of reliability for the two groups of eight analysts ranged from 0,74 to 0,96 for ratings based on job descriptions and 0,08 to 0,95 for ratings based on observation with regard to "degree" of aptitude required, while the "ratio" of agreement ratings on most important aptitudes ranged from 0,39 to 0,94 for ratings based on job descriptions, and 0,32 to 1,00 for ratings based on observation. Although this study is not aimed specifically at the reliability of judgements of job analysts in drawing up specifications from descriptions, it does indicate to a certain extent that such judgements of trained job analysts may be regarded as being reliable in general as based on job description material. This study further emphasises the necessity for trained job analysts in the job analysis process in order to achieve the required level of objectivity.

III. Verification and Editing

It is necessary, once the job descriptions and job specifications have been completed, for such drafts to be shown to the workers and supervisors concerned in order to give them the opportunity to read

³⁹Trattner, Fine, and Kubis, Personnel Psychology, VIII.

this information thoroughly and suggest any changes. Should changes be suggested, and such changes are justified by the facts, revisions may be made by the job analyst.

The final procedure is the process of thoroughly editing the individual job descriptions and specifications for internal consistency, completeness, accuracy and conciseness. This editing should give particular attention to a thorough analysis of the job description and specification in order to determine whether they conform to the standards specified for these materials. In short, this process should include a thorough editing of the adequacy and quality of job information, judged in terms of the standards by which they were supposed to have been prepared.

This editing process is essentially important to the wage and salary survey procedure in that for position-to-position comparison purposes, the job descriptions are required in concise summary form, and yet should incorporate sufficient necessary detail to allow reliable re-evaluation for weighting and adjustment purposes.

Finally, it should be mentioned that this editorial process is not for the purpose of developing the literary excellence of the material, but for the sole purpose of developing a clear, concise and complete statement of the job facts which it is necessary to include in the job description and specification.

EXECUTIVE POSITION ANALYSIS

As discussed in Chapter I, due to the difficulties and pitfalls inherent in obtaining wage and salary survey job comparability at the executive levels, many survey programs exclude such positions rather than risk the analysis of incorrect information. The reason behind these difficulties is the problem involved in analysing and describing such positions in terms of the usual job content and job factor indices.

However, considerable research effort has been directed at the problem of adequately analysing the supervisory-managerial-executive levels. As the supervisory level position in industry is considered

particularly critical in that it represents the interface between labour and management, research has been completed by Chapple and Sayles⁴⁰ which resulted in four methods of describing supervisory and managerial positions, which are basically similar to and can be accommodated by methods utilised to analyse general levels of jobs.

The specifics of executive job content were comprehensively studied by Baehr⁴¹ who managed to identify twelve factors to represent the content of higher level positions, and this appears to be the most comprehensive study to date in terms of sampling of occupational groups. The study by Hemphill⁴² approached the problem by factor analysis in order to determine essential dimensions of executive positions, while Prien⁴³ managed to identify seven such dimensions. An examination of the results of these studies indicates that fifteen dimensions will account for the analysis of the executive position.

In terms of this research, one point remains clear, namely, that supervisory and managerial work is far more complex than as described by authors such as Barnard⁴⁴, and yet in spite of intangible, unobservable nature of this type of work, it appears quite possible to differentiate between jobs in a meaningful way, at least in terms of job content. Different research designs appear to yield comparable results although the differences in dimensions reported casts some doubt on the adequacy of all of the studies. A spate of further research was completed on Hemphill's Executive Position Description Questionnaire in order to combat this inadequacy, but these studies failed to show the factorial congruence demonstrated in

⁴⁰E.D. Chapple, and L.R. Sayles, The Measure of Management (New York : MacMillan, 1961).

⁴¹Melany E. Baehr, "A Factorial Framework of Job Description", (Chicago : Industrial Relations Centre, University of Chicago, 1967).

⁴²Hemphill, Harvard Business Review, XXXVIII, No. 5.

⁴³Prien, Journal of Applied Psychology, XLVII.

⁴⁴Chester I. Barnard, The Functions of The Executive (Cambridge, Massachusetts : Harvard University Press, 1938). Also H. Mintzberg, The Nature of Managerial Work (New York : Harper and Row, 1973).

studies of either lower level positions or those which span the occupational hierarchy, nor did these studies match the quality or sophistication of the original study by Hemphill.

Quasi - replication of the Hemphill study are reported by Meyer⁴⁵ who essentially provided a construct validation of Hemphill's factor definitions. Meyer administered questionnaires to a representative sample of one hundred management personnel spanning the entire hierarchy of a single organisation. The profile score norms based on subgrouping correspond very closely to expectations.

In another study by Brennecke⁴⁶ a modified form of Hemphill's EPDQ was administered to a sample of two-hundred-and-eighty-eight life insurance agency managers. A partial sample including most and least effective managers used to establish test-retest reliability yielded a product moment correlation of 0,67, and a contingency coefficient of 0,65. Composite profiles were obtained for eleven "top" managers and ten "bottom" managers in terms of general effectiveness. The only difference approaching significance was a factor called Responsibility for Technical Products and Markets.

A study reported by Dawson⁴⁷ used a 315 item revised form of the original 575 item EPDQ. A repeat factor analysis of this revised form yielded six factors, three of which were comparable to Hemphill's original factor definitions. The remaining three appeared to be composites of the remaining seven factors. The revision of the EPDQ was specific to the sponsor organisation with no attempt to obtain generalisable results.

The general criticism, therefore, is that questionnaire items are usually written which are specific to the position and to the interests

⁴⁵H.D. Meyer, "An Explanatory Study of the Executive Position Description Questionnaire in the Jewel Tea Company, Inc." (United States: The Conference on the Executive Study, June 1961).

⁴⁶C. Brennecke, "A Study of the Work of Life Insurance Agency Managers" (United States: The Conference on the Executive Study, June 1961), 71-94.

⁴⁷R.I. Dawson, "The Use of the Job Description Questionnaire in the LOMA Management Selection Study" (United States: The Conference on the Executive Study, June 1961), 135-152.

of the sponsor, and thus the lack of research designed to provide generalisable results remains the overall problem. In spite of the now obvious potential of such questionnaires for describing work at various organisational levels, the research has been largely proprietary. There has, however, been an attempt to develop a checklist questionnaire aimed at the management levels of the organisation which contains task-oriented items which have the following characteristics: (1) are responded to differently by different functions within and across organisations; (2) are responded to differently across management levels; and (3) have relevance for more than one function and organisation. This checklist questionnaire is the Management Position Description Questionnaire developed by Tornow and Pinto⁴⁸, the format for collecting job information and the methods used to synthesise the data being similar to those used with the Position Analysis Questionnaire developed by McCormick, Jeanneret, and Meacham. This MPDQ is useful for slotting jobs into appropriate clusters of similar jobs when they are created, and for immediate use in job evaluation.

In order to bypass the necessity to analyse executive, or other positions for job evaluation and salary determination purposes, several studies have been aimed at using questionnaires to actually predict salaries⁴⁹, as mentioned in the discussion of the Questionnaire Method of data collection. These studies, however, did not approach the predictability of salaries using conventional point evaluation plans, especially at higher level, or executive jobs. Thus, although a great deal of research may still be necessary to develop this theme, reliance at present is largely on conventional analysis and evaluation systems.

In spite of the fact that the analysis of executive positions remains a problem, the trend that has developed alongside the more recent job evaluation systems, is a movement away from factors which

⁴⁸W.W. Tornow, and P.R. Pinto, "The Development of a Managerial Job Taxonomy : A System for Describing, Classifying and Evaluating Executive Positions", Journal of Applied Psychology, LXI (1976), 410-418.

⁴⁹See studies by Champagne and McCormick, Occupational Research Centre Purdue University; Prien et al, Journal of Industrial Psychology, III, 91-94; Meacham and McCormick, Occupational Research Centre, Purdue University; Boshoff, Psychologia Africana, XII, 212-221; Marshall, Personnel Psychology, XX, 417-430.

rely on specific job content as such, and rather to incorporate as few content measurement indices as possible and rely on an overall evaluation principle. For example, the Paterson system relies on the single decision-making factor, while the Castellion/Peromnes system is based on the differentiation of kinds of decision-making and evaluates jobs on several factors in the light of this decision-making process. Thus, the decision-making process is utilised as a common yardstick in the evaluation of all positions, from highest to lowest, by both systems, and in this way such systems attempt to solve the problem of the executive position analysis.

A further development of such systems is to provide carefully phrased progressive definitions for each evaluation factor such that the evaluation of executive positions has the same basis as that provided for all levels within the organisation. In short then, the trend has been to facilitate the writing of job descriptions and specifications based on analyses applicable to these degree definitions supplied by the job evaluation manual in question. In this way, although the problem of the adequate analysis of the executive position is still to be solved in terms of a generally acceptable method, the job evaluation system may provide a temporary and acceptable method of assisting in the completion of job descriptions for surveying of executive positions.

THE DEVELOPMENT OF A JOB ANALYSIS PROCEDURE: JOB ANALYSIS AND JOB EVALUATION

I. Compensable Job Factors

In studying the elements of job evaluation, note has been made of the fact that the first step in establishing the relative value of jobs for both wage and salary administration purposes in general, and the maintenance of a competitive pay structure, is a study of all jobs within the organisation through the process of job analysis. Through this process facts regarding the duties and responsibilities of the job are obtained, together with information regarding worker requirements for successful performance of the job. These data are obtained, analysed, and recorded in precise, consistent language.

The next step in the overall process is deciding what the

organisation is in actual fact paying for, and consists of determining what factor or factors place one job at a higher level in the job hierarchy than another, and thus at a higher rate of pay. This decision thus becomes the core of the job evaluation process, as these compensable factors are the yardsticks used to determine the relative value of jobs. Unless they are applicable to the jobs concerned, success of the project cannot be assured.

It has been suggested that job analysis should precede the decision on compensable factors, as such an important decision should only be made when all possible information is available⁵⁰. However, with the development of more recent job evaluation systems the decision on compensable factors is made before jobs are analysed, which allows job analysts to make judgements on the amount of each compensable factor present in a job at the time the jobs are analysed. According to Gray⁵¹ when a ready-made job evaluation system is adopted in toto by an organisation, it is assumed that the factors incorporated in the system are applicable to the organisation and its jobs, and should these factors chosen not be applicable, and there is evidence that they often are not, the results are unfortunate. Those responsible for job analysis are asked to assess the amounts of inapplicable factors existing in jobs, and even more serious, these are the only factors used, for no attempt is made later in the procedure to substitute more applicable factors.

However, as mentioned, recent job evaluation systems have been developed specifically with such problems in mind, and the majority of these systems are developed for in toto adaption purposes. The theme behind the development of such systems has been a movement away from the use of independent sub-factors toward single factors, or a number of factors developed according to a common yardstick of job measurement, for example, decision-making. This practice is certainly not objectionable if proper care has gone into the decision on compensable factors, and if sufficient information for such a decision exists prior to job analysis. It is thus possible to decide on compensable factors prior to the job analysis process, and in fact

⁵⁰ Belcher, Wage and Salary Administration, 130.

⁵¹ Gray, Journal of Applied Psychology, XXXIV, No. 6, 378-380.

such factors will be used to predetermine format and content of the job description and specification⁵².

These compensable factors, then, will be included in the job evaluation manual which is an important tool in forming the basis and setting the pattern for the work to be done. The manual will define in detail the job factors or elements which are to be analysed and described to form the factual basis for the rating of jobs. It is the basic measuring stick that will be applied to the jobs in determining relative values for wage and salary payment purposes. Incorporated in this manual will be the factor degree definitions which will provide the analyst with an insight into what is job information is to be highlighted in the analysis process, that is, such degree definitions define the extent of analysis required with regard to each compensable factor such that effective evaluation is allowed.

II. The Survey Organisation Job Evaluation Factors

In the light of the previous discussion of job analysis as a basis for job evaluation and wage and salary survey purposes, emphasis may now be placed on drawing from the methods and techniques mentioned in order to specifically accommodate one particular job evaluation method. As this overview was primarily aimed at data collation techniques with the points system of evaluation in mind, it now becomes necessary to substantiate such background material with actual factor and sub-factor analysis such that a basis for the wage and salary survey guide may be developed at a later stage.

In order to provide an insight into the type of information required, and the extent to which job and task analysis requires a specific skill for job analysis purposes, it now becomes necessary to define sub-factors according to progressive degree definitions. These degree definitions are then utilised, not only as a direct basis for job analysis reference, but as a guide in actually evaluating all positions according to a common yardstick, as will be discussed in detail. Further, such definitions also provide a basis for effective

⁵²Belcher, Wage and Salary Administration, 131.

minimisation of those disadvantages which have been mentioned in conjunction with the evaluation method as potential invalidators of the present wage and salary survey procedures, and which are to be eliminated by development of a new guide and procedure.

The following points are important when considering the sub-factor degree definitions of the job evaluation system utilised as a basis for the Structural Comparison System (as outlined in Chapter VII):

1. The scale should be used to analyse and evaluate the job and never the incumbent in the job.

2. Each factor is divided into nine progressive definitions, such definitions representing a scaled continuum including all degrees relating to the entire job hierarchy, including senior executive levels.

3. In any definition all lower definitions are understood to apply.

4. To analyse or evaluate a job start reading at definition 0 or 1. The lowest definitions are also applicable in part to the highest jobs.

5. Continue to read progressively and accumulatively until the first definition which is just too high for the job being evaluated is reached; then return to the previous apt definition. This definition will then indicate the degree to which the factor under consideration applies to the particular position, as well as the points allocation.

6. When a definition is just too high nothing can be considered beyond that point on the scale for the job being evaluated. Should part of this definition be apt, but not all, the scale will make provision for an applicable points allocation.

7. All scores of relative worth should be based on critical incidents and factual situations for which evidence is clear and

definable.

Factor 1 : Problem Solving (Decisions): A decision may be interpreted as the solving of a problem where alternative actions are possible. The incumbent must identify the alternatives and decide which is best. The process varies from simple decisions with only a few easily identifiable alternatives within the framework of specified work procedures, to decisions which become more difficult where clues are unlimited. At the higher levels the incumbent must initiate alternatives, the effectiveness of which may be in doubt. Clues may be regarded as information used to arrive at a decision. Alternatives may be regarded as different solutions which can be applied to a problem.

Factor definitions are as follows:

0. Reacts only to direct instructions : does not make independent decisions.
1. Responds to single concrete clues, which are immediately (directly) perceptible. Alternatives practically do not exist.
2. Responds to a limited number of concrete, immediately perceptible clues which appear in a routine. Alternatives are limited and prescribed or obvious.
3. Clues consist of isolated visually obvious deviations from the normal routine. Additional clues are freely available. Alternatives are still limited but demand a degree of reasoning to be able to make a choice.
4. Clues are less obvious but not contradictory and can be interpreted by direct reasoning. More possible alternatives which require interpretation and independent reasoning in the light of circumstances are encountered.
5. Clues are readily available, but indirect and form a wider variety which must be applied selectively to identify the problem precisely, especially with regard to new problems which may appear on

occasions. Alternatives are not self evident and must be considered closely in the light of possible implications.

6. Clues are vague and require that the incumbent not only acts selectively but also investigates particular clues more closely. Alternatives are developed through active investigation and the testing of possible conclusions.

7. Clues are manifold, abstract and of divergent meaning. Implications of clues are determined by searching personal investigations as well as by available specialised advice. Alternatives are interpreted and created by original deductions which are made in continually changing circumstances.

8. Clues are abstract, incomplete and doubtful and must be formulated by new methods of investigation, own deduction and abstraction. Alternatives are indefinite and must be formulated by the incumbent taking into consideration the possible but unknown influence of manifold dynamic factors within, as well as outside, the organisation.

9. Clues are extremely abstract, subtle and undefined. Problems must be formulated by own conceptualisation and creative thinking. Consultation not available and the reference framework must be built up for each individual case. Radical conclusions are the result of a long process of abstraction and generalisation.

Factor 2 : Consequence of Errors of Judgement: This factor measures the consequences of wrong decisions as reflected in losses and their extent, for example, financial losses related to material or manpower.

Factor definitions are as follows:

0. Hardly perceptible to production.

1. Errors have very limited (negligible) impact and can be rectified by repeating the job. The cost is usually wasted time and labour.

2. Errors have little impact on a production or office system - usually remedied by supervision.

3. Errors have limited but definite impact - may upset a significant day's program and probably involving management.

4. Errors have a definite perceptible impact, limited to a specific sector (internally), for example, accounts, personnel department, buying.

5. Errors, for example, poor supervision, ineffective administration procedures, have a cumulative effect internally. Errors involve different sections.

6. Errors have implications which can affect the whole organisation with the possibility of significant repercussions outside the organisation, for example, prestige.

7. Errors may have consequences on prestige and will result in substantial reduction in profit expectations. May have limited influences on a specific environment.

8. Errors seriously affect the organisation in terms of money, material, manpower, and prestige, for example, on its survival.

9. Errors have major effect on the survival of the organisation and on the environment, for example, may affect the national economy.

Factor 3 : Pressure of Work: This factor measures the amount of stress inherent in the job as reflected in the volume and type of work as well as available time.

Factor definitions are as follows:

0. Only works on direct instructions : no material stress involved.

1. Regular, steady flow of work. No pressing deadlines.

2. Regular flow of work subjected to expected seasonal fluctuations.
3. Flow of work subjected to a few unforeseen peak periods.
4. Attention divided between parallel or similar tasks. Sometimes necessary to take immediate decisions. More deadlines than a few unforeseen peaks.
5. Attention divided because of considerable interruptions, simultaneous handling of a variety of tasks, discussions, etc., usually within one discipline. Frequent peak periods during which immediate decisions must be made.
6. Varied and divided attention throughout the day because of the simultaneous handling of a wide variety of tasks, and frequent interruptions, some of which are outside a single discipline. Prolonged periods of stress are usual.
7. Work is normally subjected to prolonged peak periods and consists of a wide variety of different interdisciplinary tasks. Decisions are made under definite time stress and it is normally necessary to work beyond normal office hours in order to complete the volume of work within time limit.
8. Decisions are made in an ever changing environment. Consequently there is nearly always an element of risk, uncertainty and mental stress involved.
9. Continued and considerable risk as well as time stress. Dependent on others, e.g. advisors, for correct information and conclusions.

Factor 4 : Knowledge: This factor measures the level of knowledge which is necessary in order to fill the position adequately. The term scientific, as used in this context, does not refer to natural sciences only.

Factor definitions are as follows:

0. Reacts only to direct instructions : needs no basic knowledge.
1. Knowledge of basic requirements needed to perform simple tasks.
2. Knowledge of standardised routines and procedures embodied in a number of tasks.
3. Knowledge of instructions and regulations that are applicable to a variety of procedures within a specific system.
4. Knowledge of the composition, functioning and changing of a system that affects different sections.
5. Executive knowledge of a technical field, or of the coordination of numerous systems, or semi-professional knowledge.
6. Professional knowledge. Broad insight and skill in scientific theory and principles.
7. Master of theory, practice and techniques of a scientific field gained by specialised training and many years of experience.
8. Profound knowledge and mastery of a scientific field. Recognised as an authority within own country.
9. Unique authority on principles, theories and practice of a scientific field. Internationally recognised as an authority in that field.

Factor 5 : Job Impact: This factor measures the scope or area in which the activities in a job have an influence. Influence may have impact on external as well as internal organisational environment.

Factor definitions are as follows:

0. Hardly noticed as a separate function.

1. Activities limited to own specific post. No direct working contacts of any significance.

2. Impact limited to a section in own organisation. Activities essentially alike, viz. limited number of processes. In case of diversions from routine, supervisors are influenced by incumbent's reports when making a decision.

3. Impact limited to a section in own organisation. Activities include that incumbent, because of superior knowledge, influences others in their performance on the job; enables colleagues and superiors to make decisions by presenting data. Contact with public limited to transfer of information.

4. Impact (internal) affects various sections in own organisation. Takes part in discussions with superiors and transfers knowledge and experience to them. Impact (external) includes positive action to retain goodwill.

5. Impact (internal) affects a whole sector in own organisation. Impact (external) includes defense of organisational actions as well as positive cultivation of goodwill.

6. Actions (internal) affect whole organisation (all sectors). Negotiations (external) take place in dynamic situations and persuasion must be done in the presence of competitive elements. Establishes a specific image of the organisation.

7. Impact of actions extends to the particular business sector in its entirety (nation-wide).

8. Actions have a country-wide influence and may affect the national economy.

9. Actions can have international implications.

Factor 6 : Comprehension: This factor assesses the requirements of the post in understanding communications, both spoken and written. Field of activity: major function, e.g. Finance,

Marketing, Production, etc.

Factor definitions are as follows:

0. Does not necessarily understand : only does as instructed.
1. Understanding physical demonstrations of simple manual tasks only.
2. Understanding simple communications in day to day language. Understanding instructions given in short terms and simple language, incorporating very few simple technical terms and requiring little discrimination.
3. Understanding simple communications involving understanding a limited number of technical terms (these terms are learned without much difficulty on the job as they are frequently repeated).
4. Understanding more varied communications. The communication is essentially simple but a larger number of technical terms and a wider variety of possible activities are involved.
5. Understanding communications embodied in varied publications. Communications remain simple but their understanding involves a full acquaintance with a limited number of written documents, e.g. technical data, works procedures, safety regulations.
6. Understanding communications involving specific terminology in a major field of activity. A broad terminology which is used extensively is needed and reference is often made to manuals, and standing instructions, which stress the need to take precise action.
7. Understanding communications based on the knowledge of varied terminology covering a number of fields of activity. Communications are meaningful through specific training in a number of techniques in different fields of activity.
8. Fully comprehending abstract terminology which has developed in a profession. Communications are meaningful to persons who have

become familiar with high level abstractions and who must be able to explain difficult passages in esoteric communications to others.

9. Critical evaluation of original professional communications. Incumbent must read advanced publications critically, evaluate them, and may have to translate these into actions which could change work patterns considerably.

Factor 7 : Equivalent Education Qualifications: This factor measures the intelligence level required in the past.

Factor definitions are as follows:

0. Unqualified in basic communications : follows demonstrations.

1. Sufficient for reading, writing and counting.

2. Standard 6.

3. Junior Certificate; National Trade Certificate One.

4. Senior Certificate; National Trade Certificate Three.

5. Post-matriculation certificate/diploma (one to two years post-matric); National Trade Certificate Five.

6. Bachelor's Degree (three years post-matric).

7. Honour's Degree (four years post-matric).

8. Master's Degree (five or more years post-matric).

9. Doctor's Degree.

Factor 8 : Training/Experience (Necessary to Perform Job Competently): This factor measures the period normally required on other jobs and on this job before becoming fully proficient.

0. No formal training needed : follows direct instructions.
1. Less than one week.
2. Less than one month.
3. Up to one year.
4. Up to two years.
5. Up to three years.
6. Up to six years.
7. Up to ten years.
8. Up to fifteen years.
9. Over fifteen years.

The above factors and definitions provide the basis for the development of the job analysis process, and further stress the type and degree of job information necessary for adequate job descriptions and specifications. The format of the job description and specification should be such that it facilitates job evaluation, and job analysis will facilitate job evaluation to its greatest extent when expressed in a format which complements the selected method of evaluation⁵³. Where the outlined system is to be used, then, job descriptions and specifications are most meaningful when expressed in terms of the same set of compensable factors and degree definitions as predetermined by such manual.

It must be stressed, however, that although there may be no best method of job analysis and writing job descriptions and specifications, systematic data collection is essential if decisions made on the basis of these descriptions and specifications are going

⁵³"Fact Sheet 57 : Salary Administration", People and Profits, VI, No. 3, (June, 1978), 20.

to be an accurate reflection of the job; thus, the abovementioned and outlined job evaluation factors have been studied and researched in order to provide such a meaningful basis for the purposes of this text, namely, to establish a sound basis for developing a wage and salary survey guide.

However, it has been suggested that when a job evaluation manual as such predetermines compensable factors for job analysis purposes, if those analysts who perform job analysis are provided with such factors with careful definitions of these factors and their degrees, results of job analysis may be biased as there may be a tendency, conscious or unconscious, to follow the definitions rather than what is observed on the job⁵⁴. If this occurs, the time and effort given to job study have been largely wasted.

In spite of this possible disadvantage, recent surveys have revealed that a large number of organisations prefer to adapt a newer, readymade job evaluation system which suits their needs, and which has predetermined job factors⁵⁵. The importance of such practice may be extended to the wage and salary survey procedure, in that in developing a procedural basis, the necessity for pertinent and objective job information such that detailed job descriptions/specifications for position-to-position comparison purposes may be drawn up, cannot be overemphasised. The obvious word to stress at this point is "detail", The details necessary for such purposes may only be drawn from the job analysis information if the analyst knows exactly what to look for, and the exact limits of what he is seeking must necessarily be carefully defined by the job evaluation manual, compensable factors and degree definitions. Thus, this predetermination of such factors becomes an integral and essential necessity for the purposes of the procedural foundation of a structural comparison method of conducting wage and salary surveys, and actual degree definitions of such factors allow sufficient detail to be incorporated in job descriptions/specifications such that necessary subjective evaluations involved are reduced to a minimum.

⁵⁴ John F. Mee (ed.), Personnel Handbook (New York : The Ronald Press, 1951), p. 158.

⁵⁵ Mobil Oil : 1977 Salary Survey. (Cape Town : Mobil Oil Southern Africa, (Pty) Ltd., 1977).

The importance of predetermined factors and degree definitions may further be emphasised if we look at the underlying logic behind the third step in the job evaluation process. The first two steps mentioned earlier in this section emphasised the first step as the study of all jobs in the organisation through the process of job analysis, while the second step mentioned is the decision on what are to be regarded as compensable factors by the organisation. The third step in the job evaluation process, then, involves either developing or choosing a system for appraisal of the jobs in the organisation according to the compensable factors chosen. This system should permit jobs involving more of a factor or factors to be consistently placed at a higher level in the job hierarchy than those involving lesser amounts. As the discussion in previous paragraphs suggests, readymade systems should be closely scrutinised, as a readymade system that has operated successfully in another organisation may or may not be applicable to the organisation under study. Its applicability depends on whether or not the factors incorporated in the system correspond with those in the organisation.

It is precisely at this stage where factor degree definitions play a vital part in the ongoing process, as such definitions should be utilised to predetermine the applicability of the factors under consideration. However, since the movement in the development of job evaluation methods has been to incorporate factors which are applicable across industries rather than simply to individual organisations, the predetermined factor definitions not only initiate the job analysis process, but are a method of job appraisal within themselves, i.e. these definitions represent the abovementioned third step in the job evaluation process in that they provide a scale of assessment in both nominal and ordinal terms, for all jobs within an organisation. The factor definitions outlined in this chapter serve to emphasise this point.

In summary, it may be stated that the outlined predetermined factor degree definitions serve three important functions in job evaluation and wage and salary survey processes: (1) they provide a basis for the detailed analysis of job information such that pertinent and sufficiently meaningful job descriptions and job specifications may be completed for job evaluation purposes, and most important, such

that reliable summarised versions may be completed for wage and salary survey procedure; (2) they either provide a basis for determining a job comparison method, or represent a method and scale of relative worth determination within themselves, a factor which allows easy salary data adjustment and weighting in the wage and salary survey process; (3) they provide an adequate technique, which is as subjective as possible, for evaluating all levels of jobs within the organisation, including executive levels, which greatly reduces the burden of executive position comparisons, as well as executive salary data adjustment, in the survey process.

III. The Job Description/Analysis Questionnaire

The difficulty of designing questionnaires for others to use has already been mentioned in the section devoted to the analysis of job analysis methods. Further emphasis was placed on the common usage of a combined interview/observation method of obtaining reliable job information. However, due to the fact that as reliable job information as possible is required for the further development of a sound base for the proposed structural comparison system of wage and salary surveys, it was assumed that both reliability and validity of such a basis could be increased by utilisation of all three mentioned methods of obtaining job information for compilation of job description/specification purposes, namely the questionnaire method, the observation method, and the interview method. The job analysis procedure based on these methods will be mentioned at a later stage.

With the above assumption in mind, a job description/analysis questionnaire was carefully designed, utilising the abovementioned predetermined sub-factors and degree definitions as a basis for formulating questions. In this way the information necessary for evaluation of jobs for survey position-to-position comparison purposes according to the predetermined factors could be reliably obtained. Due to length and detail involved, such questionnaire has been reproduced as Exhibit A, Appendix II.

Questions incorporated are as direct and as simple as possible, and as few as are enough to enable the analyst to draw up the job descriptions with confidence. Nevertheless, where desirable and possible,

"check questions" have been included, the logic behind such questions being to ask the same question another way round, so that information supplied may be checked for reliability.

Earlier in this text the assumptions upon which job evaluation is based have been discussed. The job description/analysis questionnaire should lead to the writing of a job description which will in turn allow the work to be evaluated in terms of the appropriate assumptions, and it is on this logic that overall factor questions have been compiled. So far as responsibility is concerned, it is the effect of the shelving of responsibility, and the chance of its taking place, that really matters and it is on this assumption that an overall responsibility factor has been included on the basis of five sub-factor categories.

With regard to effort, all jobs require some form of effort, and as the system takes cognisance of this fact, in order to allow some form of analysis with regard to basic human effort, on everall, effort factor must be built into the system and effectively analysed. What we are concerned with is to show how jobs compare with one another, and one of the ways in which they are similar is that they all involve effort, while one of the ways in which they are different is in the level of effort required. Thus it is necessary to indicate what sort of work we are dealing with, and how it involves effort beyond the ordinary commitment. The extent of such effort is a matter of assessment based on requisite information. A further factor concerns the conditions under which the work is done, or environmental conditions and general surrounding or climate under which the work is done, and thus, what has been included is an aim at determination of the type of condition that makes the work unattractive, and thus requires monetary compensation. Similarly, questions pertaining to factors, such as skill and competence have been analysed and included.

Under the general heading of skill, there is reasoning and planning, the aim being to analyse the reasoning and planning behind the whole job as such, rather than individual tasks, such that a reflection of such factors involved in meeting adequately the requirements of the job may be recorded.

Further, coordination refers to the coordination of senses and

muscles, beyond the ordinary accomplishment, and it is not expected, therefore that this section will include common coordinations such as writing, but includes the coordination of hands and sight involved in free-hand drawing. Coordination is also a "check question" for the training section. Jobs that require high-level coordination would be expected to take longer to learn than others. Similarly, questions pertaining to memory and intricacy are also "check questions" for training and coordination, as well as applying to factors in their own right.

Another important matter which has been given attention in the designing of such a system, has to do with the duration of the requirement of a particular factor. Time was considered an important consideration for certain factors, although not for others. Accordingly, where appropriate, the questionnaire includes some aspect of time.

The above explanations with regard to the assumptions behind the incorporation of certain sub-factor analyses within the questionnaire serves to emphasise the fact that such a questionnaire is not faultless. In fact, such questionnaire may suffer from the faults usually found in the application of a general form to a specific instance. However, the primary aim was to develop a technique which could be utilised in the process of developing, and improving the overall reliability of a larger system.

With this fact in mind, although the actual questionnaire as such has not been tested on an individual basis to determine reliability in terms of obtaining consistent information, the questionnaire as an individual technique within a larger system was utilised as an overall test of reliability and validity, and in this way the general rather than the specific reliability of the questionnaire has been effectively determined.

This contribution to degree of overall reliability and validity was determined in the undertaking of two studies which utilised the job description/analysis questionnaire as one of the methods in the job analysis process of obtaining job information for job description and job specification purposes. These job descriptions/specifications were then utilised for job evaluation purposes on two separate occasions in

order to determine (1) the similarity of job evaluation ratings when utilising different evaluation methods but the same job descriptions/specifications for a number of positions, and (2) the degree of reliability of one particular job evaluation system as indicated by the extent to which different assessors provide consistent ratings on each factor when rating a number of jobs according to job descriptions obtained from a single job analysis procedure. The results of such studies and the discussion and conclusions drawn from such results are reported in detail in Chapter VI.

Basically, the success of the job description/analysis questionnaire in obtaining relevant detailed information for the job evaluation process may be indicated by the extent to which consistent ratings of similar positions are obtained, a factor which is most important to the wage and salary survey positional comparison procedure. Therefore, the job description format, in order to assist in the achievement of this end, should follow roughly the same format as the questionnaire, although it will not be exactly the same in terms of factor headings and detail of information. This is so because the questionnaire is after all only a means to an end, the aim being to establish the factual information necessary to complete the assessment. The questionnaire is an instrument for collecting data. The job description is a device for presenting the information so collected, based in this case not only on the questionnaire, but the interview and observation methods as well.

Finally, as mentioned on a number of occasions, although there is yet no best overall job analysis procedure, the abovementioned questionnaire has been designed and developed to analyse jobs for a specific purpose, and thus fits into the flow of events, or techniques involved in the analysis procedure. Such procedure involves the utilisation of three basic methods in the analysis of jobs, namely, the interview method, the observation method, and the questionnaire method designed according to a specific job evaluation method. The detail involved in the process of analysing jobs according to this procedure is outlined in Chapter VIII, and it is only necessary at this stage to mention that such procedure has been developed as a guide and not as a method which is aimed at superceding all other methods. Thus, the proposed wage and salary survey guide has been developed such that any

reliable process may be utilised in developing a basis which provides as subjective and valid a foundation as possible for the utilisation of the proposed system.

UTILITY OF JOB ANALYSIS AND EVALUATION

As mentioned, although there may be no best method of job analysis or writing job descriptions, systematic data collection is essential if decisions made on the basis of job descriptions and specifications are going to be an accurate reflection of the actual job. Inaccurate job analysis and job descriptions can lead to invalid job specifications and invalid job evaluation, which in turn can lead to cumulative effects in the inaccurate adjustment and analysis of salary data in the wage and salary survey.

Similarly, although there may be no best method of job evaluation, as emphasised in previous chapters through studies which have suggested that the particular job evaluation system used makes little difference to results, and further that abbreviated systems produce about the same results as more complicated ones, it does seem essential that systematic attention be given to (1) what job aspects are considered of value; (2) to what degree these aspects are found in each job; and (3) what is the relative worth of jobs based on (1) and (2). Since decisions as to relative worth are universally made in organisations, the question is one of how systematic (1), (2) and (3) are going to be. It would seem that formalised methods of job evaluation serve to improve decision making about relative worth of jobs, but that highly complicated methods contribute little to additional accuracy⁵⁶.

Again, there are no best structures and formulas for wage payments, but it is quite clear that wage payments must be systematic and planned and must represent competitive levels within the labour market. Any wage-determination device or plan requires systematic attention to a wide number of organisational variables if the plan is to succeed, and thus the total context in which a given device or plan is to operate is as important as the plan itself.

⁵⁶ See previous discussions of research in these areas, Chapters IV and V.

There seems to have been little, if any, research on the reliability of job analysis and the writing of job descriptions. It appears that the extent to which different investigators arrive at the same set of job facts and the same descriptions requires extensive research. A most pertinent consideration is the determination of the reliability and validity of responses obtained from job incumbents, supervisors or other raters. The research program reported by Morsh⁵⁷ indicates that reliability varies, depending on the time interval between ratings. The suggestion is that jobs change over time, which is an essential question for job evaluation purposes. Prien⁵⁸ and Prien and Powell⁵⁹ found inter-rater agreement between incumbents and supervisors fairly low with correlations in the range of 0,40 to 0,45. McCormick⁶⁰ reports somewhat higher reliability particularly in experimental situations in which the task remained constant.

The studies of factorial congruence by Siegel and Pfeiffer⁶¹, McCormick, Jeanneret and Mecham⁶², Jeanneret and McCormick⁶³ and McCormick, Cunningham and Gordon⁶⁴ all provide indirect support to claims for reliability and validity of job descriptions. At least multiple observers see essentially the same things, but there is no evidence that observations are sufficient. Either one or both observers or raters or incumbent and supervisor may exclude relevant material, or the content

⁵⁷J.E. Morsh, "Job Analysis in the United States Air Force", Personnel Psychology, XVII, No. 17 (1964), 7-17.

⁵⁸Prien, Journal of Applied Psychology, XLVII, 10-14.

⁵⁹E.P. Prien, and D.R. Powell, "A Study of the Training Director's Functions", Journal of the American Society of Training Directors, XV (1961), 12-18.

⁶⁰E.J. McCormick, "The Development, Analysis, and Experimental Application of Worker-Oriented Job Variables" (United States, Office of Naval Research Report, Department of the Navy, 1964).

⁶¹A.J. Siegel, and M.G. Pfeiffer, "Factorial Congruence in Criterion Development", Personnel Psychology, XVIII (1965), 267-279.

⁶²McCormick, Jeanneret and Mecham, Journal of Applied Psychology, LVI, 347-367.

⁶³P.R. Jeanneret, and E.J. McCormick, "The Job Dimensions of 'Worker-Oriented' Job Variables and of Their Attributive Profiles as based on Data from the Position Analysis Questionnaire" (Lafayette, Indiana: Occupational Research Centre, Purdue University, 1969).

⁶⁴McCormick, Cunningham, and Gordon, Personnel Psychology, XX, 417-430.

in terms of items may never be presented in the questionnaire. The finding that higher level salaries are not as predictable as lower level salaries suggests a case of deficiency. It seems that job description ratings suffer the same fallability of other types of ratings. The considerable research on the reliability of job evaluation plans as such has been discussed in previous chapters, and will be further emphasised in the following chapter, particularly with regard to degrees of consistency among raters in the application of job evaluation methods, and levels of agreement on actual job evaluation factors. A conclusion drawn from such research indicates that since reliability is an essential component of validity, it would seem that the validity of job evaluation could be increased by eliminating job content factors which result in high disagreement between raters.

The aspect of validity in relation to job descriptions becomes a serious question, particularly as a function of observability of job elements or the proximity of process to results. To date, no research has been reported which has been directed to this question, and is sufficient cause for concern.

With regard to validity, it may be stated that the validity of various methods of wage and salary determination might be judged by the extent to which they contribute to the attainment of the goals of the organisation. This contribution is almost impossible to measure, however, since a large number of variables would need to be held constant in order to measure the effect of any one variable, such as job evaluation. It is thus understandable that there has been practically no research done directly on the validity of these different systems. Although research is not plentiful, some indication of validity can be obtained by examining the logic of some of the underlying assumptions. In general, the concepts of job analysis, job descriptions, job specifications, and job evaluation are valid when their logic is examined. In the examination of the logic of underlying assumptions, several revealing questions can be asked: Is the job description an accurate reflection of the actual job being performed? Are the specifications those really required by the job? Are the factors used in job evaluation related to value produced? Are the rules of administration of various pay plans contributing to the various goals of the organisation? A valuable index of validity would be the extent to which managers believe compensation

systems and devices actually work. The popularity of the various systems and devices described thus far can be ascertained by the statistics as to usage quoted in previous chapters. It is evident that most managers feel that job analysis, job description, job specification, job evaluation and pay plans within rules of administration are useful devices and systems⁶⁵.

The question of utility, reliability and validity of these compensation systems and devices leads to a final, overall question of applicability, namely: What wage levels are necessary to retain employees and to keep defensive behaviour at a minimum? The answer may well be in the fact that thinking through the probable contribution of a particular device or system to the success of the organisation will give useful insight into validity of compensation systems and devices as such. In order to do this successfully, the validity of a specific device and practice in wage determination must be examined in the context of its particular environment.

This assumption allows us to focus our attention on the wage and salary survey as a complex process. Although there has been practically no research on the reliability and validity of wage and salary surveys as such, these surveys do indicate a kind of validity in that they provide an index of what wage levels are necessary to recruit and retain needed talent and what wage levels would be higher than necessary and would lead to unnecessary costs⁶⁶. Thus, the examination of the wage and salary survey validity in such a manner must take place in the context of its environment, namely, the constituent elements which lead to the ultimate goal in terms of its validity, these elements being the elements of job evaluation.

It can be assumed that the utility, reliability and validity of such elements, namely, job analysis, job descriptions, job specifications, and job evaluation method contribute to, if not formulate, the validity and reliability of the overall system. Thus, in order to achieve the overall

⁶⁵ John A. Patton, "Job Evaluation in Practice: Some Survey Findings", Industrial Relations Forum (New York : The American Management Association, 1961), 73-77. Also "Management Report: Survey of the Necessity for Conducting a Comprehensive Compensation Survey on a national Basis", Mobil Oil, 112.

⁶⁶ An analysis of the logic of the contribution of different compensation methods to increased productivity is provided by Harold F. Rothe, "Does Higher Pay Bring Higher Productivity?" Personnel, XXXVII (July - August, 1960), 20-27.

objectives of the wage and salary survey in as reliable and valid, as well as subjective, a manner as possible, attention must be paid to the reliability and validity of the integral elements⁶⁷. Only in as far as each element contributes as a reliable and valid method or device to the overall objective, may the system as a whole be regarded as having achieved any level of success. These facts are particularly relevant as far as the development of a basis for a newer structural comparison method of wage and salary surveys is concerned. As explained in the section devoted to the rationale for a new system, in order to ultimately eliminate the disadvantages representing potential invalidators of present survey procedures, a one-time basis utilising the elements of job evaluation must be developed, such that the salary data information obtained to provide this basis is, first and foremost, as objective as possible, a fact which focuses attention on reliability and validity. In order to achieve this careful attention must be paid to each element such that levels of subjectivity may be reduced where possible, and thus improve overall reliability of the process as a whole.

With these facts in mind research into studies covering relevant elements of job evaluation have been discussed and examined such that a sound basis for a structural comparison method of wage and salary surveys may be developed. Particular attention has been paid to those areas where subjectivity may be reduced, and finally a particular job evaluation system has been studied and further researched such that an adequate basis for job analysis has been established. In this way the previous chapters have been structured more as a guide to improving the overall validity and reliability of a wage and salary survey system by careful analysis of the elements constituting the environment of such system, the ultimate objective being to provide a basis which effectively eliminates cumulative subjectivity over successive periods of usage. In this way a particular system has been studied and researched in the light of research completed on other systems and processes mentioned, bearing in mind that detailed research of all such systems in the manner applied to the chosen system is beyond the scope of this text.

⁶⁷This fact is emphasised by a study which provided some useful insight into reliability of wage surveys, by finding that generalised, ambiguous job descriptions led responding organisations to report widely diverse salary ranges for these jobs in contrast to the spread of salaries reported for jobs more clearly and specifically described. John B. Harker, Personnel Journal, XXXI. See also W.A. Groenekamp, "How Reliable are Wage Surveys?" Personnel, XLIV, No. 1 (January - February, 1967), 32-37.

However, the research and studies completed in the process of providing a rationale for a foundation which may be regarded as being as reliable as possible in reducing subjectivity disadvantages, provides in themselves a justification for the choice, design, and development of the flow of events formulating the foundation system as such. Thus, in order to critically-analyse this justification attention must now be focused on such studies.

CHAPTER VI

TESTING THE ELEMENTS OF JOB EVALUATION: THE JOB ANALYSIS PROCEDURE AND THE JOB EVALUATION METHOD

ASSESSING THE BASIS FOR A STRUCTURAL COMPARISON METHOD

The previous chapters have been devoted to an overview of the elements of job evaluation, a process which is vitally important to the wage and salary survey procedure. In the process of critically-analysing these elements a particular guide has been developed such that steps may be taken in the development of a basis for the proposed wage and salary survey system. In developing such a guide an individual job evaluation system has been designed, incorporating a job analysis procedure and a job evaluation method, which may be utilised in the further development of the core subject of this text, namely, a structural comparison guide to conducting wage and salary surveys. However, as mentioned previously, this particular flow of events has not been developed as a process which supercedes all other processes, but rather as a guide to the development of such a system, and as a basis for the further analysis of the proposed survey procedure.

On this basis, it is necessary to assess the degree of validity, reliability and acceptability, not only of the individual methods and techniques, but of the system as a whole, bearing in mind that the primary objective is to develop an overall basis which is as subjective as possible in the gathering, analysis and evaluation of job related information.

In order to accommodate this requirement, two studies were undertaken, both utilising the principles behind the suggested job evaluation system, but individually testing different concepts of reliability and validity. In short, to emphasise points which have been mentioned in previous chapters with regard to requirements to be considered in the selection of individual techniques for a job evaluation system procedural basis, the following basic requirements are recalled :

1. The job analysis procedure as a whole should be constructed so as to consistently produce reliable job data to be abbreviated in form of job descriptions and job specifications.
2. The job evaluation method should be acceptable to a number of diverse organisations in terms of supplying approximately the same classifications as those supplied by any other job evaluation method when applied to a series of jobs.
3. The job evaluation method should be reliable in terms of consistent results obtained from assessment of jobs according to job content factors relevant to that particular method. The degree of reliability may be indicated by the extent to which different assessors provide consistent ratings on each factor when rating a number of jobs.
4. The simplicity and adequacy of the job evaluation method in terms of the scale of job content factors must be both valid and acceptable. This involves testing of the independence of the sub-factors utilised for assessment purposes.

With these basic requirements in terms of objectivity and reliability as a primary concern, the job analysis/job evaluation procedure which has been developed became the nucleus of two studies aimed at assessing the degree to which the system was acceptable.

The first study was aimed primarily at a determination of the extent to which a number of different job evaluation methods would supply approximately the same classifications when rating the same series of jobs. However, such study was also used as a pilot study in testing the reliability of the job analysis procedure in producing consistent job description/specification information. This assessment was achieved by utilising the previously designed job analysis procedure in order to analyse the series of jobs to be rated by the different job evaluation systems. In this way consistency of classification according to the different systems would indicate, to a certain extent, the reliability of the procedure as a whole. This is so because on the basis of this study, a number of different job analysts compiled the job descriptions/specifications which were then utilised as assessment instruments for the

different job evaluation systems.

The second study was aimed primarily at determining the validity of one particular system, chosen for the purposes of this text, plus the independence of the sub-factors of this system. Once again the predetermined job analysis procedure was utilised to compile all job descriptions/specifications necessary for such a study, and once again the nature of such a study further indicated the degree of reliability of the job analysis procedure as a secondary objective.

Thus, although the details of the job analysis procedure are not mentioned at this stage, or in discussion of either study, it is nevertheless important to stress that such a procedure was utilised in both studies in conjunction with the job evaluation method, as chosen for purposes of this text, in order to provide a unified systematic flow of events.

COMPARABILITY AND SIMILARITY OF JOB EVALUATION METHODS

There is a belief that any evaluation method, when correctly applied to a series of jobs, will result in approximately the same classification. A study undertaken by Robinson, Wahlstrom and Mecham¹ intercorrelated rates derived for nineteen municipal government jobs using five different methods of job evaluation, and found that these rates intercorrelated between 0,82 and 0,95. Chesler² compared several point and factor comparison systems and found that they produced highly similar results when applied to the same jobs.

The research completed in this area serves to emphasise the necessity to examine the comparability of a number of job evaluation methods in order to validate the acceptability of one method to be applied to a number of organisations within the framework of the wage and salary survey procedure. Comparisons of different methods in use should thus be

¹David D. Robinson, Owen W. Wahlstrom, and R. Mecham, "Comparison of Job Evaluation Methods", Journal of Applied Psychology, LIX, No. 5 (October, 1974), 633-637.

²Chesler, Journal of Applied Psychology, XXXII, No. 3. Also Robert Kelly, "Job Evaluation and Pay Plans: Office Personnel", in Handbook of Modern Personnel Administration, ed. Joseph Famularo (New York: McGraw-Hill Book Co. 1972); E.C. Snyder, "Equitable Wage and Salary Structuring," Personnel Journal, LVII, No. 5 (May, 1977), 240-244.

made to determine whether approximately the same classifications would be obtained when the same jobs are evaluated by different methods.

Such a study was undertaken in order to determine the degree of comparability between different job evaluation methods within an established salary survey community, this community having a national basis. The object of such a study was to provide empirical proof of comparability such that organisations participating in surveys would readily accept the evaluation and adjustment of their own jobs according to the single method chosen by the survey organisation.

Most organisations are accustomed to and satisfied with their own systems. In spite of certain (often debatable) inadequacies and weaknesses of a particular system, it is usually an acceptable procedure in operation, with little inclination on the part of management to make any but minor revisions, and a strong disinclination to switch to an entirely different system. This consideration is the key to the difficulties that are encountered in making direct comparisons of jobs in different organisations. In the final analysis the problem boils down to the fact that the unit of job worth differs from system to system.

Thus, one purpose of the present study was to make a direct comparison of the different job evaluation methods used by the different survey community organisations. A second, and important, purpose was to develop acceptance of an overall method chosen from the different methods under consideration. It was not the purpose of the study to develop an overall method to replace those methods already in use in the different organisations. Rather the purpose was to develop acceptance of an overall method which would serve as a common measuring stick for comparisons among different organisations.

I. Participating Organisations and Types of Job Evaluation Systems In Use

The organisations participating in the study were the sixteen organisations forming a national wage and salary survey community. Such organisations were drawn from diverse industries and labour markets, but were sufficiently large to have interests on a national basis, and thus applied particular job evaluation systems in the development of their pay structures.

With respect to methodology, there were four basic methods of job evaluation in use, namely: (1) ranking, (2) classification, (3) point, and (4) factor comparison. Although the methods as such were not individual copies of the abovementioned conventional methods, with few exceptions, all were variations of one or more of these basic methods. All, however, utilised an analytical approach to the allocation of points in the rating process, including variations of ranking and classification methods. Precise information as to the type and actual rating procedures of job evaluation methods was not available prior to the undertaking of the study. Each organisation had adapted or developed its own method independently, the differences among the methods being apparent in the range of the unit of job worth. Thus, the ranges of units of job worth became the basis for comparison and analysis purposes.

These ranges in terms of highest evaluated job and lowest evaluated job in each organisation are illustrated in TABLE 2.

TABLE 2

JOB EVALUATION SYSTEM POINT RANGES : SURVEY COMMUNITY ORGANISATIONS

ORGANISATION	RANGE	SALARY GRADES
A	88 - 2733	24
B	170 - 2460	14
C	100 - 1060	12
D	170 - 2460	14
E	81 - 1346	16
F	11 - 133	15
G	4 - 1248	14
H	100 - 3000	19
I	22 - 550	15
J	188 - 2137	20
K	180 - 1166	11
L	120 - 525	12
M	1 - 200	14
N	170 - 345	9
O	50 - 1840	15
P	160 - 1270	11

II. Positions Selected for Study

Twenty-four jobs, common to all organisations concerned and regarded as key jobs, ranging from very simple to very difficult in terms of job content, were selected for study. These jobs were selected as key jobs after careful consideration of job descriptions and specifications in order to establish degrees of similarity in job content from organisation to organisation. Thus, it was highly likely that jobs evaluated high or low in one organisation would similarly be evaluated high or low in another. Further, these jobs were selected from the structure of one particular organisational hierarchy such that, as key jobs, they represented an ordered hierarchy of structured anchor points which had already been evaluated within the context of one particular method. The analysis of such jobs was completed according to the job analysis procedure developed and detailed in Chapter VI, such analysis being undertaken by a number of job analysts, the job descriptions being cross-referenced to ensure consistency of relevant information.

III. Method and Results

Job descriptions and job specifications for the jobs were very carefully prepared and sent to each organisation. Each organisation was instructed to rate each of the job descriptions/specifications according to its own job evaluation method. These ratings comprise the raw data for the study. Differences in the unit of job worth used by the various organisations are very apparent in that points allocation per job varied greatly from organisation to organisation depending on the evaluation method. This raw data is presented in TABLE 3.

In order to maintain confidentiality as to points allocation and organisational structure, those organisations participating in the study submitted evaluations of positions in terms of both monetary values and points allocation; thus, the actual monetary worth rather than numerical worth of key jobs are reflected, and in this way a more meaningful matrix of raw data is illustrated.

As an initial step in the statistical treatment of data, correlation coefficients among the sixteen organisation point ratings were computed,

as presented in TABLE 4. These correlation coefficients range from 0,9302 to 0,9974 with an average of 0,9815. This indicates a remarkably high level of agreement among the sixteen organisations in assessing both point and monetary values to the twenty-four jobs.

The averages of the correlations of each organisation with every other organisation range from 0,9638 (Organisation E) to 0,9893 (Organisation A). These average correlations are measures of commonality between one organisation and all other organisations, and indicate that all of the job evaluation methods in the study have a great deal in common with each other.

The fact that each organisation had converted point ratings into actual monetary worth facilitated the application of further statistical treatment of the r w data. As it was obvious that raw point ratings when added to form a composite score for each job would fail to yield a unit of job worth that would show more commonality with all sixteen methods than did any individual method with the remaining fifteen methods, it was decided that the conversion of all original point ratings to a common basis would facilitate the control given over the relative importance or weight of the units of job worth in the composite score for each job, which is lacking when the raw ratings are summed.

However, in order to further facilitate such control, it was decided to reduce all the original monetary ratings to "z - scores" and then combine the values so derived into a new set of twenty-four job values for each of the sixteen organisations. The raw ratings of each of the organisations were, therefore, converted to a common distribution in which the mean and standard deviation were assigned specific values. In other words, the twenty-four ratings of each organisation were converted to a new set of values in which the average rated job was fifty, the lowest rated job was approximately five, and the highest rated job was approximately ninety-five. In effect, then, the differences in the unit of job worth among the sixteen methods have been eradicated such that a standard rating unit now becomes applicable.

The sums of the sixteen standard ratings for each job were then computed, and correlation coefficients between the raw ratings for each organisation and total standard ratings were computed, as presented in TABLE 5.

TABLE 3

MONETARY RATINGS OF JOBS ACCORDING TO DIFFERENT JOB EVALUATION SYSTEMS

JOB TITLE	ORGANISATION : RATINGS															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
LABOURER	162	172	180	173	149	167	134	181	166	158	-	127	190	138	129	179
FORK LIFT OPER.	198	222	233	229	189	208	192	-	186	197	285	142	172	214	142	217
CHAUFFER	240	250	276	258	237	238	206	231	238	175	284	162	186	214	181	294
COPY TYPIST	295	290	300	323	387	383	-	328	328	284	317	294	380	346	270	331
CLERK	360	397	357	362	361	366	365	359	348	353	402	342	374	348	352	391
STOREMAN	438	507	430	430	414	490	-	-	-	328	510	450	442	-	475	354
SENIOR CLERK	485	464	453	469	517	490	600	491	426	502	535	482	382	416	462	466
PROGRAMMER II	531	407	520	512	551	625	-	510	505	605	618	-	695	566	600	537
PROGRAMMER I	586	651	627	598	636	635	628	545	615	650	713	586	574	544	630	563
PERSONNEL OFFICER	646	571	627	604	642	635	578	-	647	604	-	632	648	750	590	615
ENGIN. ASST.	711	712	662	752	721	815	796	656	670	745	978	830	919	694	771	673
SENIOR PERSONNEL OFF.	780	897	757	902	-	854	818	-	834	756	1110	723	803	788	670	713
DEPOT MANAGER	858	745	741	831	853	820	837	-	930	737	-	879	823	-	770	741
LEGAL ADVISOR	946	822	840	902	721	890	-	809	-	931	978	937	909	917	911	731
PERSONNEL MANAGER	1043	999	976	-	-	1039	1058	1106	1078	-	1711	-	829	930	895	1000
DATA PROCESSING MGR.	1149	1077	1005	1115	943	1074	1160	1031	1121	1052	1417	-	1080	1113	1045	1085
REAL ESTATE MANAGER	1265	1330	1089	1328	853	1210	1256	1482	-	1154	1294	-	-	-	1006	1105
SECRETARY	1389	1423	1247	1388	1125	1327	1421	1371	1470	1396	1980	-	-	1353	1223	1345
SYSTEMS MANAGER	1560	1627	1516	1704	1605	1504	1474	-	1794	1206	1858	1701	1892	-	1420	1572
ASSISTANT ACCOUNTS MGR.	1754	-	-	-	-	-	-	1596	-	-	2261	1624	1795	2075	1674	-

TABLE 3 (Continued)

MONETARY RATINGS OF JOBS ACCORDING TO DIFFERENT JOB EVALUATION SYSTEMS

JOB TITLE	ORGANISATION : RATINGS															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
OPERATIONS MANAGER	1966	1914	1934	1916	1316	1869	1914	-	2103	1978	-	-	-	1841	1922	1996
ACCOUNTS MANAGER	2211	2495	2155	2544	2244	-	2230	2067	2103	2161	3132	2070	2191	2053	-	2250
MANUFACTURING MANAGER	2483	-	2282	-	-	2470	-	-	2510	2382	-	2070	-	-	-	2514
MARKETING MANAGER	2783	2495	2550	2827	2265		-	-	-	-	3854	3125	-	2875	2286	-

TABLE 4

INTERCORRELATIONS: INDIVIDUAL ORGANISATION RATINGS

ORGANISATION	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A																
B	0,9872															
C	0,9973	0,9903														
D	0,9945	0,9954	0,9949													
E	0,9679	0,9728	0,9711	0,9814												
F	0,9974	0,9871	0,9954	0,9961	0,9759											
G	0,9964	0,9904	0,9901	0,9904	0,9514	0,9957										
H	0,9876	0,9808	0,9760	0,9825	0,9342	0,9720	0,9826									
I	0,9949	0,9794	0,9930	0,9812	0,9482	0,9913	0,9836	0,9971								
J	0,9913	0,9760	0,9888	0,9770	0,9302	0,9892	0,9920	0,9784	0,9795							
K	0,9867	0,9746	0,9879	0,9887	0,9769	0,9853	0,9777	0,9602	0,9716	0,9823						
L	0,9847	0,9684	0,9821	0,9829	0,9723	0,9822	0,9877	0,9937	0,9881	0,9694	0,9856					
M	0,9792	0,9651	0,9753	0,9786	0,9845	0,9666	0,9677	0,9733	0,9795	0,9546	0,9464	0,9945				
N	0,9907	0,9749	0,9909	0,9880	0,9699	0,9957	0,9910	0,9747	0,9936	0,9934	0,9767	0,9833	0,9800			
O	0,9897	0,9823	0,9912	0,9831	0,9634	0,9871	0,9878	0,9433	0,9847	0,9832	0,9713	0,9828	0,9746	0,9813		
P	0,9946	0,9883	0,9969	0,9903	0,9573	0,9923	0,9904	0,9744	0,9921	0,9874	0,9809	0,9776	0,9738	0,9897	0,9831	
MEAN	0,9893	0,9808	0,9880	0,9870	0,9638	0,9873	0,9850	0,9741	0,9839	0,9782	0,9769	0,9823	0,9729	0,9849	0,9843	0,9846

TABLE 5

INTERCORRELATIONS: RAW RATINGS WITH STANDARD RATINGS

ORGANISATION	CORRELATION
A	0,9977
B	0,9960
C	0,9977
D	0,9895
E	0,9703
F	0,9888
G	0,9799
H	0,9747
I	0,9922
J	0,9886
K	0,9922
L	0,9864
M	0,9833
N	0,9916
O	0,9889
P	0,9952

IV. Discussion

The high values of the inter-organisational correlation coefficients indicates that within each of the sixteen methods, the twenty-four jobs were rated very much alike, in spite of the fact that the unit of job worth differed from method to method, and in spite of the fact that the methods differed in methodology. These unexpectedly high correlations thus result in the conclusion that the actual points allocation of the sixteen methods have a great deal in common although each method used different units and different techniques of arriving at the difficulty value of a job. Should these correlations have been of a lower order, say 0,50 or 0,60 proceeding with the study would have been a debatable issue since the evidence would have indicated too little commonality among the sixteen methods to make it acceptable, and possible, to utilise one overall system for key job adjustment and weighting purposes. However, the empirical evidence suggests a great deal of commonality among the methods, and thus justifies the possibility of using one overall system.

It is this empirical evidence which provides the grounding for acceptability of one of these methods in establishing a basis for survey community position-to-position comparisons.

The high average of the correlation coefficients computed between raw ratings for each organisation and total standard ratings supports the conclusion of commonality amongst the sixteen methods. It is questionable whether any other statistical procedure would yield an average correlation coefficient greater than 0,98, since we are approaching the limits of almost perfect agreement between individual systems. From the point of view of the practical problem to be solved by this study, the coefficients presented are highly significant and justify accepting the use of one overall system in which the unit of job worth would be common to all jobs.

Thus, the findings of this study indicate that there is a great deal in common among the various job evaluation methods. As has been previously suggested, the primary consideration in the selection of a job evaluation method is basically its acceptability to those involved. Advantages and disadvantages are found more in the work required in installing and administering a system than in the final accuracy of a system which is judged to be appropriate for the kind of job being rated. Most researchers will agree that methods which intercorrelate 0,95 on the average are sufficiently similar to be substituted for each other without changing the final classification of jobs appreciably.

VALIDITY AND RELIABILITY OF AN OVERALL SYSTEM

As the initial step in the choice of an overall method provided positive results in the light of empirical study as to comparability of all methods utilised in a survey community, the following step concerns the testing of an actual system in the light of basic requirements discussed.

As mentioned in discussing advantages and disadvantages of various methods in use, the trend is a movement away from subjectivity at all levels of evaluation, but not at the expense of comprehension. Thus, the basic decision lies in the validity of a system, as well as the

number of evaluation factors and sub-factors involved in the actual method.

The validity of a system rests primarily on its demonstrated practical usefulness, which also indicates the degree to which number of factors concerned contributes to such a success. Thus, after careful consideration of the basic requirements and advantages and disadvantages of these methods with particular reference to the South African scene, the actual method chosen for empirical study was an extensively utilised method which is basically a modified form of the Castellion method. This method has operated satisfactorily in a number of large and diversified corporations, and salary ranges relate consistently to market values. However, some scientific backing is desirable in order to support the choice of such a method. Jacques³ was the first to suggest that job evaluation be based entirely on psychological factors, and his conception of the time span of discretion concerned itself entirely with the mental processes experienced by people doing work. This approach enabled consideration of aspects of work which previous systems had ignored, such as the anxieties and diffuse nature of executive role structures. This method further enabled comparison of activities executed by different functions in organisations, for example, contrasting marketing and engineering activities.

However, research⁴ has revealed that theoretical formulation of Jacques could not be easily implemented as much skill was required to tease out essential information needed for the assessment of the time span of discretion, and this left the same basic problems of job evaluation unsolved. Current systems could be applied to selected sectors of an organisation, but failed to find some common basis for classification of widely different jobs. The basic choice of factors and the interpretation attached to these factors was determined by the jobs which were studied. Physical conditions, for example, were

³E. Jacques, Measurement of Responsibility; Equitable Payment; Time Span Handbook.

⁴L.E. Cortis, Studies in Job Evaluation (Johannesburg: National Institute for Personnel Research, 1962), and R.E. Skawran, and L.E. Cortis, The Evaluation of Administrative Posts in the C.S.I.R. (Pretoria: South African Council for Scientific and Industrial Research, 1961).

important when the tasks of factory workers were evaluated, but such factors cannot be extended to administrative positions, and this led to job evaluation practitioners restricting themselves to homogeneous job groups.

Thus, between 1956 and 1962 attempts were made by the National Institute for Personnel Research to develop a system which would incorporate all the functions present in a large business organisation. In 1962 Biesheuvel⁵ proposed a system of job evaluation based on three psychological factors, namely, Competence, Responsibility and Effort. As previously discussed⁶, he saw each of these factors as the resultant of two dimensions, and provided an initial set of six job evaluation scales, arguing that there was a similarity between the thought processes of workers operating at different levels in the hierarchy of organisations, and the various levels which are known to function in the central nervous system.

A pilot study was conducted in 1962 which revealed that the concepts postulated by Biescheuwel were viable, but that the scales which he had designed failed to discriminate meaningfully between jobs in industry. Cortis⁷ used the concepts in a further study which involved analysis of jobs covering engineering, marketing and administrative activities. Job descriptions were studied by Cortis who provided a further set of job evaluation scales, selecting eleven variables, and incorporating the time span of discretion in the key dimension of decision making and postulated that the variables would overlap considerably with each other. These eleven variables are as follows: (1) decision making; (2) pressure of work; (3) controls and checks; (4) vigilance; (5) man management; (6) consequence of errors; (7) comprehension; (8) expression; (9) numerical computations; (10) education; and (11) experience.

Using these variables, two samples of job evaluation scores were

⁵S. Biesheuvel, "Outline of a Psychological Job Evaluation System". (Johannesburg: National Institute for Personnel Research, 1962).

⁶As discussed under the Castellion Method, p. 93.

⁷L.E. Cortis, South African Journal of Psychology, II.

analysed by cluster analysis, one sample representing homogeneous level jobs, and one representing heterogeneous level jobs. It was found that the scores, which were assumed to measure the eleven variables defining jobs, fell into three clusters in each sample, named as representing Responsibility, Competence and Decision Making.

The Responsibility cluster incorporated the same two variables for both samples, namely (1) pressure of work; and (2) man management. Both imply that personal involvement is necessary for adequate job performance. A high score on pressure of work suggests that the person accepts high work loads even when this interferes with domestic life, while a high score on man management indicates a concern with successful completion of tasks rather than the credit which would accrue to him.

The Competence cluster reflects the formal aspects of competence as postulated by Biesheuvel, and are measured through the assessment of verbal skills (comprehension and expression) and the level of formal education considered necessary for the job.

The Decision Making cluster incorporated variables concerned with information and its elaboration, i.e. decision making, vigilance, controls and checks, the highest points in the scales of these three variables featuring these common characteristics:

1. The exercise of thought processes over material of extreme complexity and abstraction.
2. Conceptual thinking in situations which require innovation. The interpretation of data cannot be readily inferred from precedents.
3. Activities which require clear measures of autonomy and which can only be subjected to the guidelines of broad functional policies.
4. High level of uncertainty in the information which is used and the judgements which are made.

An important point to mention at this stage is that, apart from computation of intercorrelation matrices, grades into which specific jobs were ultimately placed were also established, and of interest is

the fact that grade appeared only in the decision making cluster of the heterogeneous sample of jobs (clerical to senior executive). This supports the observation that the higher levels in the hierarchy of organisations concern themselves with the more demanding decisions, i.e. those requiring an evaluation of complex information of high uncertainty; and that in itself the nature of the decision making process is the best indicator of the positions of the more senior jobs in a hierarchical structure.

The system of job evaluation thus developed reflects in part the original model suggested by Biesheuvel⁸ in that two of the factor clusters identified corresponded exactly. These similarities between clusters support Biesheuvel's basic conception that jobs in a hierarchy can be ranked through their conceptual or ideational complexity. However, of importance to the wage and salary survey specifically is the fact that this is a system which can be applied to a broad spectrum of functions, as supported by the choice of a homogeneous sample of jobs from within one organisation and evaluated by a single panel of executives, and a heterogeneous sample of jobs from within a different organisation, evaluated by various assessors over a number of years.

I. The Developed System as a Survey Base

The significance of the above research in identifying clusters of variables which may be utilised as the basis for a successful job evaluation system, indicates probability of reliability as a basis for developing a wage and salary survey program. This suggestion may be supported by the following observations:

1. Jobs may be evaluated according to a number of factors which have been successfully utilised to evaluate a diverse range of jobs, from clerical to senior executive levels (the intercorrelation matrix of the heterogeneous sample indicated that the factors intercorrelated highly, all but one correlating at 0,90 with the total grade score).

2. The system is based on a key dimension of decision making, but incorporates the time span of discretion in this dimension. The system has thus been utilised to successfully evaluate a number of

⁸Biesheuvel, "Outline of a Psychological Job Evaluation System".

executive positions, as indicated by the reliability figure mentioned above. In this way the system is based, not only on the simplicity of evaluating jobs according to points allocation factors, but incorporates the logic behind the development of systems such as the Paterson system, and the Time Span method.

3. The validity of the system rests on its demonstrated practical usefulness, as indicated by its satisfactory operation in a number of large and diversified corporations in South Africa⁹.

4. Salary ranges based on the system relate consistently to market values¹⁰.

5. Use of evaluation factors as suggested by the system allows for simplicity of weighting and adjustment of salary data when establishing position-to-position comparisons in the wage and salary survey. This is opposed to the complexity of adapting principles of systems such as Paterson, Time Span and Profiling.

The logic behind the selected overall method of job evaluation is essentially the same as that behind the systems developed by Biesheuvel and Cortis; in fact, this modified Castellion system is based on similar factor variables and is now a more extensively used method. As a basis for this modification, note was made of the fact that some overlap existed between eight of the eleven variables suggested by Cortis, and that the nature of the overlap varied with the groups of jobs which were evaluated and the conditions under which these jobs were evaluated. As a result, the number of variables was reduced from the initial eleven to the eight of the newer system, although basic variables and concepts remained unchanged in order to preserve the logic behind the system.

Bearing these facts in mind, it is possible to test the independence of the sub-factors, or variables, of this newer system in order to establish a degree of validity and reliability, on a similar basis as that applied to the system developed by Cortis, and in this way further analyse the usefulness of such a system to the wage and salary survey.

⁹Biesheuvel, Business Management, VIII, No. 4, 22.

¹⁰Ibid.

A number of questions thus require answering. Can it be shown that the same result cannot be obtained by means of a simpler system, using fewer factors? Is the system not too complicated for practical use, as assessments have to be made by managers and supervisors without technical qualification in the use of personnel techniques? How reliable is the system?

The first question can legitimately be asked in view of the popularity of Paterson's Decision Band System at present being used by a number of large organisations in South Africa. This system would at first sight appear to rely on decision making only, but the resulting grades are very broad, and additional factors have to be used to establish sub-grades, necessary for proper salary differentiation.

It thus becomes necessary to test the independence of the sub-factors used in the modified Castellion method, such sub-factors being:

1. Problem Solving (Decisions). A decision can be interpreted as the solving of a problem where alternative actions are possible. The incumbent must identify the alternatives and decide which is best. The process varies from a simple decision with only a few identifiable alternatives within the framework of specified work procedures, to decisions which become more difficult where clues are submitted. At the higher levels the incumbent must initiate alternatives, the effectiveness of which may be in doubt.

2. Consequence of Errors of Judgement. This sub-factor measures the consequence of wrong decisions as reflected in losses and their extent, for example, financial losses related to material or manpower, or loss of prestige, external or internal.

3. Pressure of Work. This sub-factor measures the amount of stress inherent in the job as reflected in the volume and type of work, as well as available time.

4. Knowledge. This sub-factor measures the level of knowledge which is necessary in order to fill the position adequately.

5. Job Impact. This sub-factor measures the scope or area in which the activities of a job have an influence.

6. Comprehension. This sub-factor assesses the requirements of the post in understanding communications, both spoken and written.

7. Equivalent Educational Qualifications (or intelligence level required in the post).

8. Training/Experience (necessaary to perform job competently). This sub-factor measures the period normally required on other jobs, and on this job, before becoming fully proficient.

Each of the above sub-factors is divided into nine progressive definitions, such that in any one definition all lower definitions are understood to apply. In order to evaluate a position each definition is read progressively and accumulatively until the first definition which is just too high for the position being evaluated has been reached; then the previous apt definition should be returned to. A particular score will be applicable to such definition which will then form the point allocation for that particular job as evaluated against that particular sub-factor.

Obviously, then, the assessment according to sub-factor definitions becomes subjective; thus, the necessity to test the independence of sub-factors in order to assess the degree to which each sub-factor is capable of adequate evaluation on an independent basis.

II. Positions Selected for Study

Two samples of jobs were selected for study, the one sample consisting of sixty jobs, type and level being heterogeneous, while the second sample consisted of forty jobs, type and level being homogeneous. Sample A, then, consisted of sixty jobs containing a large number of professional managerial and supervisory positions, and ranged from top executive to routine clerical jobs. Sample B, consisting of forty jobs, was homogeneous, containing only technical and manual jobs in the refinery of a large petroleum products organisation. All jobs were analysed and described according to the job-analysis procedure outlined

in Chapter VII.

III. Method and Results

To test the independence of the sub-factors of the modified Castellion job evaluation method, the factor scores for the two samples of jobs were intercorrelated. In order to obtain the raw data for these intercorrelations, Sample A jobs were evaluated by a variety of assessors, these evaluations taking place on an individual assessment basis, with assessors being chosen from all levels of the organisation, while Sample B jobs were evaluated by six managers on a panel consensus score basis. The intercorrelations of the sub-factors and the total grade scores for jobs in Sample A are presented in TABLE 6, while those for jobs in Sample B are presented in TABLE 7.

In order to further test the case for the relative independence of sub-factors, an additional study was completed whereby only one job was evaluated, but by thirty different assessors. The intention of such an exercise was not only to further test the relative independence of sub-factors, but also to gain insight into the extent to which assessors, inexperienced in evaluation techniques, evaluate a single job consistently. In short, this exercise assesses the relative independence of sub-factors, and demonstrates the system's practical validity. The job chosen for evaluation in this exercise is the Relations Assitant of a large organisation, and results obtained are presented in TABLE 8, revealing relationship between evaluation sub-factors and total grade score, and TABLE 9, revealing relationship between factors and total points score.

IV Discussion

From TABLE 6 it may be noted that the sub-factors intercorrelated very highly in the group of heterogeneous jobs, such intercorrelations ranging from 0,6825 to 0,9550 while all but one correlated at or above 0,90 with the total score. These intercorrelations not only indicate a high level of consistency in the evaluation of a diverse range of jobs according to the sub-factors mentioned, but further, due to the independence of these sub-factors to the extent that it may be assumed that any one sub-factor, except Qualifications, would have been

sufficient to determine the job grades.

On the other hand, TABLE 7 shows much lower correlations and greater factorial independence for the homogeneous sample, intercorrelations between sub-factors ranging from 0,3889 to 0,8467. However, this may be expected as all sub-factors have a positive relationship with job progression, and if this progression ranges all the way from the highest to the lowest jobs, relatively minor differences in factor involvement in jobs located in adjoining grades will be outweighed by the overall trend to move upwards together. Due to the fact that the homogeneous sample of jobs are limited to a narrower range of grades, specific job differences in respect of the sub-factors are more likely to show up and reduce both intercorrelations and correlations with grade points. It is for this reason that the Paterson system manages with one classifying concept for its overall scheme of decision bands, but has to resort to additional factors for closer discrimination within certain of the lower bands, while even at the higher levels there is doubt as to whether the bands allow sufficiently for job diversity. The decision making process cannot be broken down exclusively in the hierarchical form postulated by Paterson as the time stress factor must be separately considered. Jobs equivalent in complexity of decision making, for example staff jobs, can differ very materially in this respect from line jobs and as this affects the demands made by the jobs, it should affect compensation and therefore grade. It also makes sense that more should be paid for a job which differs from another in respect of consequences of error, though alike in other respects, as responsibility is clearly greater. Differentials are most important in adjoining job grades, where the influence of factor specificity is greatest, and it is for this reason that the Castellion/Peromnes systems are preferred, even though by using only the factor which carries the heaviest weight the majority of jobs would be correctly placed. This does not minimise the importance of other sub-factors which will reduce misplacements to a minimum.

As mentioned, the argument for the independence of sub-factors has been further supported by results obtained from an exercise reported in TABLES 8 and 9. Here only one job has been evaluated, but by thirty different assessors. It may be noted that factors are still positively related, but specificity is at a more desirable level. Due to the fact

TABLE 6

INTERCORRELATIONS: EVALUATION SUB-FACTORS AND TOTAL GRADE SCORE

SAMPLE A : SIXTY JOBS : TYPE AND LEVEL HETEROGENEOUS

SUB-FACTORS	A	B	C	D	E	F	G	H
A. DECISION MAKING								
B. CONSEQUENCE OF ERRORS	0,9550							
C. PRESSURE OF WORK	0,9245	0,9173						
D. KNOWLEDGE	0,9310	0,8896	0,9193					
E. JOB IMPACT	0,9246	0,9123	0,9127	0,9002				
F. COMPREHENSION	0,9269	0,9235	0,9180	0,9097	0,8926			
G. QUALIFICATIONS	0,7639	0,6825	0,6917	0,7748	0,6999	0,7597		
H. EXPERIENCE	0,8834	0,8357	0,8589	0,8433	0,8948	0,8695	0,7557	
TOTAL GRADE SCORE	0,9817	0,9598	0,9559	0,9565	0,9543	0,9602	0,8088	0,9269

TABLE 7

INTERCORRELATIONS: EVALUATION SUB-FACTORS AND TOTAL GRADE SCORE

SAMPLE B : FORTY JOBS : TYPE AND LEVEL HOMOGENEOUS

SUB-FACTORS	A	B	C	D	E	F	G	H
A. DECISION MAKING								
B. CONSEQUENCE OF ERRORS	0,8467							
C. PRESSURE OF WORK	0,8439	0,7003						
D. KNOWLEDGE	0,7459	0,5397	0,8001					
E. JOB IMPACT	0,7524	0,6328	0,7758	0,7080				
F. COMPREHENSION	0,8369	0,6778	0,8288	0,8113	0,6824			
G. QUALIFICATIONS	0,6851	0,5139	0,6421	0,6339	0,5297	0,7457		
H. EXPERIENCE	0,6101	0,3889	0,7045	0,7275	0,6687	0,7339	0,6435	
TOTAL GRADE SCORE	0,9317	0,7786	0,9121	0,8813	0,8435	0,9121	0,7911	0,8240

TABLE 8
 INTERCORRELATIONS: EVALUATION SUB-FACTORS AND TOTAL GRADE SCORE (Rho):
 RELATIONS ASSISTANT

SUB-FACTORS	A	B	C	D	E	F	G	H
A. DECISION MAKING								
B. CONSEQUENCE OF ERRORS	0,0436							
C. PRESSURE OF WORK	0,1237	0,1085						
D. KNOWLEDGE	0,1460	0,0074	0,4707					
E. JOB IMPACT	0,0175	0,0878	0,0446	0,3443				
F. COMPREHENSION	0,0359	0,0124	0,0807	0,4207	0,3455			
G. QUALIFICATIONS	0,3106	0,2218	0,0208	0,2912	0,0060	0,1033		
H. EXPERIENCE	0,1420	0,0029	0,2147	0,0942	0,2207	0,1590	0,3549	
TOTAL GRADE SCORE	0,3261	0,4117	0,4916	0,6841	0,6019	0,4842	0,4501	0,2945

TABLE 9
 INTERCORRELATIONS: EVALUATION FACTORS AND TOTAL POINTS SCORE (Rho):
 RELATIONS ASSISTANT

	EFFORT	RESPONSIBILITY	COMPETENCE
EFFORT			
RESPONSIBILITY	0,2991		
COMPETENCE	0,4474	0,2648	
TOTAL POINTS SCORE	0,7066	0,5669	0,8357

TABLE 10

SCORE RANGES AND MEDIANS FOR FACTORS AND SUB-FACTORS: EMPLOYEE RELATIONS ASSISTANT

FACTORS AND SUB FACTORS	MAX. SCORE	RANGES FOR JOB	MEDIANS FOR JOB	CRITERION SCORES	CRITERION GRADE POINTS RANGE
DECISION MAKING	153	63 - 81	81	81	
CONSEQUENCE OF ERROR	153	72 - 99	81	72	
EFFORT	306	126 - 172	153	171	
PRESSURE OF WORK	153	63 - 81	81	90	
KNOWLEDGE	153	54 - 81	72	63	
JOB IMPACT	153	63 - 81	72	72	
RESPONSIBILITY	306	135 - 180	153	135	
COMPREHENSION	153	81 - 90	81	72	
QUALIFICATIONS	153	54 - 72	63	63	
EXPERIENCE	153	81 - 99	90	81	
COMPETENCE	306	270 - 342	306	288	
TOTAL GRADE POINTS SCORE	1224	576 - 639	603	594	576 - 603

NOTE :

1. Fifteen out of thirty assessors placed the job within the correct grade.
2. Criterion score and grade range calculated by a job evaluation committee of the organisation concerned.

that the factor Competence has been more heavily weighted this factor still makes the greatest contribution. However, some jobs may in fact be equally weighted with the three factors, although this is not the case for the particular job utilised in this exercise. Nevertheless, this does not affect the validity of the demonstration of relative independence.

However, it could be postulated that, as the participants in this experiment were a number of employees drawn from a single organisation, but untrained in the assessment of job factors, the lower correlations could simply be due to error. TABLE 10 gives the ranges of individual assessments and their medians, and a comparison with the criterion scores and grade. The considerable degree of error introduced by lack of evaluation experience must have affected correlations, but this error does not prevent the group trend approximating the correct grade, a fact which provides some support for the relative independence of sub-factors, and thus warrants their inclusion in the system.

A further point of practical importance is the fact that this experiment indicates that it is possible for a reasonably intelligent employee to become acceptably competent in the application of the system, given theoretical background and training, with feedback on performance (which the employees involved did not have).

One final question needs to be answered : Is this the kind of job evaluation system applicable to a less structured and less hierarchical kind of work organisation? The majority of organisations operating in South Africa conform to the hierarchical organisational pattern, and the question is therefore more of theoretical than of practical importance. Nevertheless, the system should be applicable to an organisation in which jobs are not narrowly defined, cover a wide variety of diverse activities, or where work is organised on a project basis, to which employees contribute according to their competence and experience. Only in the satisfaction of these requirements will the system be universally applicable. However, this organisational flexibility does not affect compensation, as a variation in an individual's salary from project to project is most unlikely, and maintenance of proper differentials in accordance with the contribution he is required to make, is still basically necessary. Task descriptions will be needed which

will inevitably be more complex than the orthodox job description, but there is no reason why this proposed system factors should not be used to evaluate task differentials.

On the other hand, if one considers the Paterson system with its differentiating principle depending on a succession of decision making levels, it is probable that this system would face a problem in that these decision making levels correspond to a hierarchical organisation structure, from top management down to unskilled grades. As suggested by Biesheuvel¹¹, one doubts whether this scheme really accords with the prevalent authority structure in most organisations. Policy decisions, which are those decision levels corresponding to top management, according to the Paterson system, are not only taken at the top, but it would further be difficult to reconcile it with the project type of organisation which Galbraith¹² has designated as the "technostructure" in which decisions emerge from task committees drawn from a large group which "extends from the most senior officials of the corporation to where it meets, at the outer perimeter, the white-and-blue-collar workers whose function is to conform more or less mechanically to instruction or routine".

CONCLUSION

Emphasis has been placed throughout the discussion on the job evaluation process as a means of obtaining reliable and objective information for wage and salary survey purposes, and the need to utilise such a process as a basis in the need to move away from subjective procedural techniques. On this assumption a procedural basis has been developed as a means of providing an objectively structured one-time basis for the further development of a wage and salary survey technique which relies on pay structural rather than positional description comparisons.

A disadvantage to be pointed out in terms of comparability of various job evaluation processes which might be applied on the same

¹¹ Biesheuvel, *Business Management*, VIII, No. 4, 23.

¹² J.K. Galbraith, *The New Industrial State* (2nd ed., rev.; London: André Deutsch Ltd., 1972), pp. 70-71.

basis, is the fact that it is difficult to assume the reliability and validity of any one system in terms of another inasmuch that each system has its own weaknesses in terms of obtaining objective information. In short, there is no system which may be regarded as a perfect method of obtaining job comparability, and against which other systems may be effectively evaluated, which resulted in the necessary testing of the system, developed in the light of advantages and disadvantages of other systems, against predetermined standards specifically set for wage and salary survey procedural purposes.

Due to the fact that useful insight into the question of reliability of wage and salary survey information has been provided by the finding that generalised, ambiguous job descriptions led participating organisations to report widely diverse salary ranges for these jobs in contrast to the "spread" of salaries reported for jobs more clearly and specifically described¹³, care had to be taken in the development of an analysis procedure which would provide consistent job information summaries for purposes of compiling reliable job descriptions and job specifications. The utilisation of these job descriptions/specifications for job evaluation purposes in both of the reported studies has indicated a suitable level of consistency and reliability in that intercorrelations of the same positions, described by the same analysis procedure, but evaluated according to different job evaluation methods, were significantly high enough to warrant acceptance of the process as a whole. Further, these job descriptions included all levels of the organisational structure, incorporating descriptions/specifications of senior executive jobs, and intercorrelations at such levels were also significantly high.

With regard to the job evaluation method as such, the general acceptance by organisations participating in a wage and salary survey of a single method to be utilised for purposes of adjusting their own midpoint salary data, plus general acceptance in terms of overall reliability and objectivity, are primary considerations. Results obtained from studies indicate that many systems utilised by the organisations forming the particular survey community under consideration produce similar results in terms of classification of similar jobs. This

¹³Harker, Personnel Journal, XXXI, 131-134.

indication of one particular method for re-evaluation and data adjustment purposes will essentially produce the same results as a procedure utilising a number of different job evaluation methods, and should thus prove more efficient in terms of time, and therefore be acceptable to the organisations concerned.

Further, the intercorrelations obtained from the study concerning overall reliability and validity of one particular system indicate that, not only do different raters assess the same jobs consistently, but the sub-factors of this system are significantly independent to allow individual assessment on a reliable basis, and therefore substantially increase the levels of reliability, validity and acceptability as a whole.

In terms of the concepts and standards discussed, then, it may be assumed that the particular job evaluation process which has thus far been developed and assessed, has proved to be adequate in the attainment of the overall goals of a concrete foundation to be utilised by a structural comparison method of conducting wage and salary surveys, and as such assumes an overall validity for such a basis. On the assumption of the overall validity in terms of logical examination of underlying concepts, the several questions originally posed by the question of reliability, have now been answered, namely, that the job descriptions can be regarded as accurate reflections of the actual job, the job specifications are those really required by the job, the factors proposed by this particular job evaluation method are related to value produced, and therefore we can use these concepts in the process of determining those wage levels necessary to retain employees and keep defensive behaviour at a minimum.

Such a job evaluation system may thus be utilised in the further development and assessment of a structural comparison method guide to conducting compensation surveys.

P A R T I V

THE PAY STRUCTURAL COMPARISON SYSTEM GUIDE
TO CONDUCTING COMPENSATION SURVEYS

CHAPTER VII

THE STRUCTURAL COMPARISON SYSTEM PROCEDURE GUIDE

PURPOSE

An objective of the wage and salary administration program of the organisation is to pay competitive compensation. To determine whether the compensation being paid is competitive, it is necessary to conduct and/or participate in surveys of leading organisations in the communities of the industries in which the organisation competes for qualified employees.

The information obtained from this survey guide is used by the organisation for:

1. Developing a key element in the formulation and maintenance of a pay structure, taking into consideration both internal logic and external competition;
2. Developing monetary limits for base salary groups, utilising objective techniques and methods of monetary data gathering and analysis;
3. Developing a process of updating actual salary levels;
4. Developing a reference to determine salary levels for new positions;
5. Developing a method of cross-check upon market levels of pay and benefits;
6. Auditing the external competitiveness of the job evaluation system by comparison of intra-organisational pay structures;
7. Maintaining external competitiveness of the overall organisational compensation package.

PHASE I : PREPARATORY PROCEDURE

I. Frequency of Surveys

Gradually changes occur in a labour market area and within particular industries. Normally, therefore, a wage and salary survey should be conducted at regular intervals of a minimum of three years and a maximum of five years¹.

However, the need to adjust base salary ranges should be reviewed on an annual basis. The decision to make interim adjustments to base salary ranges in the years between comprehensive surveys (wage and salary, and benefits) may be based on "spot check" analysis of the following: (1) general economic conditions; (2) past compensation trends; (3) surveys conducted by other organisations; (4) the movement of competitive salary structures; and (5) a review of competitive compensation for several representative positions with the organisations included in previous comprehensive surveys. If these indications suggest the necessity to adjust base salary ranges, adjustments may be made based on the structural comparison method of surveying conducted more often than every three years.

II. Who Should Conduct the Wage and Salary Survey?

It is suggested that the Personnel Department staff of the organisation concerned be assigned primary responsibility for conducting structural comparison surveys. It may be suggested that such staff call on other management employees to assist in the initial phase for reasons indicated below:

1. Line management should participate in any personal interviews with participating organisations, plus in the initial job analysis procedure, because their knowledge of duties and responsibilities associated with certain survey positions is usually greater than that of the Personnel staff. This is particularly true of the management and supervisory positions under the line manager's supervision. The judgement of line management is often helpful in evaluating the

¹"Management Report : Survey of the Necessity for Conducting a Comprehensive Compensation Survey on a National Basis", Mobil Oil Southern Africa (Pty) Ltd.

similarities and differences in management positions. Further, it allows line management to participate in the survey process and helps to reassure them about the validity of the results.

2. Compensation staff specialists of the organisation may be asked to participate in conducting surveys because their experience, particularly with respect to management positions, is usually broader than that of the Personnel staff.

III. Survey Community and Organisations

The survey should normally cover an area or community which contains a reasonable sampling of employers who compete with the organisation conducting the survey for labour which may be drawn from the same labour market. The community may thus be a town, a city, or a larger area. For example, it may be that there is one large geographic area for management, professional, technical and sales personnel, such as a country or a region within a country.

As a guide, it is recommended that each of the organisations selected to be surveyed should:

1. Be regarded as reputable employers in the community being surveyed, and compete with the survey organisation for qualified employees.

2. Provide a "benefit plan package" and working conditions reasonably comparable to those provided by the survey organisation.

3. As a group, be representative of the leading industries in the community.

It is suggested that the number of organisations to be included in the survey be about ten to twelve. However, where it appears that competitive data will be limited, the reliability of the survey results may be increased by increasing the number of organisations to as many as eighteen. To the extent that it is possible, the same organisations should be included from one survey to the next to ensure consistency in the data obtained. If an organisation should be excluded, an attempt

should be made to choose a replacement from within the same industry.

IV. Preliminary Contact With Participating Organisations

After the participating organisations have been identified, they should be contacted to explain the purpose of the survey, and to request their participation. It should be explained that initially a survey team of the survey organisation is planning to conduct personal interviews for the purpose of exchanging information, that a summary report of the survey data will be furnished to each participating organisation, and that all data will be kept confidential.

After securing the agreement of the individual organisations to participate, it is desirable to inform such organisations that in the near future Survey Booklets containing information about the survey organisation, abbreviated position descriptions, and organisation charts, will be forwarded to them. Further, mention should be made of the fact that, although detailed personal interviews for position-to-position comparison purposes will be required as an initial basis, future survey procedure will be conducted on a salary range comparison basis, according to information obtained and analysed through such initial interviews.

PHASE II : STRUCTURAL DATA GATHERING PROCEDURE

I. Selection of Survey Positions

In order to develop a basis for a structural comparison method of conducting wage and salary surveys, it is initially necessary to identify a number of "key jobs" or "anchor jobs" which may be utilised at a later stage of the phasing in of such a system in order to standardise participating organisation wage and salary structures.

In building a structural comparison scale, the organisation must select as many "key jobs" as possible from the organisational structure, varying in salary from the lowest to nearly the highest, whose duties are clearly defined, and whose rates of pay are not subject to controversy. These "key jobs" are jobs within the organisation which may be selected for comparison with similar positions in the community

to establish a competitive compensation basis. Collectively, the competitive data for these survey positions ("key jobs") provides basic information required to establish a standardisation of all appropriate base salary range pay structures such that future structural comparisons may be undertaken.

Survey positions, or key jobs/positions should thus be very carefully selected such that intra-organisational position-to-position comparisons may be made on a one-time basis requiring as few subjective adjustments as possible. The following criteria are provided for the selection of survey positions:

1. They are representative of a cross-section of all positions in the pay structure being studied, i.e. they should represent various occupational families, functions, and organisation levels.
2. The nature of the duties should be reasonably easy to define and readily found in other organisations in the survey community.
3. They should be relatively free from supply and demand extremes affecting compensation, and should not be controversial in terms of appropriate pay levels.
4. They should be relatively stable in terms of job content.
5. They should be good reference points in job structures as to level of difficulty and responsibility.

In the selection of key jobs the organisation should not be concerned whether such jobs are underpaid or overpaid in comparison with rates paid for comparable jobs elsewhere, since the primary concern should be in the relationships paid in the particular organisation or industry. It should not be difficult to find a considerable number of jobs where management and labour can agree that job relationships are equitable without agreeing on whether the whole pay structure should go either up or down. The selection of key jobs as survey positions can now be made on the basis of established skill levels, available job knowledge, and job importance, rather than on wage rates not subject to controversy.

Once such key jobs have served their purpose as comparison jobs during the initial phase of installation of the structural comparison method, they lose their designation as key jobs and become just another job in the organisation. Therefore, any change in duties or responsibilities of the key jobs has no effect on the entire plan. The structural comparison scale, once constructed, consists of all the jobs in the organisation, because the strength of the system lies in the fact that all jobs can be compared across organisations, and not just key jobs.

To ensure that an appropriate level of competitive benchmark, or anchor points will be obtained through utilising these positions, it is usually desirable to select at least four positions from each salary group or range included in the survey organisation pay structure. Depending on the number of salary groups within the structure, however, the total number of positions may become so large that participating organisations may be reluctant to devote the necessary time to the initial interviewing. It is suggested, therefore, that the total number be limited to about fifty, regardless of the number of salary groups.

II. Analysis of Survey Positions

Although choice of survey positions may be based on job analysis and job descriptions, it now becomes necessary to re-analyse those positions selected as survey positions, or key jobs, on a carefully planned and detailed basis such that: (1) sufficient relevant information is obtained on an objective basis to allow reliable abbreviation of job descriptions and specifications; (2) those jobs which cannot be effectively described in abbreviated form to allow justifiable position-to-position comparisons, may be discarded as survey positions; (3) sufficient relevant information is incorporated in abbreviated job descriptions to allow reliable re-evaluations according to the survey organisation job evaluation system, should weighting and adjusting of data be necessary.

The following detailed job analysis procedure is suggested:

1. Obtain all pertinent information available regarding

departments, including the processes, machines, and names of key personnel, and all of the information which can be obtained by a study of previous job analysis information sheets.

2. Contact the managers of departments, following whatever formalities are necessary, including clearance with superiors.

3. Visit the general supervisors, and

- (a) explain purposes and objectives;
- (b) discuss desired method for obtaining factual data;
- (c) secure cooperation;
- (d) obtain a list of all relevant jobs in the departments by titles and the number of workers in each.

4. Visit immediate supervisors and assistants with the approval of the general supervisors, and

- (a) explain purposes and objectives;
- (b) obtain necessary routine data;
- (c) discuss the nature of work and details of jobs;
- (d) obtain recommendations of the most desirable employees to observe during the course of the study on the basis of efficiency and willingness to cooperate.

5. Observe the employees at work, and

- (a) note carefully each operation performed;
- (b) make certain all observable operations have been noted;
- (c) check for specific items to be included in the job analysis schedule;
- (d) record factual data of working conditions, and tools, equipment and materials used;
- (e) question employees about those operations which are not observable, and obtain from the employee an estimate of the percentage of time such operations are performed;
- (f) review the notes concerning the job elements with the employee and ask for suggestions, and obtain from him an estimate of the percentage of time each operation

is performed.

6. Hand the employee the job analysis questionnaire, as exemplified in Exhibit A, Appendix II, and

- (a) ensure that such questionnaire is completed in detail;
- (b) review the questions and answers concerning the job elements with the employee, and ask for any additional information he might wish to add.

7. Review observations, notes, questionnaire questions and answers with the immediate supervisor, and

- (a) determine whether the job has been thoroughly covered;
- (b) obtain estimates of percentage of time for each operation;
- (c) ascertain whether information obtained is as objective as possible.
- (d) obtain information regarding relation to other jobs.

8. Write the first drafts of the analyses on the approved forms according to instructions, see Exhibit B, Appendix II.

9. Have the department managers review and approve the original drafts, and

- (a) allow all supervisors concerned the opportunity to review and edit the original drafts;
- (b) revise drafts on basis of comments, changes and criticisms suggested by the reviewers and obtain written approval of contents;
- (c) arrange for final drafts of completed analyses to be typed.

10. Write the first drafts of the abbreviated job descriptions/specifications survey purposes according to the job description/specification format in Exhibit C, Appendix II, and

- (a) ensure that abbreviated information includes sufficient necessary detail to satisfy requirements of the job

- evaluation manual factor degree definitions;
- (b) allow the Personnel Manager to review and approve the original drafts;
- (c) revise drafts on basis of comments, changes and criticisms suggested by the Personnel Manager.

11. Arrange typing and collation of final drafts of completed abbreviated job description/specification forms for survey booklet purposes. (See Exhibit B, Appendix I).

It may be suggested that the job analysis procedure specifically the questionnaire, be structured according to the job evaluation factors incorporated in the organisation's evaluation system, such that final abbreviated description details may be easily summarised to accommodate requirements of degree definitions.

III. Secondary Contact with Participating Organisations

After securing the agreement of the individual organisations to participate, it is desirable to send each participating organisation a Survey Booklet containing information about the survey organisation, the abbreviated job descriptions/specifications, and organisation charts. The data supplied should be in the form of Exhibits A and B, Appendix I.

Exhibit A: This exhibit should contain survey organisation information to provide participating organisations with data that will be helpful to them in establishing comparable anchor or "key jobs", and that will serve as a model for the type of information they are asked to supply. Included in the questionnaire should be all questions with regard to fringe-benefit packages which the survey organisation wishes to analyse. However, most important to the further development of a structural comparison method are questions regarding salary practices, and more specifically, salary ranges.

Exhibit B: Should contain the concise, yet complete summary of the survey organisation survey positions, in the form of the abbreviated job descriptions/specifications as specified in the job analysis procedure summary, and should include all related data which specifically applies to those positions. Particular care should be taken to ensure that the

scope and magnitude data is pertinent to each position. With respect to this exhibit, the section "salary information" should not be completed in advance of the personal interview to avoid prejudicing the participating organisations in their selection of comparable positions. Each participating organisation should be informed that salary data will be furnished during the personal interview after the position comparisons have been made.

Additional blank copies of the Survey Booklet should also be furnished such that representatives of each participating organisation may record their own compensation data and related information in advance of the personal interview.

IV. Personal Interview

The purpose of the personal interviews is to review the tentative key job comparisons made by the participating organisations, review the adequacy of the data reported, and gather other general information of interest, such that final key job anchor points in the various pay structures may be established on as exact and objective a basis as possible. It is therefore recommended that persons conducting the interviews have with them more complete and detailed job descriptions of the survey positions, and appropriate organisation charts to supplement the Survey Booklet information.

The final establishment of "key ranges" for structural comparison purposes are only as valid as the comparisons of the survey positions, and the personal interview plays a key role in this determination. It is therefore suggested that these interviews be undertaken with great care to detail, and that the specific criteria used to judge the level of responsibility of participating organisation positions be thoroughly explored for exact comparison purposes. It should also be stressed that these interviews are conducted on a one-time basis only, and that once key job comparisons are reliably established, further interviews are unnecessary.

V. Information Required

General Information: The following general information should be

obtained from each participating organisation and recorded on a form similar to Exhibit A, Appendix I:

1. Operational information, such as: (1) type of business activity; (2) number of employees; (3) size of organisation in terms of sales volumes; (4) manufacturing capacity; (5) profits; (6) number and location of major plants or facilities, etc. (Operational information should apply to an organisation's operations inside the survey community, that is, the information should relate to the key jobs included in the Survey Booklet. If an organisation has operations outside the survey area, information related to the organisation's total operations should be recorded separately).

The recording of this general information may be vital to the establishment of exact key job comparisons, and on the other hand, may aid in determining which jobs are to be excluded as anchor points due to arbitrary data adjustments.

2. Compensation information applicable to the positions being considered such as: (1) base salary ranges; (2) recent history of changes in base salary structures; (3) general increases; (4) salary administration policies; (5) incentive bonus plan; (6) allowances; (7) subsidies, etc.

The nature and extent of compensation practices will reveal the participating organisation's philosophy toward their employees, and the degree to which they are comparable with those of the survey organisation. The first time a participating organisation is surveyed, a comprehensive review of this general information will prove invaluable in the future determination of the adequacy and stability of its pay structure for purposes of adjustments to structural comparison bases.

Compensation Data: For each participating organisation, the following data should be obtained and recorded for each survey position: (1) base salary range midpoint; (2) actual salaries of each incumbent, or the average salaries of all incumbents if individual incumbent salaries cannot be provided; (3) additional month(s) payments (bonus); (4) incentive bonus payments; (5) allowances; (6) premium payments; (7) subsidies, etc.

With respect to base salary range midpoints, where the participating organisation has established salary group ranges, i.e. a minimum salary and a maximum salary for a particular group of positions, the midpoint salary of the range is usually considered as that salary which is representative of the competitive rate of pay for positions in that salary group. In some cases, participating organisations might not use the midpoint of the range for this purpose, but might use another salary point within the range. For purposes of developing the structural comparison system, it is important that these points be identified as midpoints of key jobs are utilised in establishing those points which may be regarded as representing anchor points of the pay structures "key ranges".

In the event that a participating organisation does not have an established salary range for a position, the survey team should obtain, in addition to actual salary data, the number of years such incumbent has been in the position (including prior comparable level positions, if any). As in the case of actual salaries, when individual years in position can be provided, the average years in position of all incumbents should be obtained. This data may then be utilised by the survey organisation to establish hypothetical midpoints for key positions, and similarly, hypothetical "key ranges" and an overall hypothetical standardised pay structure, should the participating organisation's salary data be important enough to the labour market in question to warrant the inclusion of such data. However, the time factor involved in the necessary recalculation of such points would tend to disrupt the basic principle of simplicity of application of the structural comparison technique over successive surveys, and it is therefore preferable to exclude those organisations which do not have established base salary ranges. However, a later section is devoted to explaining the use of the abovementioned data in the calculation of such hypothetical points.

A form similar to Exhibit B, Appendix I is recommended for use in recording base salary data and related position information, and a form similar to Exhibit C, Appendix I is recommended for recording data necessary for hypothetical calculations.

VI. Establishing Criteria for Evaluating Comparability of the Survey Organisation Positions and the Participating Organisation Positions.

The basic purpose of the survey is to determine whether the compensation paid by the survey organisation is competitive in the community in which it competes for employees. The aim of the structural comparison technique is to compare total pay structures, and thus, all possible positions within the community concerned, on an intra-organisational basis. The method used to determine overall competitiveness in this way begins with a comparison of each carefully selected survey organisation key position, as determined by the job analysis process outlined in Section II, with comparable key positions of the participating organisations. Based on this comparison, an assessment is made of the degree of comparability in terms of whether each participating organisation's position is equal to, heavier than, or lighter than the survey organisation's position, in terms of compensable factors as predetermined by the job evaluation manual. In this way exact comparisons of certain key positions may be established, and it is these exact comparisons which provide anchor points, or key grades, necessary for eventual standardisation of pay structures.

The accuracy of this assessment depends upon the reliability of the comparisons made during the personal interview, and it is essential, therefore, that the information required for each position comparison be carefully planned in advance by making use of reliable and objective job analysis, job descriptions, and job specification techniques. The following criteria should be considered when determining the initial level of comparability on a position-to-position basis:

Reporting Relationship: The relative location of the survey organisation position, and the participating organisation position in their respective organisational structures is reviewed. The level of the position to which they report, the number of positions which report to the next higher level position, etc., all have a bearing on which of the two positions is more difficult or responsible.

Functional Responsibilities: The number of business activities for which each position is responsible is examined and evaluated. If, for example two supervisory positions are being compared and one of them has

additional responsibility for the development of work procedures, that position will be judged to be heavier.

Scope and Magnitude: Each position, whether line or staff, should be described in terms of quantitative data that may be used in determining relative differences. For example, sales supervisory positions may be compared on the basis of sales volumes, realisations, number of employees supervised, number and type of customers, and other similar factors. Although it is more difficult to quantify the scope and magnitude of staff positions, it is usually possible to do so in most cases. A public relations position, for instance, can be described in terms of (1) the type and complexities of problems encountered and solved; (2) the level of the organisation client or organisation served; (3) the publics to which the work product is directed; (4) size of operating budget, etc.

Other: Other factors of significance should be considered, such as (1) limits of authority; (2) degree of functional guidance given and received, etc.

As the specific criteria under these general headings vary from position to position, the survey team should develop, prior to the personal interview, a description of the specific criteria for each position which should be used as the basis for further comparisons. The job analysis procedure is vital in its role as an objective determinant of such specific criteria.

Once the specific characteristics or criteria for each position have been determined by this method, the survey team is prepared to discuss these criteria with the participating organisations, and to record the comparative data required to assess the comparability of the participating organisation's positions with the survey organisation's positions.

Those positions of participating organisations which are regarded as matching exactly the corresponding positions of the survey organisation with regard to scope and magnitude, functional responsibilities, reporting relationships and other criteria, require no further adjustments in salary data. However, those positions

regarded as being heavier than, or lighter than the corresponding survey organisation position require careful attention to relevant descriptive criteria, such that possible re-evaluations according to the survey organisation job evaluation factors may take place.

VII. Summarising Position Comparisons

When all interviews have been completed, and all relevant position data has been gathered according to necessary detail, a Summary Worksheet may be prepared for each survey organisation position in the survey (Exhibit D, Appendix I). On each worksheet record (1) the names of the participating organisations; (2) the titles of their survey positions; (3) the criteria used in identifying differences in responsibilities; (4) the applicable quantified scope and magnitude data; and (5) any other compensable factors which might be helpful in assessing the degree of comparability between participating organisation position and the survey organisation position.

The data recorded on Exhibit B, Appendix I, for each position should be reviewed and posted to the Summary Worksheet in order to assess comparability factors. For each criterion of comparison, a notation of =, +, or - should be entered to indicate whether the participating organisation position is equal to, heavier than, or lighter than the survey organisation position with respect to the criteria mentioned above, and general job evaluation predetermined compensable factors. No attempt should be made at this stage to assign a salary group differential to each of the criterion separately. This is important, as when all criteria have been considered, a judgement may be reached as to the overall degree of comparability, and a salary group differential estimated, for example, plus one-half of a salary group overall. (Exhibit D, Appendix I).

For those positions regarded as being equal on an overall comparability basis, no adjustments are made to salary data, even though such positions may not be equal in terms of individual criteria. This is important because, when similar positions are evaluated according to various compensable factors, undoubtedly various positions receive more points allocation on some assessment factors, and less points allocation on others, than do their counterpart positions, and yet overall points

allocation places them in the same labour grade and salary structure. These positions may be regarded as being exact matches in terms of salary range midpoint allocation.

However, those positions which are unequal on overall comparability basis require salary data adjustment according to degrees of points allocation allotted to each compensable factor. Such positions therefore require evaluation according to individual criteria in order to gain insight into degree of inequality on an overall basis. Adjustments may then be made in terms of salary range midpoint adjustments, i.e. heavier than, or lighter than, by degree of salary group.

As a final check, previous surveys should be reviewed. If the degree of comparability of any participating organisation has changed, then the new assessment should be re-examined to determine whether the change is justified.

As an initial guide to discarding positions which are incomparable, when initial judgements have been reviewed, each participating organisation position judged to be more than three salary groups heavier or lighter than the survey organisation position should be deleted from the Summary Worksheet. Those positions judged to be two-and-a-half or three groups heavier or lighter should also be deleted unless there are fewer than three remaining position comparisons, or unless the position being surveyed is the only position in its salary group for which comparisons have been made.

Those positions judged to be up to two salary groups heavier or lighter may be effectively adjusted to warrant incorporation in the process of determining key grades at a later stage. The point to make is that, although adjustment of salary data is completed according to techniques which are as objective in their evaluations as possible, it is necessary to, as far as possible, incorporate only those positions regarded as being exact matches as an initial basis, and in this way keep subjective judgements to a minimum. A later section deals with the detailed examination of the method which may be used to establish monetary weightings based on the salary group weightings thus established.

It is important that effective use of the job evaluation method of the survey organisation be made whenever there is difficulty in assessing the comparability of positions, as this system places degrees of scope and magnitude of similar positions on a standardised basis. In this way, subjective estimates of comparability will be reduced to a minimum.

PHASE III : STRUCTURAL STANDARDISATION PROCEDURE

I. Standardising Participating Organisation Base Salary/Position Hierarchy Structures

In order to compare entire base salary structures of all organisations within the survey community, all participating organisation established base salary group range structures require a basic standard standardisation such that a similar range of competitiveness may be established. Due to the fact that the base salary ranges included in the pay structures of the participating organisations vary to such a degree, both in range from maximum to minimum salary points, and in number, all such structures require standardisation according to the survey organisation base salary structure, in order to achieve a base of comparability. In order to achieve this standardisation, as an initial step, key jobs which may be regarded as being exact matches on intra-organisational bases, must be identified for each participating organisation, which in conjunction with the corresponding survey organisation position, then form basic "anchor points", or points which link the participating organisation base salary structure (pay structure) with the survey organisation base salary structure by forming links of equality between position hierarchies.

In order to undertake this process of standardisation, then, a number of factors require identification and clarification, and a detailed procedure may be outlined on the basis of these factors.

Identifying Positional Hierarchy Anchor Positions: Through the detailed and careful process of establishing levels of job comparability by utilising job analysis, job description/specification, job evaluation, and personal interview techniques, it is possible to identify certain positions which may be regarded as anchor positions. These anchor

positions may be defined as those positions within the survey organisation hierarchy of positions which are regarded as being, not only key positions, but exact counterparts of similar positions identified as key positions in participating organisation hierarchies, as determined by comparability criteria. In other words, these positions have corresponding counterparts in participating organisational hierarchies by virtue of the fact that they may be classified in the same labour grade when assessed in terms of overall compensable factors. Such positions may be identified on the Summary Worksheet (Exhibit D, Appendix I) as those positions which are classified as being equal when individual comparability criteria have been separately considered, and an overall degree of comparability has been estimated.

These positions thus form the vital links in the standardisation process, as they provide the basic centres of comparability both in terms of compensable criteria and ultimately, therefore, in terms of actual base salary structures. As such, anchor positions provide the foundation of standardisation in that they provide points of equality between otherwise vastly different pay structures by providing the bases for identifying key ranges. In other words, anchor positions are in fact the cores of key ranges in that they represent the monetary midpoints of those base salary ranges which include complete series, or groups, of positions which may not otherwise have been comparable with participating organisation positions due to significant differences in comparability criteria.

However, although the key ranges as such may be identified by establishing anchor positions, in order to further support such identification, the process of standardisation should be taken a step further by the analysis of those positions which are not exact matches of counterparts in terms of comparability criteria, but which may be identified as supportive matches subsequent to adjustment and weighting.

Identifying Positional Hierarchy Supportive Positions: After identifying anchor positions within position hierarchies through the process of establishing levels of comparability, attention may be focused on those positions which may be regarded as "supportive positions". Supportive positions may be regarded as those positions within the survey organisation hierarchy of positions which do not have exact counterparts

within participating organisation hierarchies, as determined by comparability criteria, but which may have a comparable match established through weighting and adjustment by utilisation of the survey organisation job evaluation method. For example, according to data recorded on the Summary Worksheet (Exhibit D, Appendix I), for each criterion of comparison a notation of =, +, or - has been entered to indicate whether the participating organisation position is equal to (anchor position), heavier than, or lighter than the survey organisation position with respect to the criterion. After consideration of individual criteria separately, a judgement is reached as to the overall degree of comparability, and a salary group differential estimated. It is this salary group differential estimate which provides the basis for adjustment. In this way a supportive position may be deemed to be one salary group lighter than its survey organisation counterpart, but after adjustment of plus one salary group it may be regarded as being a match. In this way such a position will provide a basis of support for whatever anchor positions have been identified within that particular labour grade represented by the anchor positions.

However, it is important to recall that, as these supportive positions only play a secondary role in the eventual identification of key ranges, each participating organisation position judged to be more than three salary groups heavier or lighter than the survey organisation position should be deleted from the Summary Worksheet, and therefore discarded as a supportive position. In fact, even those positions judged to be two salary groups heavier or lighter should be considered for deletion.

Once the supportive positions and their weightings have been identified, the next step is to positively identify key ranges or key labour grades on the basis of both anchor positions and supportive positions.

Identification of Key Labour Grades: As discussed, key ranges or key labour grades may initially be established by identifying anchor positions. These key labour grades (key ranges when referring to the base salary range structure) may be regarded as those grades/ranges within the survey organisation hierarchy which, by virtue of the fact that anchor positions have been identified within them, are regarded as

being exact counterparts to those grades within participating organisation hierarchies which are represented by those exact counterpart positions. Basically, then, these key labour grades are identified by establishment of anchor positions through exactly the same comparability criteria as utilised in establishing position-to-position comparisons.

Although these anchor positions form the nuclei of the key labour grades, supportive positions may be utilised either in the supportive role in the establishment of key grades, or in the actual establishment of supportive key grades. In other words, anchor positions as such are sufficient to establish key grades, but should any further positions, after adjustment and weighting factors have been applied, become supportive positions in that they fall within the same grades as identified anchor positions, then such supportive positions add their weight to the basic logic behind the identification of key grades. However, should such supportive positions fall within grades which do not contain anchor positions, and therefore are not identified as keygrades, then these supportive positions may themselves form the basis for identification of key ranges, and thus fulfill their supportive function.

Thus, anchor positions, once identified, are regarded as being permanent points of reference, and those key grades which have been identified as such due to the fact that they contain and are represented by anchor positions, may also be regarded as permanent, and as such form the permanent basis for standardisation. However, supportive positions may not be regarded as having any permanent function, due to weighting and adjustment which may be subjective, and therefore, should such positions be utilised to establish key grades, then such grades cannot be regarded as being permanent in their function. Thus, anchor positions and key grades are utilised as a permanent basis for standardising structures, whereas supportive positions and their corresponding key grades may be used, but only if necessary.

As mentioned once the key labour grades within the positional hierarchy have been identified, what this in effect means is that a direct reference to the base salary range structure, or pay structure, has been made in that the key labour grade is represented by a key range

within the base salary structure, a point which will be extended when applying actual compensation figures for data analysis purposes. However, it is important at this stage to draw a distinction between the position hierarchy structure and the base salary range structure as two separate entities, as the base salary range structure refers to monetary worth, while the position hierarchy structure refers to relative worth. In this way standardisation may initially be completed according to labour grade number for future survey purposes, while actual competitive salary range midpoints may at a later stage be applied for overall comparison purposes.

Structural Standardisation: Once the process of identifying anchor positions, supportive positions, and key grades has been completed, the participating organisation structures may then be standardised according to the survey organisation structure. In order to do this all those grades/ranges of participating organisations which have been identified as key ranges by virtue of the fact that they are exact counterparts of the survey organisation key ranges, may be applied to the survey organisation structure to form a skeleton structure of key ranges. Supportive key ranges may or may not be applied, depending on the number of matching key ranges which have been established. An example will serve to illustrate and clarify the process.

After applying the process of establishing levels of job comparability it may be found that Organisation A has a number of positions which are equal in terms of comparability criteria to those positions of the survey organisation. These positions may now be positively identified as anchor positions within both organisations. Similarly, through identification of these anchor positions, positive identification of key grades may be made. Similarly supportive positions and their corresponding key grades may be identified for possible usage. However, the survey organisation position hierarchy structure may consist of fifteen base salary ranges, while the participating Organisation A position hierarchy structure consists of only eleven grades, and similarly the base salary structure consists of eleven base salary ranges. Clearly then a standardisation is required, and links of equality between the two organisational structures, as represented by the anchor positions and key grades/ranges, are utilised as a skeleton standardisation structure, while supportive positions and their

corresponding key grades/ranges may be utilised to substantiate the skeleton structure. TABLE 11 below illustrates such a standardisation.

TABLE 11

EXAMPLE OF STRUCTURAL STANDARDISATION

Survey Organisation				Participating Organisation A	
Grade/Range Number				Grade/Range Number	
1	-	-	-	-	2
2	-	-	-	-	
3	-	-	-	-	3 **
4	-	-	-	-	
5	-	-	-	-	**
6	-	-	-	-	5 *
7	-	-	-	-	
8	-	-	-	-	**
9	-	-	-	-	7
10	-	-	-	-	
11	-	-	-	-	9 *
12	-	-	-	-	*
13	-	-	-	-	10
14	-	-	-	-	
15	-	-	-	-	11 *

NOTE:

Numerals applicable to the participating organisation structure represent the grade/range number regarded as being key grades/ranges as applicable to indicated counterpart key grades/ranges in the survey organisation structure. Asterisks (*) indicate supportive position key grades which may be used to substantiate anchor position key grades.

The above table illustrates the completed standardisation of the participating organisation's structure according to that of the survey organisation, and this provides the basis for comparing entire pay structures, and thus all positions contained within the hierarchy. This structural comparison, then, is supported by the logic that the anchor

positions are representative of the entire range of positions which fall within the same labour grade.

In a similar fashion, the structures of all participating organisations in the survey community may be standardised such that a community of survey standardised structures may be developed as a basis for all future surveys to be undertaken by the survey community. Of importance is the fact that once such standardisations have been completed, they are never altered for further survey procedure purposes, unless (1) either the survey organisation, or a participating organisation alters the number of labour grades/salary ranges applicable to its structure; or (2) the duties, responsibilities, etc. of an anchor position alter to such a degree that the position may no longer be regarded as an anchor position according to criteria previously defined, either within the survey organisation structure, or within a participating organisation structure. However, as the chances of such possibilities occurring are fairly remote, the standardised structures in the form of matching labour grade numbers, may be regarded as permanent for future survey procedure. In this way, once such standardisation procedure has been completed, techniques of determining individual position comparability fall away as useful, or necessary, techniques; the use of these techniques, therefore, are applicable only initially and strictly on a one-time basis.

Finally, for future survey purposes, structures which have been standardised according to anchor position and therefore key labour grade identification, are to be used on a permanent basis. As suggested previously, supportive positions and their corresponding key grades are utilised to substantiate the immediate standardisation process, and in fact are to be considered as permanent supportive techniques only if the required adjustment and weighting factor is minimal, and therefore able to produce as near an exact match as is objectively possible, otherwise such positions and grades are to be permanently discarded in order to prevent cumulative subjectivity over successive survey periods.

PHASE IV : COMPENSATION DATA ANALYSIS PROCEDURE

I. Establishing Competitive Total Compensation

Total compensation in its broadest meaning includes any payment,

whether in cash, or in kind, that has a financial value to the employee. Base salaries, extra salary payments, incentive bonuses, allowances, subsidies, perquisites, benefits, etc., are all elements of compensation. However, for the purpose of establishing competitive base salary structures, survey organisations should ordinarily include in the total compensation paid by participating organisations only base salary midpoints, extra salary payments, such as thirteenth month payment, and possibly incentive bonuses. The competitiveness of the survey organisation with respect to any other element of compensation should be assessed, and decisions made by the survey organisation management, separately from considerations of base salary structures, regarding whether and by what means such competitiveness should be achieved. If management deems it appropriate in the light of local conditions, such other elements paid by a participating organisation might be included in its total compensation.

It is important to note at this stage that competitive total compensation in the context of structural comparison techniques refers to the midpoint of any key range, as identified by anchor positions, adjusted by whatever factors are deemed permanent and necessary, for example, thirteenth month payments. Thus, when the process of standardising participating organisation position hierarchy structures has been completed through the process of assessing comparability of survey positions, the next step is to establish the total compensation for each competitive anchor and supportive position, such that standardisation of base salary structures in compensation terms may be completed.

Identifying Base Salary Key Ranges: Through the process of identifying anchor positions and supportive positions within the organisation position hierarchy, it is possible to identify key labour grades, or those labour grades which incorporate the complete series of positions which are represented by the nucleus anchor or supportive position. In a similar fashion key ranges of base salary structures may be identified in that the hierarchy of labour grades representing relative worth in terms of job evaluation points allocation has a corresponding hierarchy of salary ranges as applicable to each labour grade, and representing the monetary limits of such grades. Thus, since the identification of key labour grades has been completed, in

effect identification of key ranges has also been completed.

In short, then, key ranges, whether identified through anchor or supportive monetary rates of pay within a base salary structure as applicable to the ranges of positions represented by, and identified through the establishment of key positions and supportive positions. However, key ranges as identified by anchor positions are most important.

Identifying Base Salary Anchor Points: In this context base salary structure anchor points may be regarded as base salary range midpoints which represent the competitive rates of pay attributable to those positions in the organisational position hierarchy which are not only regarded as key positions, but positions with which exact comparisons may be established in the position hierarchy of a participating organisation, in terms of overall comparability criteria, i.e. anchor positions.

This, as an initial step in the process of establishing competitive total compensation, the identification of these midpoints becomes necessary, a process which is directly linked to the establishment of anchor position key ranges. Once such key ranges have been positively identified, those base salary structure midpoints which represent the competitive rates of pay for the groups of positions falling within those ranges are regarded as anchor points. The important fact to stress is that these points are identified through establishing exact position-to-position comparisons on the basis of job description criteria, rather than on base salary range midpoint equality.

Further, the midpoints of key ranges identified through anchor positions are the only base compensation points which may be regarded as being truly comparable competitive rates, as supportive position key range midpoints are only comparable due to predetermined weighting and adjustment factors. Thus, structural comparison in compensation terms is based primarily on anchor position key range midpoints.

If the participating organisation has an established group range for its positions, i.e. established minima and maxima, the midpoint of that range should be used. This is important as this is the rate of

pay that represents the competitive rate applicable not only to the identified anchor position, but to the complete range of positions falling within that salary group. These base salary midpoints which represent competitive rates of pay for key range positions may thus be used as bases for comparing standardised structures at the competitive compensation level.

However, as suggested, key ranges may also be identified through identification of supportive positions, and the base salary midpoints of such key ranges may be used to substantiate the structural comparison of competitive compensation. However, due to the fact that supportive position compensation data requires weighting and adjustment, such key ranges are secondary in their use as structural comparison bases.

Calculation of Base Salary Supportive Points: Base Salary Supportive Points may be regarded as a base salary range midpoints which represent the competitive rates of pay attributable to those positions in the organisational hierarchy which have initially been regarded as key positions, but which have had weighting and adjustment factors applied to their original base salary midpoints in order to establish comparable counterparts within the position hierarchy of a participating organisation, in terms of overall comparability criteria, i.e. supportive positions.

As discussed, certain positions in a participating organisation's hierarchy may be judged to be heavier or lighter than those corresponding positions within the survey organisation's hierarchy due to differences in individual comparability criteria. Should this be the case, a comparable level may be established between these positions by adjusting the base midpoint representing the participating organisation's position. The reason for this is that the competitive rate for a job which has a degree of responsibility equal to that of the survey organisation must be determined. If, for example, the participating organisation position is heavier, its base salary midpoint must be reduced to a value that would be reasonable for that position if it were equal to the survey organisation. Conversely, if the position is lighter, its base salary midpoint must be reduced.

The adjustments to be made vary in technique, depending on whether

the participating organisation's total compensation consists of base salary alone, or includes incentive bonuses as well².

If the total compensation of the participating organisation consists solely of base salary (including one or more extra payments, if any), the adjustment is made to the midpoint of that organisation's base salary range. The technique used to make this adjustment is based on the fact that the participating organisation position is valued in terms of plus or minus one-half, one, one-and-one-half, etc., survey organisational salary groups. Thus, assume that Position "A" of the participating organisation is minus one-half to Position "A" of the survey organisation. If, for example, the survey organisation position is evaluated in salary group fourteen, the participating organisation position would be evaluated in salary group thirteen-and-a-half. To adjust the participating organisation midpoint, it must be increased by one-half of the group-to-group progression rate (i.e. the percentage difference between two adjacent salary group ranges) that exists between the survey organisation's midpoints of salary group thirteen and salary group fourteen. This process, in effect, establishes a hypothetical base salary midpoint that would be appropriate in the participating organisation's salary structure for a position whose level of responsibility is equal to that of the survey organisation.

Examples of method used in the calculation of such adjustments are provided in FIGURE 5 overleaf.

²Although the structural comparison method deals essentially with base salary midpoints as competitive total compensation data, which usually includes a factor for thirteenth month payments, some organisations pay incentive bonuses, and this factor may be incorporated. These bonus payments will be discussed in the following section.

FIGURE 5

BASE SALARY MIDPOINT ADJUSTMENT CALCULATIONS
FOR SUPPORTIVE POSITIONS

<p>If the participating organisation position is lighter by:</p>	<p>Then multiply the participating organisation midpoint by the factor as calculated below: ^a</p>
<p>$\frac{1}{2}$ salary group</p>	<p>Factor = 1 plus one-half of the percentage difference between groups.</p> <p><u>Example:</u> Factor = $1 + (\frac{1}{2} \times 0,1076)$^b = $1 + 0,0538$ = 1,0538</p>
<p>1 salary group</p>	<p>Factor = 1 plus the full percentage difference between groups.</p> <p><u>Example:</u> Factor = $1 + 0,1076$ = 1,1076</p>
<p>$1\frac{1}{2}$ salary groups</p>	<p>Factor = the factor for one group multiplied by the factor for one-half of a group.</p> <p><u>Example:</u> Factor = $1,1076 \times 1,0538$ = 1,1672</p>
<p>2 salary groups</p>	<p>Factor = the factor for one group multiplied by itself.</p> <p><u>Example:</u> Factor = $1,1076 \times 1,1076$ = 1,2268</p>
<p>$2\frac{1}{2}$ salary groups</p>	<p>Factor = the factor for two groups multiplied by the factor for one-half of a group.</p> <p><u>Example:</u> Factor = $1,2268 \times 1,0538$ = 1,2928</p>

NOTE:

^aObviously group-to-group progression rates vary from one salary structure to another; however, for purposes of above illustrations, it is assumed to be 10,76%.

^bWhen the participating organisation position is heavier than

the survey organisation position, the same factors as illustrated above are used, but because the participating organisation midpoints must be reduced, they are divided by the appropriate factors.

If the total compensation of the participating organisation consists of both base salary and incentive bonus, the base salary midpoint should first be adjusted as described above. The adjusted value for the incentive bonus should be the amount that the participating organisation would normally pay to an employee whose salary is at the participating organisation's adjusted base salary midpoint, and whose performance level is comparable to the survey organisation's performance rating which indicates a meeting of all requirements of the particular position as stipulated in the job description. This amount should then be added to the adjusted base salary midpoint to obtain the adjusted total compensation for the participating organisation position.

Those positions falling within the survey organisation hierarchy which have counterparts falling within participating organisation hierarchies which may be weighted by utilising the job evaluation method as previously discussed, with subsequent midpoint adjustment as illustrated, are the supportive positions which may within themselves be utilised to identify supportive key ranges. Once the supportive position's matching participating organisation position base salary midpoint has been adjusted according to the applicable weighting factor, that adjusted midpoint then identifies the supportive key range midpoint. In order to clarify, we may return to our example in which Position "A" of the participating organisation is minus one-half to Position "A" of the survey organisation; thus, the participating organisation position has been evaluated in salary group thirteen-and-a-half in terms of the survey organisation base salary range structure. To obtain a comparable level between the two positions, the participating organisation's base salary range midpoint for that position is adjusted by one-half of the group-to-group progression rate that exists between the survey organisations midpoints of salary group thirteen and salary group fourteen. In this way a supportive key range is identified within the survey organisation structure, but the adjusted midpoint refers to the participating organisation base salary midpoint, regarded as a hypothetical midpoint within the survey organisation structure. These

midpoints thus form the base salary supportive points which may either be used to substantiate anchor point key range midpoints, or form separate supportive key range midpoints themselves.

Incentive Bonus Payments: An incentive bonus is an award granted for individual performance. Its value is stated as a cash amount regardless of the form in which it is paid. If a participating organisation regularly awards incentive bonuses, the cash value of awards made for performance during the latest full year (calendar) may be included in that organisation's total compensation. In some cases, awards are made in the year following the performance year, while in others, awards are made during the performance year.

When the participating organisation has established salary group ranges, the bonus amount to be included should be that amount which the participating organisation would normally award to an employee whose salary is at the midpoint of the group range, and whose performance rating is comparable to the survey organisation's performance appraisal rating which indicates a meeting of all requirements as stipulated by the job description/specification for that particular position.

If bonus payments vary significantly from year to year, the average of the bonuses paid in the most recent five calendar years (including any year in which a bonus was not paid) should be used³. For example, if a bonus was paid in three of the years, the sum of the three awards should be divided by five to obtain the average award. This procedure is applicable both when the participating organisation has established salary group ranges, and when it does not, which is a possibility to be discussed at a later stage.

Monthly or Annual Compensation Values: Organisations usually prefer to express compensation data in either monthly or annual terms. Whichever is the preference, it is essential that each element of

³This figure has been calculated as that which represents the most reliable number of years on which an average bonus may be calculated for an incumbent rated as meeting all requirements of a position as stipulated in the job description/specification. "Old Mutual : Western Cape Survey" (Cape Town : Old Mutual, August, 1976).

compensation paid by participating organisations be converted, if necessary, to the same basis. It is suggested, however, that a monthly basis be utilised for ease of analysis and calculation.

For example, if the survey organisation uses the monthly basis, the base salary data of all participating organisations must be converted to monthly amounts. Similarly, if a participating organisation pays extra salaries such as a thirteenth month payment, its base salary midpoint data should be analysed to ascertain whether the extra payment is included or not. If it is not, the monthly base salary midpoint should be increased by one-twelfth.

Finally, if incentive bonuses are paid by the participating organisation, the total award granted for the performance year should be divided by twelve to obtain the equivalent monthly value. This amount should be added to the monthly base salary midpoint to obtain the total compensation midpoint.

II. Hypothetical Base Salary Structures

If a participating organisation does not have established salary group ranges, but the organisation is regarded as being an important competitor within the labour market such that its rates of pay should be regarded as significantly competitive, such organisation's rates may be taken into consideration in the structural comparison system by the development of a hypothetical base salary structure.

In other words, should such an organisation have survey positions which have exact corresponding counterparts in terms of comparability criteria, within the survey organisation position hierarchy, but do not have established salary group ranges, and therefore do not have representative midpoints, then it is possible to calculate hypothetical midpoints for such positions. However, although these hypothetical midpoints may be calculated, they are based on compensation data, and therefore positional hierarchy standardised structures cannot be developed for future survey purposes. This fact presents problems with regard to the simplicity of the continuing process of structural comparison surveys over time, as hypothetical structures would require

reconstruction according to competitive rates applicable to that organisation at the time of each survey. With these facts in mind, it is suggested that construction of hypothetical structures be limited to individual surveys, rather than incorporating them in the ongoing structural comparison procedure.

Hypothetical Midpoint Calculation: Should a number of positions falling within the position hierarchy of a participating organisation having no established salary group ranges, be regarded as being exact counterparts of survey organisation positions, these positions will not be regarded as anchor positions as they do not represent the core positions of labour grades, and therefore anchor points cannot be identified. However, hypothetical midpoints for such positions may be calculated, and TABLE 12 below has been developed for use by the survey organisation in making the calculation.

TABLE 12

STRUCTURAL COMPARISON HYPOTHETICAL MIDPOINT CALCULATION

If years in position are:	Multiply actual salary by the factor:
less than 1	1,1364
1	1,1033
2	1,0712
3	1,0400
4	1,0098
4½	1,0000
5	,9948
6	,9851
7	,9754
8	,9657
9	,9562
10	,9467
11	,9373
12	,9281
13	,9189
14	,9098
15	,8320

NOTE:

Factors have been calculated on the basis of four-and-a-half years as the minimum average period required for full effectiveness to be achieved according to job description/specification, i.e. the requirement in terms of time and training before the midpoint of the salary range is achieved. Applying a factor of 1,000 to four-and-a-half years, corresponding factors have been calculated for each year, on the basis of a 50% spread in the salary range.

The resulting salary value will represent an objective estimate of the hypothetical midpoint for the position under consideration. Where there is only one incumbent in the position, the actual salary and years in position of all incumbents should be used.

It is important to note that should the participating organisation grant one or more extra monthly base salary payments, the hypothetical base salary midpoint should be increased by one-twelfth for each such extra monthly payment. Similarly, with regard to incentive bonuses, the organisation should be asked to provide an estimate of a "normal" bonus for an employee who meets all requirements of the position. If a "normal" bonus estimate is not provided, the average of the actual bonus paid to the incumbents of the position should be used, calculated by dividing the sum of bonuses paid by the number of incumbents, including those who did not receive an award.

Further, should incentive bonus payments vary significantly from year to year, the average of the bonuses paid in the most recent five calendar years (including any year in which a bonus was not paid) should be used.

The hypothetical midpoints thus calculated may be used as bases of equality between the participating organisation rates and the survey organisation base salary structure, bearing in mind that these midpoints represent individual positions rather than groups.

Development of Hypothetical Structures: As with all other participating organisations, those organisations which do not have established base salary group ranges may also have positions within their hierarchies which do not match the survey organisation position exactly in terms of comparability criteria, but which may have a possible

weighting factor applied such that an adjustment may be made to compensation data.

In this way the actual salaries of such positions may be utilised to calculate hypothetical midpoints, and such midpoints may then be adjusted accordingly by the predetermined weighting factor to provide adjusted hypothetical midpoints, which may then be utilised in a supportive role to the existing hypothetical midpoints. In other words, such adjusted hypothetical midpoints may be regarded as hypothetical supportive points in their role of substantiating the calculated hypothetical anchor points of "equal" survey positions.

Through the process of calculating hypothetical midpoints and adjusted hypothetical midpoints, the participating organisation's positions may form clusters of midpoints consisting of core hypothetical midpoints plus substantiative and supportive adjusted hypothetical midpoints, which may then be regarded as hypothetical key ranges forming the skeleton hypothetical structure.

III. Tabulating the Anchor and Supportive Total Compensation Midpoints

Once anchor and supportive points have been identified and necessary adjustment calculations, if any, have been made, the anchor and supportive midpoints for each position should be tabulated on a worksheet similar to that shown in Exhibit E or Exhibit F, Appendix I.

Exhibit E: This exhibit illustrates a format which may be used when the total compensation paid by all participating organisations consists solely of base salary midpoints (with the annual bonus factor included) and the survey organisation records data in monthly terms.

Exhibit F: This exhibit illustrates a format which may be used when the total compensation of one or more of the participating organisations includes both base salary and incentive bonus. Data is expressed in annual terms. In both exhibits position averages are calculated for comparison purposes only.

The anchor total compensation midpoints, and the supportive total

compensation midpoints (i.e. adjusted midpoints) for each participating organisation for each survey position should be tabulated, by salary group according to standardised structure determination, as illustrated in Exhibit G, Appendix I. This serves to identify any supportive midpoints which are not consistent with the anchor midpoints for the same position. When such identifications are made, the survey information for the affected position should be reviewed and a decision reached concerning the validity of the job comparison that was made with the participating organisation. Ordinarily, as these midpoints represent supportive position key ranges, such inconsistent midpoints should be deleted from the tabulation. For example, the midpoint of Supportive Position "E" of Organisation "C" shown on Exhibit G, Appendix I, was inconsistent and thus deleted. This deletion can be applicable to single positions, as indicated in the above example, or collectively for a number of organisations, as illustrated in the following Section IV.

Should the necessity arise for the development of hypothetical standardised structures through hypothetical midpoint calculations, the hypothetical anchor and supportive positions are tabulated and analysed according to the abovementioned methods. Once such hypothetical structures have been developed, the relevant data is adjusted and analysed according to methods and techniques applicable to data of other participating organisations. In other words, this hypothetical data is to be incorporated under exactly the same analysis process as applicable to any other participating organisation data.

IV. Deleting the Data of Certain Supportive Positions

As has been stressed, structural standardisation relies on the identification of anchor positions and midpoints for the establishment of permanent links of equality between the survey organisation and participating organisation base salary structures, and as such the permanent standardisation relies on these permanent formations of skeleton key ranges. However, supportive positions and their supportive key ranges may be used to substantiate these skeleton structures, but are by no means regarded as being permanent in their supportive function. This is so because, whereas anchor positions and their corresponding

anchor points are identified through a process of exact comparison between survey organisation and participating organisation survey positions, while supportive positions and their corresponding supportive points are based on adjusted midpoints, and thus an element of subjective judgement has been introduced.

On the basis of this logic it must be stressed that the supportive midpoints which are inconsistent with anchor midpoints should be deleted. Once the tabulation has been refined as described in Section IV, the Competitive Total Compensation Midpoint for each key range should finally be established. Essentially the midpoints representing such key ranges will be those anchor points which have been identified through anchor positions, and substantiated by supportive points if necessary. When the supportive point for a supportive position is nearer the Competitive Total Compensation Midpoint for key ranges placed higher or lower than that in which the supportive position has been evaluated, the supportive point for that position should be deleted. For example, if Supportive Position "C" (Exhibit G, Appendix I), is evaluated in key range ten, but the survey data indicates that an evaluation in key range eleven would be more appropriate, Supportive Position "C" should be deleted. However, before this is done, it is suggested that the comparisons made between Supportive Position "C" and the corresponding survey organisation position be reviewed to check the validity of the assessment of job differences.

Note may once again be made of the fact that, due to the role of supportive positions and their corresponding supportive points, which may be deleted due to inconsistency, attention is once again focused on the vital role of the job evaluation system in the eventual establishment of valid and reliable comparisons, weightings and necessary adjustments. Thus, the necessity for development of a valid and reliable job evaluation system in the formation of a subjective structural comparison base.

V. Determining the Competitive Average Total Compensation Midpoint for Each Salary Group

After the necessary adjustments have been made, including adjustments of the midpoint data and deletion of supportive position data, the Competitive Average Total Compensation Midpoint for each salary group

may be calculated as follows:

1. First, for each salary group, finally establish each organisation's Competitive Total Compensation Midpoint for each standardised key range as described in Section V. For example, as shown on Exhibit G, Appendix I, this midpoint for key range for Organisation "A" for salary group ten is R1034.

2. Second, for each salary group, calculate the average of the organisation standardised key range Competitive Total Compensation Midpoints as established in the first step. This is the Competitive Average Total Compensation Midpoint for the salary group in question. As shown on Exhibit G, Appendix I, this average for salary group ten is R1008. The resulting averages are used in determining the Competitive Total Compensation Trend Line, which represents the average community base salary structure when calculated as described below.

VI. Determining the Competitive Total Compensation Trend Line

The Competitive Total Compensation Trend Line (line of best fit) may be drawn by inspection from a plot of the survey data as follows:⁴

1. First, plot the Competitive Average Total Compensation Midpoints on semi-log graph paper as shown in Exhibit H, Appendix I. Semi-log graph paper facilitates the graphic representation of data since a wide range of values can be drawn within a small space. Also, the trend line will appear as a straight line rather than a curve because the horizontal scale is spread arithmetically, while the vertical axis is spread logarithmically.

If semi-log graph paper is not available, linear graph paper may be used. In this case, the salary group number is represented on the horizontal axis, and the logarithm of the Competitive Average Total Compensation Midpoint is represented on the vertical axis, Exhibit I, Appendix I, illustrates the plotting of survey data on linear graph paper.

⁴The determination of this trend line may be computerised for absolute accuracy; however, as such a step is not always feasible, the above guide illustrates the detailed process involved in the determination, assuming limited knowledge of statistics.

2. Draw the Competitive Total Compensation Trend Line by superimposing a straight edge, such as a transparent ruler, upon the plotted midpoints.

As shown on Exhibit H, Appendix I, the distribution of the midpoints indicates that a single straight line may be drawn from salary group one through salary group fifteen because: (1) the midpoints cluster close to the line all along its length, and (2) the sum of the distances from the line to the midpoints above the line will be approximately equal to the sum of the distances from the line to the midpoints below the line.

On the other hand, the single straight line drawn through the entire series of salary group midpoints may not adequately represent the competitive trend line. Visual examination may show, for example, that a straight line for salary groups one through ten appears to be reasonable, but that a different line should be drawn for salary groups eleven through fifteen. Exhibit J, Appendix I, illustrates this point. Such a break in the competitive trend of salaries may occur at any place in the structure. Normally, one or two lines are adequate for salary groups one through fifteen, while two to four lines might be adequate for salary groups sixteen and above, depending on the highest salary groups included in the survey. Generally, each separate trend line should cover a minimum of five salary groups⁵.

3. Compare the Competitive Total Compensation Trend Line values with the Competitive Average Total Compensation Midpoints. The trend line values should be reasonably close to the corresponding midpoint values. If the average of the individual percentage deviations of each trend line value from its corresponding midpoint falls outside the range of -0.5% to $+0.5\%$, the line should be redrawn until the average deviation falls within this range⁶.

The suggested procedure in calculating individual percentage deviations is as follows:

⁵This depends on the total number of salary groups concerned. See French, The Personnel Management Process, 246-248.

⁶For statistical analyses of these concepts see William L. Hays, Basic Statistics (Belmont, California: Brooks/Cole Publishing Company, 1967), pp. 96-104.

- (a) Divide the trend line value by the corresponding midpoint value.
- (b) Subtract 1,000 from the answer.
- (c) Move the decimal point two places to the right in order to obtain the percentage deviation.

The following examples illustrate this procedure:

Example A

The trend line value (752) is larger than the Average Total Compensation Midpoint (740).

$$\begin{array}{r} \frac{752}{740} = + 1,016 \\ \quad \quad \quad - \underline{1,000} \\ \quad \quad \quad + 0,016 = +1,6\% \end{array}$$

Example B

The trend line value (900) is smaller than the Average Total Compensation Midpoint (924).

$$\begin{array}{r} \frac{900}{924} = + 0,974 \\ \quad \quad \quad - \underline{1,000} \\ \quad \quad \quad - 0,026 = -2,6\% \end{array}$$

The suggested procedure in calculating the average of the individual deviations is as follows:

- (a) Total the plus deviations.
- (b) Total the minus deviations.
- (c) Subtract the smaller total from the larger.
- (d) Divide the remainder by the number of salary groups in the structure for which there are competitive average midpoints. The resulting answer is the average deviation.

The following example illustrates this procedure:

Salary Group	Percentage Deviation of Trend Line Value from Average Total Compensation Midpoint
11	-2,7
12	+2,2
13	No Competitive Average Total Compensation Midpoint
14	+1,3
15	-2,5
Total of minus deviations	= -5,2
Total of plus deviations	= +3,5
Remainder	= -1,7
Average Deviation	= $(-1,7 \div 4)$
	= -0,4%

VII. Establishing the Survey Organisation Base Salary Structures

The base salary structure of the survey organisation may be determined from the Competitive Total Compensation Trend Line as outlined below:

1. Determine the ratio of the trend line value for the highest salary group to that for the lowest salary group on the same straight line. This ratio is found by dividing the value for the highest salary group by the value for the lowest salary group as determined from the trend line. For example, from Exhibit A, Appendix I, the value for salary group fifteen is R1610 and for salary group one the value is R424; therefore:

$$\text{Ratio } \frac{1610}{424} = 3,7972$$

2. Determine the group-to-group progression rate. For the above example, refer to page two of Exhibit K, Appendix I⁷. Find the column containing the nearest ratio equal to 3,7972 which is 3,8. Follow down the column headed 3,8 to the value opposite the number of

⁷The tables in Exhibit K have been compiled to facilitate group-to-group progression rate calculations. These tables express progression rates calculated for selected ratio values and possible corresponding range of base salary structures, in terms of numbers of salary groups.

salary groups in the structure (in our example the number is fifteen) as indicated in the first column. The approximate group-to-group progression rate (r) for this example is shown to be 1,1001. Since the ratio of the midpoint to the highest salary group in the structure divided by the midpoint of the lowest salary group in the structure is not an even-tenth, the group-to-group progression rate may be calculated more closely by interpolation as shown below:

(a) Identify the two even-tenth ratios that the actual ratio lies between (3,7972 lies between 3,7 and 3,8).

(b) Calculate the difference between the "r" values as shown in Exhibit K, page two, Appendix I, for the ratio 3,7 and 3,8:

$$\begin{aligned} r \text{ for } 3,8 &= 1,1001 \\ r \text{ for } 3,7 &= \underline{1,0980} \\ \text{difference} &= 0,0021 \end{aligned}$$

(c) Calculate the difference between the actual ratio and the lower even-tenth ratio:

$$\begin{aligned} \text{actual ratio} &= 3,7972 \\ \text{lower even-tenth ratio} &= \underline{3,7000} \\ \text{difference} &= 0,0972 \end{aligned}$$

(d) Move the decimal point in the difference from Step (c) (0,0972) one place to the right (0,972).

(e) Multiply the difference in the "r" values from Step (b) (0,0021) by the result from Step (d) (0,972):

$$0,0021 \times 0,972 = 0,0020$$

(f) Add the result from Step (e) to the "r" value for the lower even-tenth ratio:

$$\begin{aligned} &1,0980 \\ + &\underline{0,0020} \\ &1,1000 \end{aligned}$$

This is the group-to-group progression rate (r) for the actual ratio of 3,7972.

Although the tables in Exhibit K, Appendix I have been compiled to facilitate the calculation of the group-to-group progression rates, and thus prevent unnecessary mathematical calculation, the mathematical formula for these calculations may be utilised, as illustrated below, using the same example as above, and revealing the use of base salary midpoints of the trend line:

$$\begin{aligned}
 r &= \text{group-to-group progression rate} \\
 &= \sqrt[N-1]{\frac{M_1}{M_2}} \\
 &= \sqrt[N-1]{R_m}
 \end{aligned}$$

In this equation:

- N = number of salary groups in structure
- M₁ = midpoint of highest salary group in structure
- M₂ = midpoint of lowest salary group in structure
- R_m = M₁ divided by M₂

From the abovementioned example:

- N = 15
- M₁ = 1610
- M₂ = 424
- R_m = 3,7972

Substituting:

$$\begin{aligned}
 r &= \sqrt[15-1]{\frac{1610}{424}} \\
 &= \sqrt[14]{3,7972}
 \end{aligned}$$

log 3,7972 = 0,57946
 divide log 3,7972 by 14

$$\frac{0,57946}{14} = 0,04139$$

Then:

$$\text{antilog } 0,04139 = 1,100$$

This is the group-to-group progression rate (r) for the ratio 3,7972.

3. Calculate the tentative salary group midpoints. Multiply the value on the Competitive Total Compensation Trend Line for the lowest salary group (in this example, R424 for group one) by the progression rate ($r = 1,100$). This results in the calculated value for group two. Then multiply the calculated value of group one by " r " to obtain the calculated value of group three. This process is repeated for each subsequent salary group. The results of these calculations are tentative midpoints for the salary groups. (Each resulting tentative midpoint should be rounded to the nearest whole number).

4. Calculate salary group minimums.

(a) Divide the tentative midpoint by a factor which is equal to the sum of one plus one-half of the desired "spread", such "spread" representing the percentage by which the maximum of the range exceeds the minimum⁸. The result of this calculation is the tentative minimum.

For example, if the spread is 50% and the tentative midpoint is R909, the tentative minimum is R727 (R909 divided by 1,25).

(b) Adjust the tentative minimum to the nearest whole number that is divisible by a factor which is equal to two times the reciprocal of the spread.

For example, if the spread is 50% and the tentative minimum is R727, the factor is four (two times the reciprocal of 50% = two times two) and the nearest whole number that is divisible by four is R728.

This is the salary group minimum.

⁸ Experience has shown that a 50% spread in the salary range is proper for most salary groups. Spreads of less than 50% do not provide adequate range for administration of salaries on a merit basis over a period of time. Spreads of more than 50%, particularly where salary administration policy is not well defined, result in compensation levels at salary group extremes which are either non-competitive or excessive. Richard C. Smyth, Financial Incentives for Management, (New York: McGraw-Hill Book Company, Inc., 1960), p. 68.

5. Calculate the salary group midpoint. Multiply the minimum by a factor which is equal to one plus one-half the desired spread. For example, if the spread is 50%, the factor is 1,25.

6. Calculate the salary group maximum. Multiply the minimum by a factor which is equal to one plus the full amount of the spread. For example, if the spread is 50%, the factor is 1,5.

Application of the above calculations in the example cited results in the salary group ranges shown in Exhibit L, Appendix I.

Once the range midpoints have been calculated, a tabulation should be prepared showing, by salary group, the calculated range midpoint, the corresponding Competitive Total Compensation Midpoint, and the percentage deviation (plus or minus) of the calculated range midpoint from the Competitive Average Total Compensation Midpoint. (See Exhibit M, Appendix I).

VIII. Comparison of Recommended Structure to Present Structure

After the recommended salary structure has been developed according to data analysed from survey results, a comparison of the recommended midpoints and present midpoints should be made as illustrated in Exhibit N, Appendix I.

As a guide, a recommendation to adjust a salary structure should be made only if the average change in midpoints will exceed plus or minus 5%.

IX. Preparation of Summary Report to Management

The survey findings and the recommended salary structure should be submitted to management in a report which incorporates the following format and content:

Proposal: This is a summary statement that includes:

1. Recommendation that the proposed structures be adapted.
2. The effective date for implementation.
3. The average percentage by which the proposed structure differs

from the existing one (Exhibit N, Appendix I).

4. Reference to an exhibit in the Summary Report which contains the proposed structure (Exhibit L, Appendix I).

Background: In this section, the pertinent events that have taken place since the last formal survey should be outlined.

1. Date of last survey and salary groups included.
2. The chronology and details of any interim adjustments that were made in the survey organisation, including the compounded percentage increase in ranges since the last survey.
3. The chronology and details of range changes made by participating organisations since the last survey.
4. The chronology and details of general increases granted by the participating organisations and the survey organisation.
5. A statement of general economic conditions and trends, including any pertinent indicators, such as consumer price index.

Scope of Survey: This section should include:

1. Definition of geographic area covered by the survey.
2. List and description of participating organisations including an explanation of any variations from the previous survey.
3. Date of competitive data.
4. List, by salary group, of the survey organisation anchor positions included in the survey.

Survey Techniques and Findings: This section should include:

1. A statement of the staff and line employees who were involved in the preparation of the job descriptions/specifications used, in personal visits to participating organisations, in the analysis and

review of data, in the review of validity of job matches and adjustments in the initial one-time basis of standardising participating organisation structures.

2. An explanation of the techniques used in the adjustment of competitive data, calculation of competitive salary group averages, construction of the competitive trend line, and calculation of the survey organisation base salary structures.

3. Reference to Supporting exhibits.

X. Summary Report of Survey Data for Participating Organisations

A Summary of the survey data should be prepared and forwarded to the participating organisations. The data for each participating organisation should be identified by code only, i.e., by Organisation "A", Organisation "B", etc. This will ensure that the information exchanged is treated confidentially.

It is suggested that, for the initial comprehensive survey aimed at collecting data for structural standardisation purposes, the survey data be summarised for each survey position in a manner similar to that shown in Exhibits E or F, Appendix I, with the exception that competitive averages for the survey positions should not be included. Since these averages include data for the participating organisation positions and exclude data for the survey organisation, they are meaningless to the participating organisation.

However, for the purposes of all future surveys which rely on the established structural standardisations, and therefore key range comparisons rather than individual position comparisons, it is suggested that only individual organisational key range midpoint data, plus any additional total compensation midpoint data as revealed by the general information questionnaire, be forwarded. (Exhibit O, Appendix I).

XI. Indicated Re-Evaluation of Positions Based on Survey Results

The survey results may indicate a need to review the survey organisation position evaluations. This will usually arise when it has

been necessary to delete a supportive position and therefore its supportive key range, as discussed in Section IV of Phase IV. In Exhibit G, Appendix I, the data for Supportive Position "C", which had been evaluated by the survey organisation in key range ten, was deleted because the internal evaluation of key range ten is not consistent with the community's evaluation of comparable jobs. The survey organisation may wish to consider re-evaluating the position. However, any decision by the survey organisation to re-evaluate should take into account the effect upon other positions whose evaluations have been based upon comparison with that reference position. Such consideration might indicate that the best course of action is to retain the present evaluation.

PHASE V : FUTURE SURVEYS - THE CONTINUING STRUCTURAL COMPARISON PROCEDURE

Although the initial procedure involved in gathering the data necessary to establish as subjective and reliable a basis as possible for structural standardisation purposes, is of necessity involved and time consuming, the ultimate objective of such a procedure is to develop a wage and salary survey system which is both simplistic in application, and reliable and valid in production of results. The application of phases I to IV in the outlined guide are thus applicable in the initial process of achieving such an objective. However, once participating organisation structural standardisation has been achieved, certain of these phases are no longer applicable in future survey procedures, which in fact become far less complex and time consuming in their application, a fact which considerably reduces the overall survey costs.

Once the initial data gathering process has been completed and structural standardisations achieved, the following procedure is suggested for future surveys, utilising the aforementioned guide as an established basis:

I. Preparatory Procedure

The preparatory procedure phase of the guide is totally applicable to all future surveys, with a few minor exceptions. With regard to survey community and organisations, careful consideration should be given

to the initial decision on the organisations to be included in the survey. This is of importance due to the fact that once the decision has been made, and structural standardisations have been completed, the survey community remains essentially unchanged for all future survey purposes. The inclusion of any further organisations in future surveys would involve data gathering for structural standardisation of those particular organisations, a procedure which is to be avoided unless absolutely necessary. However, it is assumed that once a structural standardisation procedure has been completed, the participating organisations involved will form the core of the survey community for the survey organisation, which may in fact add new organisations or exclude existing member organisations as the necessity arises.

To a certain extent then, the participating organisations will define the community to be surveyed, and as a result, once structural standardisation has been completed, the survey community in terms of geographic area, will remain essentially unchanged for future survey purposes. It is thus suggested that the structural standardisation procedure be conducted on a national community basis in order to facilitate both national and regional standardisation of base salary ranges, if necessary.

With regard to preliminary contact with participating organisations, there will no longer be a necessity to inform such organisations of the necessity for personal interviews, as these interviews will not be necessary for future survey procedure. Only objectives of the structural comparison procedure need be outlined, and any pertinent information supplied in the form of the previously mentioned Survey Booklet.

II. Structural Data Gathering Procedure

Selection of key jobs for survey and personal interview purposes is no longer necessary as the structural comparison results rely on complete pay structure comparisons as based on key range equality in terms of comparability criteria, rather than on individual position-to-position comparisons. Thus, the complete job analysis process as applicable to the structural comparison basis development procedure, becomes obsolete for future survey procedure, as does the necessity of

the personal interviews for purposes of establishing levels of comparability.

However, the use of the Survey Booklet as a means of gathering data which is necessary for application of the structural comparison method, is essential to the success of the continuing survey procedure. These booklets should be aimed primarily at obtaining information in the form of Exhibit A, Appendix I, which is the general information questionnaire. The most pertinent section of this general information questionnaire is the "Salary Practices" section, as the questions incorporated in such section are aimed at gathering information with regard to established base salary ranges, and general salary administration policies which possibly affect such ranges. Similarly, compensation data required will be that data specifically applicable to base salary ranges, i.e. base salary range midpoints, additional month(s) payment (bonus), and possible incentive bonus payments, as it is essentially the information incorporated in the base salary structures which is to be analysed. Actual salaries of individual positions, or average salaries of all incumbents are no longer necessary.

Further, the process of establishing levels of comparability, and weighting and adjusting data is no longer necessary to the continuing survey procedure, as the structural standardisations are regarded as being permanent once established.

III. Structural Standardisation Procedure

As mentioned in previous sections, the necessity to standardise participating organisation structures for future survey purposes is regarded essentially as a "one-time" process, and thus the necessity for careful choice and application of various techniques in the establishing of an objective and reliable basis. Once these techniques have been applied and the process completed, the resultant standardisations are the only necessities in the overall flow of events forming this process which are applicable to future survey procedures. In other words, the basic techniques involved in establishing these standardisations are no longer useful in future survey procedures.

These structural standardisations are applied as originally

established to the analysis of all future survey data. However, it is once again important to stress the difference between the labour grade structure and the base salary range structure as applicable to the structural comparison procedure. Although these two structures refer basically to the same overall pay structure, it is the standardisation in terms of labour grades, and not salary ranges, which is applicable to all future surveys. In other words, in each future survey the original standardisation of labour grades in terms of comparability criteria, or points allocation according to the job evaluation manual, which forms the basis of the overall survey procedure. It is not the standardisation in terms of salary range monetary compensation midpoints which is applicable, as these ranges tend to alter over time, as deemed necessary by individual participating organisations; thus, participating organisation ranges alter at different rates of expansion. The basic number of labour grades, or ranges, do not alter, however, and it is this standardisation in terms of number of labour grades formulating individual structures which is carried forward. The corresponding base salary range compensation midpoints, which have altered over time, are then applied to these standardised structures in order to determine an overall community average structure, or trend line.

IV. Compensation Data Analysis Procedure

In order to apply the total compensation figures, which are applicable to each individual participating organisation, to the standardised structures it is still necessary to identify base salary anchor points and key ranges. However, through application of principles suggested in the phase IV of the structural comparison procedure guide, such midpoints, and corresponding relevant data, if any, may be readily identified by referring to the established base salary range compensation data as supplied by participating organisations. Thus, it may be assumed that the only compensation information required by future structural comparison wage and salary surveys is essentially the base salary ranges of participating organisations, as such ranges supply the midpoint information necessary to establish a community pay structure.

It is the simplicity of the above principle which forms the nucleus of the structural comparison method of conducting wage and salary surveys. On this assumption then, reliable, valid and objective wage and salary

survey results may be obtained by analysis of participating organisation base salary range midpoints alone, as applied to the predetermined structural standardisations.

In short, the phase IV of the structural comparison guide is applicable to future surveys in that it is devoted to specifying techniques involved in the process of determining the competitive total compensation trend line, or community average pay structure, as established from the individual participating organisation standardised structure key range midpoints, as well as techniques involved in establishing the survey organisation base salary structure to be recommended on the basis of the community trend line analysis, all of which are very relevant to the data analysis procedure of future structural comparison method surveys.

Finally, such phase is also devoted to suggestions regarding management reports and presentation thereof, plus summary of information to be supplied to participating organisations, both of which are relevant not only to the structural comparison procedure, but to all wage and salary survey procedures.

P A R T V

ASSESSING THE STRUCTURAL COMPARISON SYSTEM

CHAPTER VIII

THE WAGE AND SALARY SURVEY COMMUNITY AND BACKGROUND

GENERAL INTRODUCTION

In order to assess the effectiveness of the structural comparison system as a guide to conducting wage and salary surveys such that valid and reliable results are obtained from successive surveys, and on as objective a basis as possible, the guide as outlined in the previous chapter has been utilised by a large survey organisation in conjunction with its normal survey process in order to establish a basis for comparison.

The survey organisation which was utilised as a base organisation is a large international oil company which conducts compensation surveys on a three-yearly basis in order to maintain a competitive pay structure. The survey guide presently utilised by this organisation relies to a large extent on the job evaluation system and the midpoint concept¹ in order to obtain survey community organisation wage and salary data on a position-to-position comparison basis. Although this guide has proved effective in obtaining individual position salary data, the overall reliability of such data in the adjustment of the total pay structure, and the cumulative effects of subjective judgements while utilising various techniques has led to the necessity for research into a new method. Further, the various disadvantages as outlined in Chapter III are applicable to this existing system.

Comprehensive surveys were thus conducted during the years 1974, 1977 and 1980 with the international oil organisation as the survey organisation and utilising both the conventional system and the structural

¹As outlined in Chapter III. See Snelgar, "A Guide to Conducting Compensation Surveys". The survey guide utilised by this organisation will be referred to as the Midpoint System.

comparison system as guides. In this way results were obtained from both guides while using the same survey community and labour markets, but by applying the different methods and techniques as applicable to each guide. The two sets of results were then analysed and compared in order to gauge the effectiveness of the structural comparison system guide against an established tried and tested guide which is based on the same data analysis logic, namely, an analysis of salary range midpoints.

In order to utilise the structural comparison guide it was necessary to standardise the various community organisation pay structures according to that of the survey organisation, as outlined in the structural comparison system guide, bearing in mind that such standardisation occurs only on a one-time basis, and the standardisations thus obtained are carried forward for all future survey purposes. Thus, such standardisation of structures was completed according to the 1974 and 1980 surveys. However, in order to obtain a wider base for comparison, the standardisation procedure was thoroughly tested against both the 1974 and the 1977 survey data in order to ensure that the reliability of the procedure as a whole remained at an acceptable level, and could thus be utilised effectively in successive surveys.

In order to further evaluate the structural comparison system, results obtained by utilisation of such a guide were then compared with the survey results obtained by two international salary survey organisations, both of which conduct surveys on a twice-yearly basis, using a national community, covering one-hundred-and-twenty-four economic sectors and sub-sectors within the Republic of South Africa, and over one hundred and four thousand individual salaries; thus providing the most reliable and complete salary data available. The following section of this text is devoted to the evaluation of the structural comparison guide survey results against the wage and salary data obtained and analysed from the surveys conducted by these two survey organisations.

Mention may be made of the fact that, although the comprehensive compensation surveys naturally consist of two sections, namely, a benefit survey and a wage and salary survey, data pertaining to the benefit survey has not been included within this report as the techniques and methods which have been scrutinised throughout this text are

applicable only to the wage and salary survey as such, and thus it is unnecessary to include benefit, or fringe-package, data. However, the basic fringe-benefit which has a direct effect on compensation, namely, the annual bonus², has been taken into account alongside wage and salary data, such that pay structures have been analysed on a basis of basic salary range midpoint plus monthly portion of annual bonus. In other words, all salary range midpoints are altered by the relevant bonus factors.

SURVEY ORGANISATION BACKGROUND

The organisation posing as the survey organisation and which provided a survey community which could be utilised to estimate the effectiveness of the Structural Comparison System, is an international marketer of petroleum products. Due to the fact that the policy of this organisation is to pay competitive compensation in order to attract and maintain a highly competitive labour force, it is necessary to conduct wage and salary surveys which determine whether the pay structure is competitive both within the industry concerned, as well as within communities in which such organisation's subsidiaries may compete for qualified employees. On this basis the organisation conducts comprehensive compensation surveys every three years, and it is thus imperative that a valid and reliable data gathering and analysing system be utilised to effect competitive adjustments to the overall pay structure. Further, in order to prevent a lapse in pay policy competitiveness on a general basis, close attention is paid to influences such as the Consumer Price Index, competitive adjustments made by competing organisations to their own pay structures, national salary surveys conducted by international survey organisations such as Peromnes Surveys (Pty) Ltd., and Urwick International (Pty) Ltd., plus analysis of labour market trends on an annual basis.

²Although a myriad of fringe-benefits affect the actual compensation levels of employees, the only benefit which may affect actual pay structure salary ranges, and which is therefore taken into account by the Structural Comparison System, is the annual bonus (or incentive bonus). See Exhibit B, Appendix I. As the annual bonus award has become common practice in most organisations, the applicable monthly factor has been included in all structural analyses by adding it to the relevant salary range midpoints.

However, in order to achieve and maintain pay structure competitiveness as a compensation policy objective, the comprehensive compensation survey data analysis conducted at four-yearly intervals provides the basis for competitive adjustments to total pay structure. Thus the necessity for an objective, reliable and valid system of data gathering and analysis. Further general background information is provided in summarised form.

I. General

The survey organisation as an international manufacturer and marketer of petroleum products is basically divided into two types of operation within the Southern African setting, namely, marketing and refining. As such the organisation has marketing offices, bulk plants and warehouses throughout the Republic of South Africa, South West Africa and Mocambique, with one refinery based in Durban.

With regard to the size of the organisation, the approximate sales value is in excess of R450 000 000, while the refinery capacity exceeds 100 000 barrels per day, the number of employees relevant to the marketing operation is in the region of 2260, while the number relevant to the manufacturing operation is in the region of 771.

II. Salary Administration Practices

Pay Structure: The survey organisation has a pay structure which is divided into twenty-four separate salary groups, or ranges, each having a 50% spread from minimum to maximum salary points, but with differing group-to-group progression rates for ranges representing lower, middle and upper sections of the structure, basically dividing the total hierarchy into three separate groups of salary ranges, each having a different rate of progression on the scale from salary range to salary range. Basically, these three separate groups of salary ranges represent the following organisational levels: (1) unskilled and semi-skilled; (2) skilled, middle management, and senior management, and (3) top management.

The pay structure has been developed according to job evaluation principles, and groups positions within salary ranges according to

similar levels of skill and decision-making. A logarithmic relationship exists between wage rates and respective salary ranges in that pay differentials between each range increase exponentially. Very simple mathematics establish the gradients of the curve, or the group-to-group progression rates, i.e. the angle of climb in pay from bottom to top. Thus, knowing the pay value at the lowest range, the gradient of the curve and the number of employees in each salary range group, the total equitable payroll for the organisation may be established. Once the minimum salary value has been established it is possible to then draw the pay structure curve at the appropriate gradient/s from such minimum salary point; thus, the importance of adequate and reliable salary survey data.

The total pay structure is maintained at a competitive level by adjustments according to comprehensive compensation surveys undertaken on a four-yearly basis, as well as the Consumer Price Index and general economic trends.

These competitive adjustments vary in size from year to year, but is generally necessary to adjust the total pay structure approximately every fourteen to fifteen months, depending on market pressures. As an example of such adjustments to the actual pay structure since the 1974 comprehensive survey, the following upward trend has taken place:

1. March 1974 : 6% (groups one to twenty-four)
2. August 1974 : \pm 4,7% (groups seven to twenty-four) This adjustment was necessary as a result of the 1974 compensation survey.
3. March 1975 : + 8,0% (groups one to twenty-four)
4. June 1976 : +10,0% (groups one to twenty-four)
5. August 1977 : + 6,2% (groups one to twenty-four) This adjustment was necessary as a result of the 1977 compensation survey.
6. August 1978 : + 8,0% (groups one to twenty-four).
7. March 1979 : + 6,0% (groups one to twenty-four)

As a result of these adjustments the compounded percentage adjustment to the overall pay structure is as follows:

1. Groups one to six : 53,1%
2. Groups seven to twenty-four : 60,3%

General Adjustments: Adjustments to the actual pay structure do not necessarily indicate a corresponding adjustment to actual salaries, as emphasised by the fact that emphasis has been placed on the utilisation of the wage and salary survey as a system of surveying accepted competitive market rates, rather than actual salaries. Adjustments to actual salaries, therefore, may be as a direct result of survey data analysis, but usually depend on a multitude of other factors as well. These adjustments to actual salaries are usually in the form of "general adjustments", or across the board adjustments to all actual salaries in the form of a fixed percentage. As an example, the following general adjustments have been made to actual salaries since 1974.

1. April 1974 : 6% (salary groups one to twenty only)
2. March 1975 : 10% (salary groups one to twenty only)
3. June 1976 : 10% (salary groups one to twenty only)
4. August 1977 : 6% (salary groups one to twenty only)
5. August 1978 : 8% (salary groups one to twenty only)
6. March 1979 : 6% (salary groups one to twenty only)

These increases have compounded salaries by 55,6%. However, as the general adjustment factor is increasingly looked upon as a disincentive due to the fact that such factors are usually larger than than actual merit increase factors, use of the compensation survey has been stressed as a tool for recommending disposal of such general adjustment factors, to be replaced by a merit increase factor which includes a proportion of a general economic factor depending on individual performance. In other words, actual salaries are increased by a merit factor which includes a proportion of an economic factor, and thus prevents all actual salaries being adjusted according to a single general economic factor, irrespective of individual performance.

Merit Increases: Employees are appraised and rated and merit increases are awarded in accordance as follows:

1. Below Range Midpoint

	<u>Time Factor</u>	<u>Percentage Increase</u>
High Performance	12 months	Max. 12%
Average Performance	12-18 months	5-7%
Low Performance	18-24 months	5-6%

2. Above Range Midpoint

	<u>Time Factor</u>	<u>Percentage Increase</u>
High Performance	15 months	8%
Average Performance	15-21 months	6%
Low Performance	24 months	5%

As mentioned previously, no economic factor is as yet incorporated in merit increases, but the general trend through utilisation of the comprehensive compensation survey has indicated the necessity to do so. All salaries are reviewed annually in September/October of each year, but increases are spread throughout the year. The following table illustrates comparisons of percentage increases according to pay structure, general economic, and merit adjustments which have affected the survey organisation since 1974:

TABLE 13
COMPARISON OF SURVEY ORGANISATION SALARY ADMINISTRATION
ADJUSTMENTS

DATE	% OVERALL PAY STRUCTURE INCREASE	% GENERAL ECONOMIC INCREASE	% MERIT INCREASE (AS % OF SALARY BILL)
1.4.74	6	6	-
1.8.74	4,6	-	± 4,5
1.3.75	8	10	± 4,5
1.6.76	10	10	± 4,5
1.8.77	6,2	6	± 4,5
1.8.78	8	8	± 4,5
1.3.79	6	6	± 4,5

Promotional Increases: Promotional increases are awarded in recognition of an actual promotion to a position of a higher responsibility level which falls within a higher salary group, or range. Such increases are, under normal circumstances, awarded at the time of the promotion, but may in unusual circumstances be deferred. Promotional increases are awarded as follows:

1. Into one salary group higher : 8% - 10%
2. Into two salary groups higher : 10% - 12%
3. Into three or more salary groups higher : Up to 15%

However, when the salary of a recently promoted employee is well below the minimum of the new range after applying the promotional increase, a further increase up to 15% or to range minimum, whichever is the lesser, may be given six to twelve months after promotion, provided performance within the new position shows promise.

Bonus: The survey organisation operates an Annual Christmas Bonus plan, such bonus being payable as a thirteenth month salary. The formula for such bonus is 8,3% of annual salary, or one full month's salary, and is pensionable. However, such bonus is only applicable to employees falling within salary groups one to nineteen, and excludes top management salary groups twenty to twenty-four. The bonus factor is taken into consideration in all analyses of pay structure data, and is considered a permanent feature of the pay structure when considering midpoints as competitive rates of pay within the wage and salary survey context.

SURVEY BACKGROUND

I. Survey Community

Due to the fact that the survey organisation has regional offices situated in all the provinces of the Republic of South Africa, and competes for labour ranging from unskilled to highly skilled and professional employees at all levels of the labour market, it is necessary to maintain an overall pay structure which provides competitive rates, irrespective of geographic location. In view of this fact then, the geographic area to be covered by the compensation survey is necessarily defined by the borders of the Republic of South Africa. As a result, all surveys have been conducted on a national basis, and the resultant organisational pay structure is therefore applicable to all regions and regional offices of the survey organisation.

II. Participating Organisations

Although the survey organisation regards the oil industry organisations as the major competitive community, due to the diverse nature of its labour force it is necessary to compete with many large organisations, irrespective of type of industry. On this basis the organisations representing the survey community are formed around a basic core of oil industry organisations representing a petroleum products manufacturing and marketing community, and is substantiated by careful selection of organisations from other industries and communities which are large enough to compete for labour within the same labour market.

These organisations are selected on the basis of being representative of the leading industries within the communities concerned, and as such are reputable employers in the community under survey, and compete with the survey organisation for employees.

The number of organisations included in the various surveys has varied from survey year to survey year, but in order to increase the reliability of survey results, the number has been maintained at a level varying between fifteen and eighteen, depending on various circumstances and willingness to participate.

In short then, as the survey organisation has regional offices on a national basis, but administers salaries and wages according to a single pay structure, the comprehensive surveys are undertaken on a national basis and include organisations from diverse industries competing in a similar labour market. The following organisations form the oil industry, representing the core community around which surveys are conducted, and which provide the most competitive pay structures for the survey organisation survey purposes, and from which general community trend lines may be gauged:

1. Shell Oil South Africa (Pty) Ltd.
2. Caltex Oil (S.A.) (Pty) Ltd.
3. B.P. Southern Africa (Pty) Ltd.
4. Total South Africa (Pty) Ltd.
5. Mobil Oil Southern Africa (Pty) Ltd.

Further participating organisations are drawn for each survey from various activities and industries such as:

1. Food; Beverages
2. Textiles; Clothing; Footwear
3. Distribution
4. Pharmaceuticals; Cosmetics
5. Heavy Engineering; Basic Metal Industry
6. Machinery; Transport Equipment
7. Rubber; Chemicals
8. Transport
9. Mining
10. Banking, Building Society
11. Insurance
12. Service Industry

III. Survey Positions

Those positions selected from the survey organisation hierarchy for purposes of establishing position-to-position matches with corresponding participating organisation positions, were selected on the basis of key position criteria.

These survey positions utilised in each survey were used as the basis for obtaining competitive total compensation rates from the labour market under consideration, and as such formed the vital link between the survey organisation pay structure and the average community competitive wage rates and levels.

Thus, the importance attached to the careful selection of these survey positions is strongly emphasised, and a great deal of care has been taken in procedures adapted for the analysing, screening and selecting of such positions.

In order to provide an idea as to which positions were selected from the survey organisation position hierarchy, simplified organisation charts have been supplied in the form of Appendix IV, these organisation charts indicating those positions which were included as survey positions over successive survey years. These survey positions are indicated by

being "boxed" on the respective charts.

These organisations charts, although completed according to 1977 manpower statistics, hierarchies and position titles, indicate all survey positions included in successive 1974, 1977 and 1980 surveys, as an indication of the limited range of positions which are utilised for survey purposes, as drawn from both Head Office functions and regional offices, including the survey organisation refinery.

IV. Survey Techniques

As explained in the general introduction to this chapter, in order to gain a basis for comparison, both the existing survey organisation compensation survey guide and the proposed Structural Comparison System guide have been utilised together over three successive survey years, representing the movement of salaries over seven years in total.

The existing survey organisation survey guide³ has been developed over a number of years due to the necessity for a formal guide to conducting compensation surveys. However, due to the vital importance of obtaining survey information over successive years on as reliable and objective basis as possible, it became clear that various disadvantages necessitated the development and research of an improved guide, which is both less costly and timeous, and which would effectively reduce aforementioned disadvantages.

The Midpoint System Techniques: Positions surveyed were selected on the basis of job comparisons made in previous surveys, and on positions generally used in surveys of participants. Such positions satisfied basic criteria of "key" positions as discussed in previous chapters of this text. Job descriptions were prepared for each of the survey positions in conjunction with the Departmental and/or functional manager concerned.

A booklet containing such job descriptions and relevant organisation charts was sent to each of the participating organisations.

³ Hereafter referred to as the Midpoint System. See Snelgar, "A Guide to Conducting Compensation Surveys".

This was followed by visits to each participating organisation by the Personnel Manager and his assistant, at which time, with the assistance of Line Managers when necessary, each survey position was compared with its corresponding match, discussed and, where necessary, weighted. The validity of these weightings was afterward discussed with and agreed upon by the Functional Managers concerned.

Percentage weightings were calculated on the basis of existing survey organisation group-to-group progression rates. Where weighting was considered necessary, multiples of over half of a salary group were used, depending on the differences in the magnitude and scope with the relevant survey position. The techniques utilised to provide a basis for decisions as regards weighting in terms of multiples of one-half salary groups, as indicated by the relevant group-to-group progression rate, was the survey organisation job evaluation system.

Analysis and weighting of data was based solely on the midpoint concept, that is, where participating organisations had established ranges, the midpoint of salary groups concerned were utilised for data analysis, and where organisations did not have established ranges, data provided was utilised to calculate hypothetical midpoints. When survey positions of participating organisations required weighting, the midpoints of the relevant salary groups were thus altered by the necessary weighting factor.

Once the personal interviews had been completed, and data collated, a booklet of results was sent to each participating organisation containing (1) a summary of the General Information Questionnaire, (2) a summary of salary data for each survey position in the form of Exhibit O, Appendix I. Data Analysis submitted to participating organisations in this form is not complete in terms of the survey organisation analysis techniques, but is rather in raw form such that these organisations may apply their own methods of analysis. An explanation is supplied with these booklets illustrating method of analysis in the compilation of data supplied for each position.

A comprehensive analysis according to the Midpoint System Guide was undertaken for each respective survey such that community average trend lines could be drawn up. As mentioned previously, the elements of

compensation taken into consideration for base salary analysis consist of base salary plus annual bonus, these base salaries being represented by respective salary group midpoints, or calculated hypothetical midpoints.

Overall evaluation weightings were calculated for each participating organisation position according to various weighting criteria, such weightings were then converted to monetary values according to necessary job weighting factors based on the survey organisation progression rates, competitive adjusted averages of all positions were then calculated, and finally community averages for each salary group were calculated and plotted on graph paper to reveal the community trend line, or average community pay structure.

The Structural Comparison System Techniques: The Structural Comparison System guide was utilised in conjunction with the survey organisation Midpoint System guide, except that all methods and techniques as formally explained in the previous chapter were applied. The positions utilised as an initial base were carefully selected according to job analysis, descriptions and evaluation techniques. However, to facilitate comparisons of salary data analysed according to respective system techniques, once such key positions had been identified and analysed according to the Structural Comparison guide, these positions were also utilised by the Midpoint System for survey purposes. These positions were very carefully screened and thus provided as reliable a base as possible for standardisation purposes.

Personal Interviews with participating organisation Personnel Managers and Functional and Line Managers were conducted so as to ensure comparable levels of responsibility such that exact position matches could be established. Although such interviews were essential in order to establish these exact comparisons for purposes of structural standardisation on a one-time basis, such interviews were conducted during both 1974 and 1977 surveys such that two standardisations were completed for comparison purposes, and these were then carried forward to the 1980 surveys.

The structural standardisation process was completed according to the identification of Anchor Positions and Supportive Positions, based on

the establishment of exact positional comparisons, and weightings according to responsibility and scope and magnitude criteria, as exemplified on Summary Worksheets similar to Exhibit D, Appendix I. The identification of these anchor and supportive positions allowed standardisation of participating organisation pay structures through identification of key grades.

Through the process of applying compensation factors to the identified anchor and supportive positions, and key grades, establishment of an average community pay structure was possible in monetary terms through the process of initially identifying anchor and supportive points, tabulating such midpoints on worksheets similar to Exhibits E and F, Appendix I and subsequently drafting such midpoints to a form similar to Exhibit G, Appendix I in order to calculate average community competitive pay rates. Inconsistent data was deleted both on positional as well as group bases, and the community trend line established through the analysis of the community average pay rates revealed the average community pay structure.

V. Executive Compensation Analysis

Due to the difficulty experienced in analysing and describing executive positions in terms of the usual job content and job factors, all executive compensation data was treated on a separate basis by both survey systems.

However, these executive surveys were subject to the same principles and techniques applicable to all other positions, with one major proviso, namely, that all such positions were surveyed by a selected staff member who was involved with executive remuneration and in conjunction with the executives concerned. Such executive compensation data was collected by a member of survey staff who was intimately involved with the remuneration of the executives in the survey organisation. Confidential interviews were conducted with similar counterparts from participating organisations, as well as the actual executives involved, and in this way levels of job comparability were established, and the nature of such compensation practices was kept on a confidential basis for each participating organisation.

Thus, although all positions were surveyed according to the same principles and techniques applicable to the respective guides, actual information for executive positions was collected and analysed on a separate and confidential basis. This was achieved by collecting information in two separate booklets - one for top management positions, and one for all positions other than top management. To facilitate this maintenance of confidentiality, booklets containing job descriptions and relevant organisation charts for top management (executive) positions were sent to participating organisations under separate cover to those booklets for all other positions.

As such positions are surveyed according to the same techniques applicable to all other positions, and are incorporated within the same pay structure, analysis of compensation data has been incorporated with all other analysis. Although the actual process of establishing comparability as well as various compensatory practices are treated confidentially, the actual analysis of salary data does not require such confidentiality due to the fact that under the conditions of the midpoint concept as applicable to both survey guides, the final analysis deals essentially with salary range midpoints and effective bonus payments, and not actual salaries as such.

In this way the survey organisation salary groups/ranges twenty to twenty-four, regarded as top management ranges, have been included in the general analysis so as to present a complete average community pay structure.

VI. "Non-White" Compensation Analysis

With respect to Non-White compensation analysis, it is important at this stage to note that, although different progression rates exist within the survey organisation pay structure, such structure is determined independently of race and according to principles of job evaluation. Due to the fact that the survey organisation has an international base, its sophisticated personnel systems force it to rationalise pay structures according to job evaluation principles and prevent treatment of each job as a category on its own.

Thus, as emphasised by the Structural Comparison System guide, the

trend is a movement away from surveying of actual salaries, and relying rather on the midpoints of salary ranges as representing competitive rates of pay. In this way such a system allows analysis of survey data on a similar basis, and according to pay structures as representing respective competitive pay rates. The size of community organisations predetermined the necessity to rationalise pay structures according to the abovementioned principles, and in this way the surveys completed during each survey year relied on the effective analysis of pay structures as such and were thus unaffected by race variables such as the wage gap.

In short then, the important factor to note is that the compensation surveys conducted over this period relied on the analysis of actual pay structures within a community which relied on the rationalisation of pay structures according to job evaluation principles, and as such all data was unaffected by actual salaries. This is regarded as a major advantage of the Structural Comparison System.

SURVEY RATIONALE

Although the basic rationale behind the undertaking of a comprehensive compensation survey is attributable to the requirement that the survey organisation remain competitive in the labour market, justification for the expense involved must be required prior to each survey for purposes of management reports and budgetary control. Obviously, the basic justification for the survey as such is the necessity to make competitive adjustments to pay structures, based on community labour market rates. However, as far as management is concerned, the need to remain competitive within the labour market indicates that with each adjustment to the pay structure follows a corresponding increase in the total wage bill which definitely requires justification.

Thus, as background to each successive compensation survey is the necessity to provide facts and figures with regard to various aspects of the economy which affect the organisation pay system. As an example, prior to a particular survey conducted by the survey organisation, it was calculated that the compounded pay structural alterations and general salary increases of the survey community organisations competing in the labour market relevant to the survey organisation, surpassed similar

adjustments made by the survey organisation by averages of 5,8% and 10,0% respectively. These figures indicate a lag in competitive adjustments to both pay structures and actual salaries, a situation which required the application of a rectifying factor such as a wage and salary survey. A vital factor in justifying such a requirement at this stage was the fact that the survey organisation dominated the petroleum products market, and in order to maintain this larger "market share" one of the basic requirements was to remain as competitive as possible within the labour market and thus maintain pay rates which would satisfy basic employee requirements.

To illustrate the abovementioned factors, TABLE 14 and TABLE 15 reveal that, although the survey organisation maintained a larger market share of the petroleum products market, employees were not being rewarded accordingly as both the pay structure as such, as well as actual salary levels were lagging behind the competitive market levels.

TABLE 14
OIL COMMUNITY ORGANISATIONS : PERCENTAGE SHARE OF PETROLEUM
PRODUCTS MARKET

PETROLEUM PRODUCT	ORGANISATION								
	SURVEY ORGANI- SATION	A	B	C	D	E	F	G	H
GASOLINE	18,47	16,84	19,83	17,40	12,83	2,29	6,96	1,29	4,09
POWER	19,10	20,34	15,31	19,85	16,40	0,68	-	1,21	7,11
ILLUMIN- NATING	24,06	17,14	17,91	17,76	13,77	0,31	-	1,54	6,91
JET	24,92	25,06	17,76	16,71	13,09	2,47	-	-	-
DIESEL	20,95	23,22	21,34	19,97	15,35	4,96	1,94	3,28	7,83
FUEL OIL	29,89	20,31	15,65	22,50	0,97	2,09	2,74	-	5,84
ASPHALT	33,74	14,48	11,30	19,67	5,00	5,90	4,93	0,87	4,11
TOTAL	19,73	18,34	18,50	17,57	12,02	2,95	4,11	1,69	5,09

NOTE :

In order to maintain confidentiality, oil community organisations have been allotted alphabetical codes. Organisations reflected in the above table are: Shell Oil South Africa (Pty) Ltd., Mobil Oil Southern Africa (Pty) Ltd., Caltex Oil (S.A.) (Pty) Ltd., B.P. Southern Africa (Pty) Ltd., Total South Africa (Pty) Ltd., Trek Petroleum (Pty) Ltd., Sonarep (Pty) Ltd., Sasol, Esso.

TABLE 15

SURVEY COMMUNITY ORGANISATIONS : COMPOUNDED PAY STRUCTURE
ALTERATIONS AND GENERAL SALARY INCREASES

ORGANISATION	% COMPOUNDED STRUCTURAL ALTERATION	% COMPOUNDED GENERAL SALARY INCREASES
B.P.	36,3	36,3
CALTEX	33,0	34,7
SHELL	36,3	36,3
TOTAL	28,6	not applicable
SAPREF	36,3	36,3
A.E. & C.I.	37,9	not applicable
AFROX	27,2	not applicable
ANGLO-AMERICAN	not applicable	not applicable
DUNLOP	46,8	not applicable
FORD	38,8	28,6
MASSEY-FERGUSON	53,1	50,8
METAL BOX	37,8	37,8
S.A. BREWERIES	27,2	not applicable
STEWARTS & LLOYDS	37,8	not applicable
UNILEVER	45,3	45,9
MOBIL OIL	32,1	28,3
IBM	43,6	not applicable

NOTE:

1. The above table reflects figures relevant to those participating organisations forming the 1977 survey community.
2. For all cases where the words "not applicable" appear, this is indicative of the fact that such organisations do not grant general across-the-board salary increases, but rather build an economic factor into their merit programmes, and apply increases annually on fixed review dates.
3. Anglo-American does not have established salary ranges.

It is therefore on the basis of this type of data that a rationale for the undertaking of a comprehensive compensation survey is provided for management approval purposes. A major market share plus the vital necessity to maintain, and even increase such a share, tends to result in larger profits and therefore a margin which will justify an increase in

total wage bill, a factor which in turn provides a contributing factor in the cycle of events leading to the maintenance of such a share.

CHAPTER IX

THE 1974 SALARY SURVEY

A comprehensive survey was conducted by members of the survey organisation Personnel staff utilising the organisation's existing system as a guide (referred to as the Midpoint System). In conjunction with this guide, the Structural Comparison guide was utilised to collate and analyse data according to the phases and steps applicable to such guide, and as set out in Chapter VII of this text.

Although data and information obtained from the General Information Questionnaire (Exhibit A, Appendix I) was summarised for comparison purposes, such summary is not presented as emphasis has been placed on analysis of wage and salary data. However, the basic fringe-benefit which has a direct effect on compensation, namely, the annual bonus, has been incorporated such that pay structure midpoints have been analysed on the basis of basic pay rate plus annual bonus factor¹.

SCOPE OF SURVEY

I. Geographic Area

The Republic of South Africa.

II. Date of Competitive Data

May 1974.

III. Participating Organisations

African Explosives and Chemicals Industries Limited: Manufacturers and marketers of explosives, fertilisers, industrial chemicals and plastics with major factories in Transvaal, Orange Free State, Natal and Cape Province. Sales offices are maintained in the principal towns in

¹Where deemed necessary, and for purposes of confidentiality, alphabetical codes have been used to denote participating organisations. These codes are specifically relevant to tabulation of salary data.

the Republic.

Number of employees : 13760
Sales value : R204 million

Anglo American Corporation of South Africa Limited: Mining and finance house holding widespread interests in all fields of mining, finance and industry. The Corporation also acts as secretaries, consulting engineers and managers to numerous organisations.

Capital employed : R688 million
Profits after tax : R45,7 million

Caltex Oil (S.A.) (Pty) Limited: Marketing company and refinery. Has marketing offices, bulk plants and warehouses throughout the Republic of South Africa, South West Africa, and Mocambique. Has one refinery in Cape Town of 50 000 barrels of oil per day capacity.

Number of Employees : 1910
Sales Value : +R150 million

Dunlop South Africa Limited: Manufacturers of rubber and rubberlike products and products allied to them either by technology or marketing conditions in which competitive efficiency requires a capital intensive manufacturing approach. Principal products are tyres, tubes, conveyor belts, hose, vinyl floors, carpets, sports goods and foam products.

Number of employees : 5396
Sales Value : +R60 million
Capital employed : R44,7 million
Profit after tax : R1 645 000

Ford Motor Company of South Africa (Pty) Limited: Automative manufacturing assembly, comprising a car and light truck assembly plant, a heavy truck assembly plant, an engine manufacturing assembly plant, and a parts depot. Also distribute through comprehensive sales and service network throught the Republic of South Africa.

Number of employees : 5548
 Sales Volumes : 55 863 units
 Sales Value (excluding parts and accessories) : R132 million
 Plant Capacity (cars, trucks and tractors) : 370 units per day

International Business Machines South Africa (Pty) Limited: Market and service wide range of office machines and computers primarily in the main centres of the Republic of South Africa.

Number of employees : +1100
 Sales Value : +R20 million

Kodak South Africa (Pty) Limited: Distributors of photographic and associated products throughout the Republic of South Africa.

Number of employees : 580
 Sales Value : +R14 million

Shell/B.P. South Africa (Pty) Limited: Marketing company and refinery. Has marketing offices, bulk plants and warehouses throughout the Republic of South Africa, South West Africa and Mocambique. Has one refinery in Durban of 180 000 barrels per day capacity.

Number of employees : 4375
 Sales Value : +R200 million

The South African Breweries Limited: Largest manufacturer and marketer of beer, wine and spirits in the Republic of South Africa. Holding and operating company. Principal operating activities are in brewing, property, real estate development, hotels, department stores, food, shoe manufacture, cool drinks.

Number of employees : 4500 (Central Office and Beer Division only)
 Sales Value : +R276 million

South African Coal, Oil and Gas Corporation Limited: State-owned organisation manufacturing and marketing refined petroleum products from coal through utilisation of the Kellogg synthesis reaction and the Arge process. Head Office and Refinery at Sasolburg in the Orange Free State.

Also operate the National Petroleum Refinery in which they have a 52.5% interest, and in which Total South Africa (Pty) Ltd has a 30% interest. This refinery has a capacity of 65 000 barrels per day.

Number of employees : +7300
Sales Value : R196,4 million (Sasol Natref)

Total South Africa (Pty) Limited: Marketing company. Has marketing offices, bulk plants and warehouses throughout the Republic of South Africa, South West Africa.

Number of employees : +12000
Sales Value : +R93 million

Unilever South Africa (Pty) Limited: Manufacturers, distributors and marketers of wide range of soaps, detergents, foodstuffs, cosmetics, ice-cream, chemicals, and animal feeds. Associate of the International Unilever combine in London. Branch offices in all main towns in the Republic of South Africa.

Number of employees : 6140
Sales Value : R125 million

Mobil Oil Southern Africa (Pty) Limited: Marketing company and refinery. Has marketing offices, bulk plants and warehouses throughout the Republic of South Africa, South West Africa and Mocambique. Has one refinery with capacity of 67 000 barrels per day.

Number of employees : 3100 (including refinery)
Sales Value : +R200 million

IV. Survey Positions

The following positions formed the base of the 1974 comparability procedure, and are grouped according to the salary ranges of the survey organisation.

Group	1	General Labourer
		Office Messenger
		Cleaner/Tea Server

Group	2	Fork Lift Operator Artison's Helper Reproducing Machine Operator
Group	3	Chauffeur Clerical Assistant Junior Clerk (male and female) Key Punch Operator
Group	4	Telex Operator Laboratory Technician I Copy Typist Telephonist
Group	5	Senior Stenographer Assigned Stenographer Laboratory Technician II
Group	7	Senior Clerk (male and female) Chairman's Secretary
Group	8	Computer Programmer
Group	9	Draughtsman, Refinery Purchasing Assistant Assistant Ledgers Chemist
Group	10	Employee Relations Assistant (Structural Standardisation survey only)
Group	11	Section Head Ledgers Engineering Assistant Senior Computer Programmer Warehouse Supervisor, Refinery
Group	12	Employee Relations Assistant, Head Office (Structural Standardisation survey only)
Group	13	Depot Superintendent, Langlaagte Office Services Manager Credit Manager, Northern Region
Group	14	Purchasing Manager Chief Chemist
Group	15	Employee Relations Manager (Structural Standardisation survey only)

Group	16	Assistant Controller, General Accounting, Public Relations Manager Chief Projects Engineer, Refinery Refinery Superintendent
Group	17	General Trade Sales Manager, Cape Town Treasurer Chief Maintenance Engineer, Refinery
Group	18	Chief Operations Engineer Secretary and Legal Counsel Technical Services Manager
Group	19	Resale Sale Manager, Northern Region Mechanical Manager, Refinery
Group	20	Assistant Accounting and Finance Manager Resale Sales Manager, Cape Town
Group	21	Operations Manager Regional Manager, Northern Region
Group	22	Accounting and Finance Manager
Group	23	Manufacturing Manager
Group	24	Marketing Manager

Note may be made of the fact that certain positions have been incorporated for structural standardisation survey purposes only. These positions have especially been incorporated to prevent the lack of exact position comparisons in certain salary groups.

RATIONALE

It has been prevailing practice in the Republic to provide for movement in salary levels by means of across-the-board general salary adjustments, and in line with prevailing practice, the survey organisation decided to adopt this practice.

However, in 1971 the survey organisation's major competitors within the oil community had altered their method of implementing such increases, and instead of awarding a general adjustment, adopted a combined economic/merit factor approach, such that all merit increases were awarded on one of two specific dates each year.

As an indication of the lack of success which has been attributed to such a method, both of these competitors found it necessary to reward general adjustments during 1973 and 1974, in spite of the economic factor having been built into the merit scheme, in order to keep salaries in pace with the market. As a result both of these competitors found it necessary to return to the general adjustment scheme at a later stage.

Further participants in the survey community who normally do not favour the general adjustment approach found, in the light of the inflationary environment, that they would be forced to adopt such a scheme.

Although the survey organisation believed that, in more settled conditions with a market rate of 2% or 3% per annum, the use of the economic factor combined with merit would be the ideal method of salary administration, the rate of inflation and rapid rate of salary movement during 1974 was making this impractical.

As a result, the trend toward the utilisation of the general adjustment led to rapid upward movements in overall salary levels, rather than at controlled individual levels as would have been the case when applying a merit plus economic factor scheme. As a result the market rate during the year 1974 changed so rapidly that it became necessary to scrutinise competitive market rates with a view to adjusting the pay structure.

A factor which further aggravated the situation was the scarcity of skilled manpower in the Republic, a result of inadequate training programs and facilities which was being particularly heavily felt during 1974, and which was having the effect of escalating salary levels. This coupled with the world-wide inflation was having adverse repercussions on the market place.

Within the Oil Industry in particular, the survey organisation was faced with a situation of increasing competition for trained staff. Two larger organisations, namely Shell and B.P. had amalgamated their services and distribution networks, but decided during 1974 to once again form two separate organisations, a fact which created a drain on trained staff. On the other hand, the smaller oil organisations in the Republic

looked to the majors as their principal source of supply for trained personnel. For these reasons then, it was essential that the survey organisation's pay structure remained competitive with both the larger and the smaller oil community organisations such that inevitable losses to the smaller community would be evenly spread.

BACKGROUND

The survey organisation's pay structure prior to the 1974 survey was introduced on 1st April 1974, following approval of an interim structure adjustment of 6% to the previous structure which had been in effect since 1st April 1973. The salary range minimum, midpoint and maximum rates of the pay structure as from 1st April 1974 is illustrated in TABLE 16.

Over the past twelve months participating organisations forming the survey community affected certain actions which resulted in the necessity to reanalyse the survey organisation's pay structure with a view to an upward adjustment. The inflationary effects of the market may be illustrated by the fact that within a period of approximately sixteen months the survey organisation pay structure was adjusted by an overall average of 10,6%, or effectively 7,9% per annum. TABLE 17 highlights structural and actual salary increases as applicable to participating organisations for the period January 1974 to July 1974.

TABLE 17
SURVEY COMMUNITY ORGANISATIONS : COMPOUNDED PAY STRUCTURE ALTERATIONS
AND GENERAL SALARY INCREASES : JANUARY 1974 to JULY 1974

ORGANISATION	% COMPOUNDED PAY STRUCTURE ALTERATION	% COMPOUNDED GENERAL SALARY INCREASE
CALTEX	10,0	11,3
SHELL/B.P.	9,8	11,3
TOTAL	9,0	not applicable
SASOL	25,4	not applicable
MOBIL	10,9	6,0
A.E. & C.I.	12,0	12,4
ANGLO AMERICAN	not applicable	not applicable
DUNLOP	15,0	± 14,0
FORD	16,0	± 7,6
IBM	12,0	not applicable
KODAK	7,0	± 10,0
S.A. BREWERIES	± 15,0	6,0
UNILEVER	6,0	6,0

NOTE:

1. For all cases where the words "not applicable" appear, this is indicative of the fact that such organisations do not grant general across-the-board salary increases.
2. Anglo American does not have established salary ranges.

The results of major salary surveys conducted by two professional organisations in the Republic of South Africa indicates that salary levels revealed the following upward trend:

1. Peromnes Salary Surveys (Pty) Ltd. : average of 8% - 9% during the period April 1973 to April 1974. ²
2. Urwick International (Pty) Ltd. : average of 8,9% during the period August 1973 to March 1974. ³

Further, from April 1973 to April 1974 the Consumer Price Index had shown an increase of 8,9%, and an increase of 12% - 13% during the 1974 calendar year.

THE MIDPOINT SYSTEM SURVEY : 1974

I. Method and Results

Subsequent to the forwarding of the survey position description booklets and organisation charts, relevant interviews were conducted during which comprehensive discussions were aimed at determining levels of comparability.

Position-to-position comparisons were made in all cases except the lower levels, where attention was given to such factors as education, length of experience and general level of responsibility rather than specific job content

The TABLE 18 group-to-group progression rates were applied as weighting factors whenever such weighting of individual positions was necessary. These rates represent the progressions applicable to the pre-survey survey organisation pay structure (see TABLE 16).

TABLE 18
SURVEY ORGANISATION PRE-SURVEY GROUP-TO-GROUP PROGRESSION
RATES: 1974

Salary Group	Progression Rate
1 to 24	1,2063
8 to 18	1,0940
18 to 24	1,1297

² "Peromnes Salary Survey - April 1974" (Johannesburg : Peromnes Salary Surveys (Pty) Ltd., April 1974).

³ "Urwick Salary Survey - March 1974" (Johannesburg : Urwick International (Pty) Ltd., March 1974).

In arriving at percentages utilised to adjust and weight certain position salary data in order to take cogniscance of variations in scope and magnitude, positions of participating organisations were first evaluated in terms of the survey organisation evaluation system, and this enabled a determination of the extent of the variations on the basis of full or half salary groups. These group differentials were then converted into percentage differentials based on the actual group-to-group progression rates of the survey organisation's pay structure, (TABLE 18).

Overall evaluation weightings were calculated for each participating organisation position on Summary Worksheets (Exhibit D, Appendix I), and these overall weightings in terms of multiples of one-half were converted to monetary values on the Summary of Adjusted (Unadjusted) Salary Data Worksheets (Exhibit E, Appendix I). The competitive adjusted averages of all positions were then calculated on these same worksheets and tabulated on Adjusted Total Compensation Midpoint worksheets (TABLE 19), such that "out-of-line" data could be deleted or re-evaluated. The tabulation of such Adjusted Total Compensation Midpoint Data allows for easy comparison of position midpoints and averages, for purposes of deletion and Competitive Average Total Compensation Midpoint calculations. These community averages for each salary group were plotted on semi-log graph paper, and the line of best fit established (FIGURE 6).

The sequence of calculations and results obtained from the stage of tabulation of Adjusted Total Compensation Midpoint Data is presented in the following sequence of tabulations and illustrations.

TABLE 19

TABULATION OF ADJUSTED TOTAL COMPENSATION MIDPOINT DATA :

MIDPOINT SYSTEM : 1974

Salary Group	Position Title	Adjusted Total Compensation Midpoint : Monthly Base (Rand)														Competitive Average Total Compensation Midpoint (Salary Group)
		Org. A	B	C	D	E	F	G	H	I	J	K	L	M	N	
1	Gen. Labourer	-	136	101	-	131	124	128	125	136	116	-	-	91	128	128
	Office Messenger	-	157	120	-	135	136	117	142	137	118	-	149	-	153	
	Cleaner/Tea Serv.	-	135	101	-	135	124	117	125	126	-	-	149	-	143	
	AVERAGE	-	143	107	-	134	128	121	131	130	117	-	149	91	141	
2	Fork Lift Truck Op.	-	184	153	-	149	152	153	-	179	141	181	178	127	186	167
	Artisan's Helper	-	157	109	-	149	137	147	-	163	162	-	-	-	194	
	Rep. Mach. Op.	-	184	135	-	194	136	179	161	243	134	225	209	150	220	
	AVERAGE	-	175	132	-	164	142	160	161	195	146	203	193	138	200	
3	Chauffeur	-	157	153	-	169	152	189	198	179	304	235	181	154	248	218
	Clerical Asst.	-	184	-	-	104	188	255	-	184	-	-	149	190	-	
	Junior Clerk	-	217	217	-	225	242	277	241	243	232	235	211	236	239	
	Key Punch Op.	-	260	240	-	257	303	255	-	258	194	257	201	-	219	
AVERAGE	-	204	203	-	211	221	244	219	216	243	242	185	193	235		
4	Telex Operator	-	314	-	-	322	266	277	262	312	228	335	-	323	255	273
	Lab. Technician I	-	314	343	-	-	-	-	305	-	323	-	-	-	235	
	Copy Typist	-	217	211	-	264	266	301	291	258	228	235	247	285	219	
	Telephonist	-	260	207	-	322	266	277	292	312	196	310	247	271	252	
AVERAGE	-	276	254	-	303	266	285	287	294	244	293	247	293	240		
5	Senior Steno. Clerk	-	260	290	-	322	303	357	289	363	271	332	288	328	286	322
	Nursing Sister	-	314	255	-	360	350	389	345	312	326	341	247	310	322	
		-	314	295	-	351	-	425	-	363	326	-	-	-	350	
	AVERAGE	-	296	280	-	344	326	390	317	346	308	336	287	319	310	
6	Senior Comp. Op.	-	379	343	-	451	386	-	-	406	396	455	426	-	382	401
	Assigned Steno. Lab. Tech. II	-	314	364	-	451	350	461	440	431	326	446	363	375	434	
		-	-	-	-	451	498	461	351	-	-	-	-	375	282	
	AVERAGE	-	346	353	-	451	411	461	410	418	361	450	394	375	366	
7	Senior Clerk	-	379	343	-	458	499	461	480	363	-	413	-	-	395	441
	Chairman's Sec.	-	379	386	-	483	499	461	457	431	478	500	391	-	567	
	AVERAGE	-	379	364	-	470	499	461	468	397	478	456	391	-	481	
8	Comp. Program. Draughtsman	-	455	495	-	451	543	425	-	477	409	500	411	-	453	468
		-	547	457	-	422	-	461	608	479	396	-	495	-	562	
	AVERAGE	-	455	495	-	451	543	425	-	477	409	500	411	-	453	

TABLE 19 -- continued

TABULATION OF ADJUSTED TOTAL COMPENSATION MIDPOINT DATA :

MIDPOINT SYSTEM : 1974

Salary Group	Position Title	Adjusted Total Compensation Midpoint : Monthly Base (Rand)														Competitive Average Total Compensation Midpoint (Salary Group)
		Org.A	B	C	D	E	F	G	H	I	J	K	L	M	N	
9	Draughtsman	-	547	457	-	433	-	461	608	479	396	-	-	495	562	521
	Purchasing Asst.	-	-	544	-	606	755	648	517	510	478	-	-	573	478	
	Asst. Ledgers	-	520	408	-	551	-	461	520	431	478	-	-	-	474	
	Chemist	-	547	544	-	551	-	648	564	-	478	-	-	495	490	
	AVERAGE	-	538	488	-	535	755	554	552	473	457	-	-	521	501	
10	Eng. Asst.	-	602	575	-	-	624	597	-	-	576	-	-	-	647	
11	Section Head Led.	-	602	544	-	691	543	596	656	510	686	689	546	559	575	590
	Eng. Asst.	-	602	575	-	-	624	597	-	-	576	-	-	-	647	
	Senior Comp. Prog.	-	547	588	-	546	624	547	-	623	576	616	508	-	-	
	Warehouse Sup.	-	602	684	-	489	-	547	-	604	576	-	-	465	707	
	AVERAGE	-	588	598	-	575	597	572	656	579	603	652	527	512	643	
12	Office Serv. Mgr.	-	575	-	-	-	-	-	-	-	748	812	-	625	738	
	Section Head Led.	-	602	544	-	691	543	596	656	510	686	689	546	559	575	
13	Depot Supt.	-	720	665	-	723	681	-	-	729	-	-	-	-	716	709
	Office Serv. Mgr.	-	-	575	-	-	-	-	-	-	748	812	-	625	738	
	Credit Mgr.	-	784	-	720	-	-	-	-	-	794	-	-	687	625	
	AVERAGE	752	620	720	723	681	681	-	-	729	771	812	-	656	693	
14	Credit Mgr.	-	784	-	720	-	-	-	-	-	794	-	-	687	625	781
	Purchasing Mgr.	-	747	724	-	715	1 015	768	841	752	729	751	-	578	750	
	Chief Chemist	-	760	730	-	702	906	795	850	788	810	-	-	578	910	
	AVERAGE	-	753	727	-	708	960	781	845	770	769	751	-	578	830	
15	Asst. Controller	-	791	892	-	880	1 174	845	968	788	810	990	867	1 005	855	916
	Chief Chemist	-	760	730	-	702	906	795	850	788	810	-	-	578	910	
16	Asst. Controller	-	791	892	-	889	1 174	845	968	788	810	990	867	1 005	855	916
	Public Rel. Mgr.	-	911	842	-	-	1 094	862	945	-	823	1 017	-	-	-	
	Chief Proj. Eng.	-	863	815	-	920	-	845	1 097	-	891	-	-	-	835	
	Refinery Supt.	-	959	1 001	-	844	-	883	-	1 005	1 027	-	-	979	-	
	AVERAGE	-	881	888	800	884	1 134	859	1 003	896	888	1 003	867	992	845	
17	Gen. Trade Sales Mgr.	952	-	-	952	-	-	970	-	-	-	1 010	-	-	1 017	1 023
	Treasurer	-	1 099	881	-	1 049	1 182	1 024	1 032	1 005	1 064	-	-	-	-	
	Chief Maint. Eng.	-	959	1 225	-	1 012	-	-	-	1 005	891	-	-	-	1 111	
	Refinery Supt.	-	959	1 001	-	844	-	883	-	1 005	1 027	-	-	979	-	
	AVERAGE	952	1 029	1 053	952	1 030	1 182	997	1 032	1 005	977	1 010	-	-	1 064	

TABLE 19 -- continued

TABULATION OF ADJUSTED TOTAL COMPENSATION MIDPOINT DATA :

MIDPOINT SYSTEM : 1974

Salary Group	Position Title	Adjusted Total Compensation Midpoint : Monthly Base (Rand)														Competitive Average Total Compensation Midpoint (Salary Group)		
		Org. A	B	C	D	E	F	G	H	I	J	K	L	M	N			
18	Chief Ops. Eng.	-	1 055	-	-	1 107	1 182	-	-	-	-	-	-	-	-	-	-	
	Secretary	-	949	-	-	1 049	-	970	1 019	1 200	-	1 250	-	1 212	1 130	-	-	
	Tech. Services Mgr.	-	1 103	-	-	-	-	-	-	1 066	1 048	-	-	1 182	-	-	-	
	AVERAGE	-	1 036	-	-	1 078	1 182	970	1 019	1 133	1 048	1 250	-	1 197	1 130	-	-	1 101
19	Resale Sales Mgr.	1 165	1 327	-	1 165	-	1 086	1 092	-	-	1 122	1 366	1 152	1 186	1 152	-	-	-
	Mech. Mgr.	-	1 441	1 211	-	1 379	-	-	-	-	-	-	-	-	-	-	-	1 130
	AVERAGE	1 165	1 384	1 211	1 165	1 379	1 086	1 092	-	-	1 122	1 366	1 152	1 186	1 171	-	-	1 212
20	Asst. Acc. Mgr.	-	-	-	-	1 144	1 605	1 591	1 310	1 412	1 581	1 757	-	1 472	1 377	-	-	-
	Resale Sales Mgr.	1 055	1 789	-	1 055	-	1 331	1 278	-	1 412	1 407	2 001	-	1 402	1 306	-	-	-
	AVERAGE	1 055	1 789	-	1 055	1 144	1 468	1 434	1 310	1 412	1 494	1 879	-	1 437	1 341	-	-	1 436
21	Operations Mgr.	-	1 804	-	-	1 673	1 361	-	-	-	1 714	-	-	-	1 533	-	-	-
	Regional Mgr.	-	1 628	-	-	-	-	1 534	-	1 655	-	-	-	1 628	1 518	-	-	-
	AVERAGE	-	1 716	-	-	1 673	1 361	1 534	-	1 655	1 714	-	-	1 628	1 525	-	-	1 605
22	Acc. and Fin. Mgr.	-	1 930	1 881	-	1 719	-	1 833	-	1 961	2 009	2 000	1 734	1 628	2 257	-	-	1 895
23	Manufacturing Mgr.	-	2 038	2 015	-	2 148	-	1 944	-	1 986	2 190	-	-	-	2 099	-	-	2 060
24	Marketing Mgr.	2 283	2 411	-	2 283	-	2 269	2 200	-	2 318	2 505	2 450	-	2 500	2 109	-	-	2 333

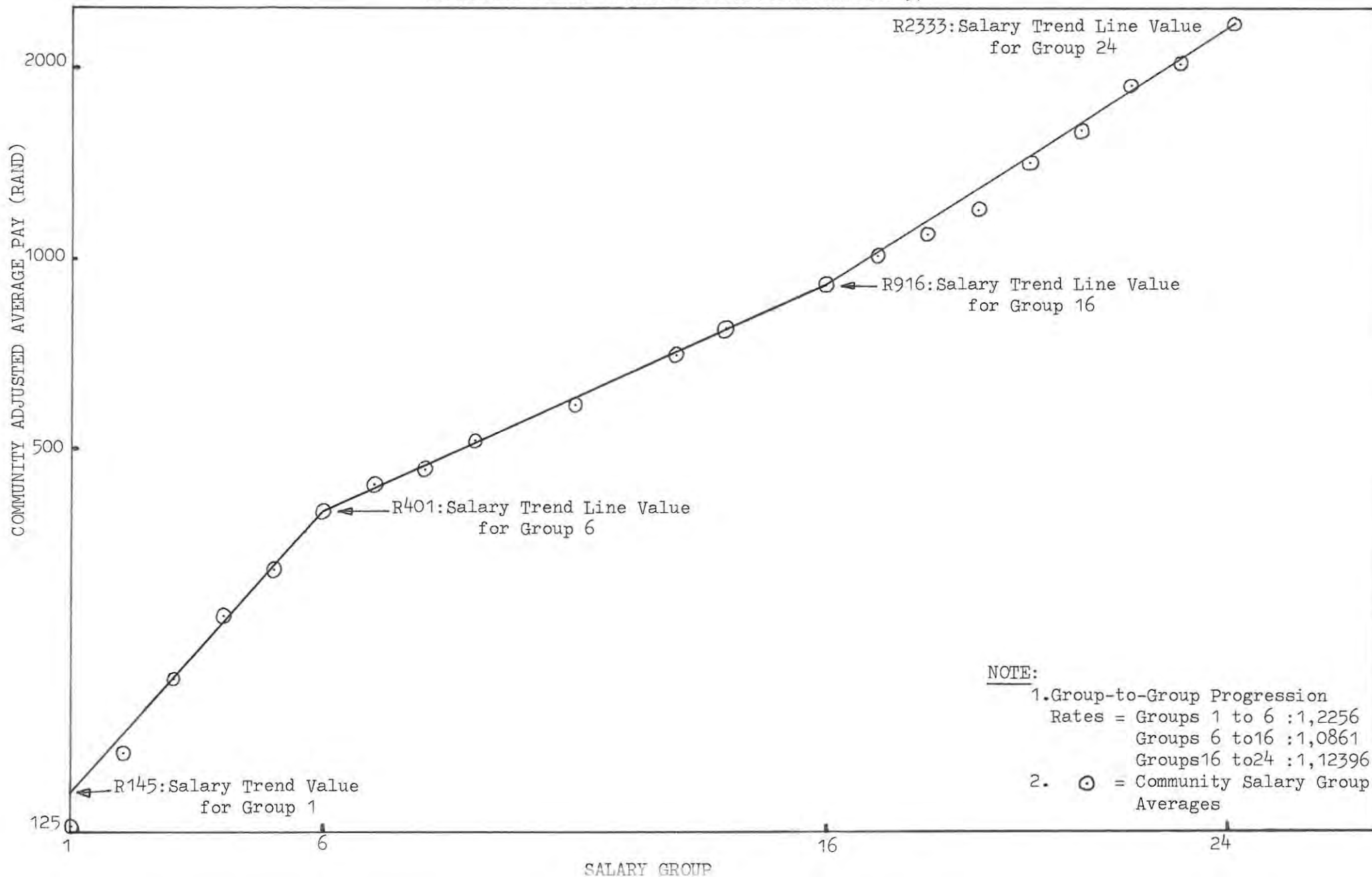
NOTE:

The following positions will be studied with a view to re-evaluation:

1. Draughtsman : from Salary Group 8 to 9.
2. Engineering Assistant : from Salary Group 10 to 11.
3. Section Head Ledgers : from Salary Group 12 to 11.
4. Office Services Manager : from Salary Group 12 to 13.
5. Credit Manager : from Salary Group 14 to 13.
6. Chief Chemist : from Salary Group 15 to 14.
7. Assistant Controller : from Salary Group 15 to 16.
8. Refinery Superintendent : from Salary Group 17 to 16.

FIGURE 6

COMMUNITY SALARY TREND LINE: MIDPOINT SYSTEM: 1974



The line of best fit thus established was utilised as a basis for calculating an adjusted survey organisation pay structure, represented below:

TABLE 20

SURVEY ORGANISATION RECOMMENDED PAY STRUCTURE :
MONTHLY BASE : MIDPOINT SYSTEM 1974

SALARY GROUP	MINIMUM (RANDS)	MIDPOINT (RANDS)	MAXIMUM (RANDS)
1	116	145	174
2	142	178	214
3	174	218	262
4	214	267	320
5	262	327	392
6	321	401	481
7	349	436	523
8	378	473	568
9	411	514	617
10	446	558	670
11	485	606	727
12	526	658	790
13	572	715	858
14	621	776	931
15	674	843	1 012
16	733	916	1 099
17	824	1 030	1 236
18	926	1 157	1 388
19	1 041	1 301	1 561
20	1 170	1 462	1 754
21	1 314	1 643	1 972
22	1 478	1 847	2 216
23	1 661	2 076	2 491
24	1 866	2 333	2 800

NOTE:

1. Group-to-group progression rate = Groups 1 to 6 : 1,2256
Groups 6 to 16 : 1,0861
Groups 16 to 24 : 1,12396
2. 50% spread in range.
3. All ranges for Groups 1 to 19 include Christmas Bonus of 1 month's salary.

The adjustment to individual salary range midpoints may be highlighted by comparing the recommended pay structure in the form of the adjusted community trend line values to the existing pay structure of the survey organisation.

TABLE 21

COMPARISON OF RECOMMENDED PAY STRUCTURE TO PRESENT SURVEY
ORGANISATION PAY STRUCTURE : MONTHLY BASE : MIDPOINT SYSTEM 1974

SALARY GROUP	RECOMMENDED STRUCTURE (MIDPOINTS : RAND)	PRESENT STRUCTURE (MIDPOINTS : RAND)	% RECOMMENDED VARIES FROM PRESENT
1	145	120	+ 20,8
2	178	160	+ 11,3
3	218	223	- 2,2
4	267	285	- 6,3
5	327	322	+ 1,6
6	401	363	+ 10,5
7	436	411	+ 6,1
8	473	446	+ 6,1
9	514	486	+ 5,8
10	558	529	+ 5,5
11	606	576	+ 5,2
12	658	626	+ 5,1
13	715	681	+ 5,0
14	776	742	+ 4,6
15	843	817	+ 3,2
16	916	901	+ 1,7
17	1 030	993	+ 3,7
18	1 157	1 095	+ 5,7
19	1 301	1 206	+ 7,9
20	1 462	1 370	+ 6,7
21	1 643	1 556	+ 5,6
22	1 847	1 766	+ 4,6
23	2 076	2 005	+ 3,5
24	2 333	2 277	+ 2,5
AVERAGE VARIANCE			= + 5,18

NOTE:

1. Average Variance = Groups 1 to 6 : + 5,6%
Groups 6 to 16 : + 5,3%
Groups 16 to 24 : + 4,7%
2. Recommended Structure group-to-group
progression rates = Groups 1 to 6 : 1,2256
Groups 6 to 16 : 1,0861
Groups 16 to 24 : 1,12396
3. Present Structure group-to-group
progression rates = Groups 1 to 8 : 1,2063
Groups 8 to 18 : 1,0940
Groups 18 to 24 : 1,1297

In order to gain further insight into the position of the recommended adjusted pay structure in relation to the market rates regarded as being competitive for specific groups of positions, the comparison of the recommended structure with the competitive average total compensation midpoints is provided in TABLE 22.

TABLE 22

COMPARISON OF RECOMMENDED PAY STRUCTURE TO COMPETITIVE AVERAGE TOTAL COMPENSATION MIDPOINTS ; MONTHLY BASE ; MIDPOINT SYSTEM 1974

SALARY GROUP	RECOMMENDED STRUCTURE (MIDPOINTS : RAND)	COMPETITIVE AVERAGE TOTAL COMPENSATION (MIDPOINTS : RAND)	% RECOMMENDED MIDPOINT VARIES FROM COMPETITIVE AVERAGE TOTAL COMPENSATION MIDPOINT
1	145	128	+ 13,3
2	178	167	+ 6,6
3	218	218	0,0
4	267	273	- 2,2
5	327	322	+ 1,6
6	401	401	0,0
7	436	441	- 1,1
8	473	468	+ 1,1
9	514	521	- 1,3
10	558	-	-
11	606	590	+ 2,7
12	658	-	-
13	715	709	+ 0,9
14	776	781	- 0,6
15	843	-	-
16	916	916	0,0
17	1 030	1 023	+ 0,7
18	1 157	1 101	+ 5,1
19	1 301	1 212	+ 7,3
20	1 462	1 436	+ 1,8
21	1 643	1 605	+ 2,4
22	1 847	1 895	- 2,5
23	2 076	2 060	+ 0,8
24	2 333	2 333	0,0
AVERAGE VARIANCE			= + 1,50

NOTE:

1. Group-to-group progression rates = Groups 1 to 6 : 1,2256
 Groups 6 to 16 : 1,0861
 Groups 16 to 24 : 1,12396

II. Discussion

The group-to-group progression rates as calculated from the community trend line thus reveal that an adjustment of 5,2% on the average, was required in order to realign the existing pay structure with the competitive market situation. Such recommended group-to-group progression rates are revealed in the table below.

TABLE 23

POST SURVEY RECOMMENDED GROUP-TO-GROUP PROGRESSION
RATES : MIDPOINT SYSTEM 1974

SALARY GROUP	CUTOFF VALUES (RAND)	GROUP-TO-GROUP PROGRESSION RATES
1	145)	. . .
6	401)	. . .
6	401)	. . .
16	916)	. . .
16	916)	. . .
24	2 333)	. . .
		1,2256
		1,0861
		1,12396

Important to note from the above table is the extremely high progression rate for the salary groups one to six in comparison to those rates applicable to the other salary groups. It may be noted that, on the average and excluding groups one to six, the recommended pay structure varies from the existing survey organisation pay structure by approximately 4,7%, and that the inclusion of these groups increases such a variation to 5,2%.

This high progression rate in the lower pay structure salary ranges may be attributed to the necessity for a rapid escalation in levels of pay rates for Non-Whites over the years 1972 and 1973, in an effort to decrease the existing wage-gap, and pay rates which were regarded as non-discriminatory. However, such an escalation seemed to indicate an over-reaction to the existing situation, and these high rates of progression inevitably had a detrimental effect on future pay structures.

The progression rates revealed in TABLE 23 further indicates

that the recommended pay structure midpoints varied from the actual community Competitive Average Total Compensation Midpoints by an average of 1,5%, a figure which perhaps indicates an average level of variance which is slightly too high for an acceptable line of best fit. However, this figure is once again attributable to the fluctuating variations at the lower range of groups. In fact then, this figure suggests that the survey organisation, in adopting the recommended pay structure, would in effect be paying rates which were, on the average, 1,5% higher than the competitive market rates for the community under consideration.

The implementation of the adjustment to the existing survey organisation pay structure as based on the abovementioned progression rates results in an immediate potential cost to the organisation in that midpoints of ranges require upward adjustments according to respective competitive rates. Further, the actual costs of adjusting salaries of those employees falling below the minima of their respective ranges to the recommended minima must also be taken into consideration. These costs are illustrated in TABLE 24, which reveals that the potential cost of implementing such a pay structure amounted to R84 708 per month, while the costs involved in adjusting actual salaries to recommended minima amounted to R2 365 per month.

TABLE 24

COSTS OF IMPLEMENTING RECOMMENDED STRUCTURE : MIDPOINT SYSTEM 1974

SALARY GROUP	NO. OF EMPLOYEES IN SALARY GROUP	POTENTIAL COST BASED ON CHANGE IN MIDPOINT (RAND)	NO. OF SALARIES BELOW RECOMMENDED MINIMUM	COST TO ADJUST SALARIES TO RECOMMENDED MINIMUM (RAND)
1	548	13 643	85	588
2	285	5 178	22	108
3	107	-	1	3
4	354	-	1	11
5	323	1 521	1	17
6	132	5 063	3	38
7	264	6 572	40	989
8	189	5 087	8	162
9	79	2 233	2	23
10	234	6 910	7	240
11	46	1 393	-	-
12	62	2 002	4	81
13	80	2 745	2	47
14	52	1 749	-	-
15	59	1 548	1	58
16	18	266	-	-
17	14	518	-	-
18	11	688	-	-
19	7	669	-	-
20	7	645	-	-
21	3	260	-	-
22	1	81	-	-
23	2	141	-	-
24	1	56	-	-
TOTAL	2 878	58 968	177	2 365

Although such costs did not represent an unjustifiable amount to the survey organisation, it was nevertheless necessary to further justify the necessary pay structure adjustment by providing comparison of both the Oil Community as well as the Non-Oil Community salary data such that an insight into the survey organisation's competitiveness within the survey community labour market rates could be gained. A summary of the analysis of this survey data is revealed in TABLE 25 which allows concise comparison of data analysis on a group-to-group basis. Such analysis further provides an insight into the survey organisations' degree of competitiveness with regard to those organisations forming the Oil Community, which is regarded as being the most important core-group of competitors.

TABLE 25

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

MIDPOINT SYSTEM : 1974

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
1	120	128	- 6,3	128	- 6,3	145	+13,3	+13,3	+20,8
2	160	153	+ 4,6	167	- 4,2	178	+16,3	+ 6,6	+11,3
3	223	211	+ 5,7	218	+ 2,3	218	+ 3,3	0,0	- 2,2
4	285	275	+ 3,6	273	+ 4,4	267	- 2,9	- 2,2	- 6,3
5	322	310	+ 3,9	322	0,0	327	+ 5,4	+ 1,6	+ 1,6
6	363	399	- 9,0	401	- 9,5	401	+ 0,5	0,0	+10,5
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 1 THROUGH 6 :							+ 6,0	+ 3,2	+ 5,6

NOTE:

1. Present structure group-to-group progression rate = 20,63% (Groups 1 through 8).
2. Recommended structure group-to-group progression rate = 22,6% (Groups 1 through 6).

TABLE 25 -- continued

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

MIDPOINT SYSTEM : 1974

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
6	363	399	- 9,0	401	- 9,5	401	+ 0,5	0,0	+10,5
7	411	428	- 4,0	441	- 6,8	436	+ 1,9	- 1,1	+ 6,1
8	446	486	- 8,2	468	- 4,7	473	- 2,8	+ 1,1	+ 6,1
9	486	539	- 9,8	521	- 6,7	514	- 4,6	- 1,3	+ 5,8
10	529	-	-	-	-	558	-	-	+ 5,5
11	576	590	- 2,4	590	- 2,3	606	+ 2,7	+ 2,7	+ 5,2
12	626	-	-	-	-	658	-	-	+ 5,1
13	681	695	- 2,0	709	- 3,9	715	+ 2,9	+ 0,9	+ 5,0
14	742	787	- 5,7	781	- 5,0	776	- 1,4	- 0,6	+ 4,6
15	817	-	-	-	-	843	-	-	+ 3,2
16	901	914	- 1,4	916	- 1,6	916	+ 0,2	0,0	+ 1,7
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 6 THROUGH 16 :							- 0,08	+ 0,21	+ 5,3

NOTE:

1. Present structure group-to-group progression rate = 9,4% (Groups 8 through 18).
2. Recommended structure group-to-group progression rate = 8,61% (Groups 6 through 16).

TABLE 25 -- continued

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

MIDPOINT SYSTEM : 1974

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
16	901	914	- 1,4	916	- 1,6	916	+ 0,2	0,0	+ 1,7
17	993	1 034	- 4,0	1 023	- 2,8	1 030	- 0,4	+ 0,7	+ 3,7
18	1 095	1 074	+ 2,0	1 101	- 0,5	1 157	+ 7,7	+ 5,1	+ 5,7
19	1 206	1 253	- 3,8	1 212	- 0,5	1 301	+ 3,8	+ 7,3	+ 7,9
20	1 370	1 330	+ 3,0	1 436	- 4,6	1 462	+ 9,9	+ 1,8	+ 6,7
21	1 556	1 616	- 2,5	1 605	- 3,1	1 643	+ 1,6	+ 2,4	+ 5,6
22	1 766	1 843	- 4,2	1 895	- 6,8	1 847	+ 0,2	- 2,5	+ 4,6
23	2 005	2 067	- 3,0	2 060	- 2,7	2 076	+ 0,4	+ 0,8	+ 3,5
24	2 277	2 311	- 1,5	2 333	- 2,4	2 333	+ 0,9	0,0	+ 2,5
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 16 THROUGH 24 :							+ 2,7	+ 1,7	+ 4,7

NOTE:

1. Present structure group-to-group progression rate = 12,97% (Groups 18 through 24).
2. Recommended structure group-to-group progression rate = 12,4% (Groups 16 through 24).

THE STRUCTURAL COMPARISON SYSTEM SURVEY : 1974

I. Method and Results

The Structural Comparison System Guide was utilised to process and analyse the same key positions utilised by the Midpoint System, those positions being identified as relevant anchor positions and supportive positions forming the base of the standardisation process.

After the job analysis process had been utilised to describe the selected key positions as carefully as possible, the exact position-to-position comparison bases were discussed at the personal interviews conducted with participating organisations. The survey organisation job evaluation system was utilised to evaluate participating organisation key positions in order to establish exact matches in the form of anchor positions, and also to establish weighted matches in the form of supportive positions, the weightings being estimated in terms of the survey organisation salary group/range size.

The exact positional matches thus established in terms of the survey organisation job evaluation criteria were thus utilised in conjunction with the supportive positions to identify key grades/ranges and supportive grades/ranges. These key grades thus identified those grades/ranges of participating organisations which were regarded as matches of the corresponding survey organisation grades/ranges, and in this way provided the basis for standardisation of participating organisation pay structures according to the survey organisation pay structures.

The Standardisation Base: It was important during personal interviews to establish (1) which participating organisations administered their pay structure according to established ranges, and (2) which participating organisations were willing to cooperate and become involved in the process of standardisation, and thereafter participate in successive structural comparison surveys.

As a result of the above two questions, three of the participating organisations involved in the Midpoint System survey were unable to remain part of the Structural Comparison System survey community.

However, the remaining participating organisations formed a survey community which was large enough to ensure a sample of salary data which was representative of a cross-section of the relevant market. The most important core-groups of the survey community, namely the Oil Community organisations regarded as being the survey organisation's major competitors within the labour market, remained as participants within the Structural Comparison System survey community.

The Structural Comparison System survey community consisted of the following organisations, drawn from the survey organisation's established community:

1. Caltex Oil (S.A.) (Pty) Ltd.
2. Shell Oil South Africa (Pty) Ltd.
3. B.P. Southern Africa (Pty) Ltd.
4. International Business Machines South Africa (Pty) Ltd.
5. Ford Motor Company of South Africa (Pty) Ltd.
6. Total South Africa (Pty) Ltd.
7. Kodak South Africa (Pty) Ltd.
8. Dunlop South Africa Ltd.
9. The South African Breweries Ltd.
10. Unilever South Africa (Pty) Ltd.
11. Mobil Oil Southern Africa (Pty) Ltd.

Note may be made of the fact that data is analysed separately for Shell and B.P., due to the fact that there was a necessity to differentiate between positions in each of the separate B.P. and Shell marketing companies as opposed to those falling under the joint Shell/B.P. Service Company.

The personal interviews with these organisations revealed exact positional matches in the form of anchor positions, plus weighted matches in the form of supportive positions. The TABLE 26 below reveals the titles applicable to the respective participating organisation anchor positions which were established as exact matches with corresponding survey organisation positions through utilisation of the job evaluation process, and which thus provided the basis for identification of anchor positions. Supportive positions are also illustrated in this table and are indicated as such.

TABLE 20
 STRUCTURAL COMPARISON SYSTEM SURVEY COMMUNITY ORGANISATIONS'
 ANCHOR AND SUPPORTIVE POSITIONS : 1974

Survey Organisation Salary Group	Survey Organisation Position Title	Caltex	Shell	BP	IBM	Ford	Total	Kodak	Dunlop	S.A. Breweries	Unilever
1	Gen. Labourer Cleaner/Tea Server Office Messenger	Gen. Labourer Houseman Messenger	Gen. Labourer Tea Server Office Messenger	Gen. Labourer Tea Server Office Messenger	- - -	Labourer - Messenger	Dept. Labourer Canteen Asst. Messenger	- Cleaner General Clerk	Labourer Cleaner/Tea Server Office Messenger	Labourer - -	Gen. Labourer Cleaner/Tea Server Office Messenger
2	F.L. Truck Operator Artisan's Helper Rep. Machine Op.	Mobile Equip. Op. Maint. Asst. Printing Op.	F. L. T. O. Mech. Asst. Rep. Machine Op.	F. L. T. O. Mech. Asst. Rep. Machine Op.	Machine Op. - Printing Mach. Op.	F. L. T. O. Relief Shop Asst. Print Room Op.	F. L. T. O. Mech. Asst. Dupl. Mach. Op.	F. L. T. O. - Rotor Print. Op.	F. L. T. O. Artisan's Helper Machine Op.	F. L. T. O. - Lithographer	F. L. T. O. Artisan's Helper Multilith Op.
3	Chauffeur Clerical Asst. Junior Clerk Key Punch Operator	Driver Clerical Asst. Junior Clerk -	Chauffeur Clerical Asst. Junior Clerk -	Chauffeur Clerical Asst. Junior Clerk -	Driver - Junior Clerk Key Punch Op.	Chauffeur - Accounts Asst. Key Edit Operator	Chauffeur Stores Asst. Junior Clerk Data Typist	Driver Gen. Clerk Acct. Clerk Key Punch Op.	Chauffeur - Junior Clerk Punch Operator	Driver Clerk Junior Clerk Junior Clerk	Chauffeur - Junior Clerk Punch Operator
4	Telex Operator Lab. Tech. I Copy Typist Telephonist	Clerk Cables Lab. Tech. B Typist Telephone Op.	Telex Operator - Copy Typist Telephonist	Telex Operator - Copy Typist Telephonist	Telex Operator - Copy Typist Switchboard Op.	Telex Operator Lab. Technician Secretary "B" Telephone Op.	Telex Operator - Copy Typist Switchboard Op.	- - Shorthand Typist Recep/Telephonist	Telex Operator - Copy Typist H.O. Telephonist	Telex Operator - Copy Typist Telephonist	Telex Operator Lab. Technician Copy Typist Telephonist
5	Senior Steno. Clerk Nursing Sister	Stenographer Clerk Nursing Sister	Stenographer Clerk Nursing Sister	Stenographer Clerk Nursing Sister	Secretary Interm. Clerk -	Secretary "A" Accounts Clerk Industrial Nurse	Typist Clerk -	Secretaries Shipping Clerk -	Snr. Mgrs. Sec. Clerk Ind. Nursing Sister	Stenographer Clerk -	Secretary Clerk Ind. Nursing Sister
6	Senior Comp. Op. Asst. Steno. Lab. Tech. II	Comp. Op. Senior Steno. -	Comp. Op. Magt. Sec. Lab. Tech.	Comp. Op. Magt. Sec. Lab. Tech.	Comp. Op. Senior Sec. -	Snr. Elec. Comp. Op. Director's Sec. -	Comp. Op. Secretary Lab. Tech.	D. P. Equip. Op. Secretary -	Snr. Comp. Op. Director's Sec. -	- Secretary Lab. Tech.	Console Op. Director's Sec. Snr. Lab. Asst.
7	Senior Clerk Chairman's Sec.	Senior Clerk -	Senior Clerk Chairman's Sec.	Senior Clerk Chairman's Sec.	Senior Clerk Exec. Sec. -	- M. D. Secretary	Acc. Asst. M. D. Secretary	- M. D. Secretary	Senior Clerk M. D. Secretary	Senior Clerk -	Senior Clerk Chairman's Sec.
8	Comp. Progr.	Programmer	Comp. Prog.	Comp. Prog.	Jnr. Comp. Prog.	Elec. Comp. Prog.	Programmer	Comp. Prog.	Systems Anal.	Programmer	Comp. Prog.
9	Draughtsman Purch. Asst. Asst. Ledgers Chemist	Snr. Draughtsman Buyer - Chemist	Draughtsman Buyer Sub-Accountant Lab. Supervisor	Draughtsman Buyer Sub-Accountant Lab. Supervisor	- - Asst. Accountant -	Design Draughtsman Buyer B Unit Sup., Acc. Lab. Engineer	Buyer - -	- - -	Design Draughtsman Snr. Buyer Section Leader -	Draughtsman Buyer - Chemist	Draughtsman Buying Clerk Section Head Chemist
10	Emp. Rel. Asst.	Relations Asst.	Personnel Off.	Personnel Off.	-	Personnel Off.	-	-	-	-	Personnel Off.
11	Section Head Ldg. Eng. Asst. Senior Comp. Prog. Warehouse Sup.	Group Acct. Snr. Ops. Asst. Snr. Programmer Stores Supervisor	Acc., Gen. Ledgers - Comp. Prog. Warehouse Sup.	Acc., Gen. Ledgers - Comp. Prog. Warehouse Sup.	Admin. Specialist - Comp. Prog. -	Sup., Gen. Acc. Proj. Eng. A Snr. Comp. Prog. Unit Supervisor	S. H., Accounts Eng. Asst. Chief Prog. -	Accountant - E. D. P. Analyst -	Chief Clerk, Acc. - Snr. Systems Anal. Stores Mgr.	Asst. Acc. - - Warehouse Sup.	Asst. Acc. Constr. Eng. - Stores Mgr.
12	H. O. Emp. Rel. Asst.	Snr. Relations Asst.	Snr. Pers. Off.	Snr. Pers. Off.	Personnel Off.	Snr. Pers. Off.	-	Snr. Pers. Off.	-	-	-

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TABLE 26 -- continued

STRUCTURAL COMPARISON SYSTEM SURVEY COMMUNITY ORGANISATIONS'

ANCHOR AND SUPPORTIVE POSITIONS : 1974

Survey Organisation Salary Group	Survey Organisation Position Title	Caltex	Shell	BP	IBM	Ford	Total	Kodak	Dunlop	S.A. Breweries	Unilever
13	Depot Superint. Office Serv.Mgr. Credit Mgr.	Depot Supt. - Credit Mgr.	Depot Mgr. - Credit Advisor	Depot Mgr. - Credit Advisor	- <u>Gen.Serv.Mgr.</u> -	- Admin.Serv.Sup. Branch Mgr.	Depot Superint. - -	- - -	Office Mgr. - -	- Admin.Sup. Credit Advisor	Dist.Mgr. Office Serv.Mgr. Credit Mgr.
14	Purchasing Mgr. Chief Chemist	<u>Purch.Co-Ord.</u> <u>Lab.Superv.</u>	<u>Materials Mgr.</u> <u>Head of Lab.</u>	<u>Materials Mgr.</u> <u>Head of Lab.</u>	Buyer -	Purch.Agent Prod.Serv.Mgr.	Chief Buyer Chief Chemist	- <u>Chief Chemist</u>	Mgr.Buying Serv. Compounder	- <u>Chief Chemist</u>	Buyer Lab.Mgr.
15	Emp.Rel.Mgr.	Relations Mgr.	Personnel Mgr.	Personnel Mgr.	<u>Personnel Mgr.</u>	<u>Personnel Mgr.</u>	Personnel Mgr.	<u>Personnel Mgr.</u>	<u>Personnel Mgr.</u>	-	-
16	Asst.Controller Pub.Rel.Mgr. Chief Proj.Eng. Ref.Superint.	<u>Sup.Gen.Ledgers</u> Pub.Rel.Mgr. Eng.Supt. <u>Process Unit Sup.</u>	<u>Financial Acct.</u> Trade Rel.Advisor <u>Head, Project Eng.</u> Plant Mgr.	<u>Financial Acct.</u> Trade Rel.Advisor <u>Head, Proj.Eng.</u> Plant Mgr.	Acc.Mgr. <u>Comm.Mgr.</u> - -	Acc.Mgr. Press Rel.Officer Fac.Eng.Mgr. Prod.Mgr.	Acc.Dev.Mgr. P.R.Officer - -	<u>Acc.Supervisor</u> - - -	Accountant - - Prod.Mgr.	<u>Accountant</u> - - Prod.Mgr.	<u>Financial Acct.</u> - <u>Proj.Eng.</u> -
17	G.T. Sales Mgr. Treasurer Chief Maint.Eng.	- Fin.Plan.Mgr. Maint.Supt.	Mktg.Advisor Treasurer Head Civil Eng.	Mkt.Dev.Advisor Treasurer Head Civil Eng.	- <u>Treasury Serv.Mgr.</u> -	- Treasury Mgr. Mgr.Plant Eng.	- <u>Treasury Mgr.</u> -	- <u>Treasurer</u> -	- <u>Treasurer Mgr.</u> <u>Chief Engineer</u>	- - -	<u>Sales Mgr.</u> - <u>Works Eng.</u>
18	Chief Ops.Eng. Secretary Tech.Serv.Mgr.	<u>Asst.Div.Mgr.</u> <u>Admin.Mgr.</u> <u>Prod.Eng.Mgr.</u>	<u>Eng.Mgr.</u> <u>Co.Secretary</u> -	<u>Eng.Mgr.</u> <u>Co.Secretary</u> -	- <u>Legal Advisor</u> -	- - <u>Prod.Qual.Mgr.</u>	<u>Chief Eng., Constr.</u> - -	- <u>Secretary</u> -	- Secretary Tech.Mgr.	- <u>Legal Consultant</u> <u>Consult.,Process</u>	- <u>Co.Secretary</u> -
19	Resale Sales Mgr. Mechan.Mgr.	Ret.Sales Mgr. Asst.Mgr.Eng.	Reg.Retail Mgr. Chief Eng.	Reg.Retail Mgr. Chief Eng.	<u>D.P.Mkt.Mgr.</u> -	Reg.Mgr. -	Reg.Ret.Sales Mgr. -	<u>Sales Mgr.</u> -	- -	Mkt.Mgr. -	<u>Sales Mgr.</u> Chief Eng.
20	Asst.Acc.Mgr. Res.Sales Mgr.	- <u>Retail Sales Mgr.</u>	<u>Finance Mgr.</u> <u>Ret.Mkt.Dir.</u>	<u>Finance Mgr.</u> <u>Ret.Mkt.Dir.</u>	<u>Fin.Ops.Mgr.</u> Mgr.Plan. & Cont.	Controller <u>Gen.Mgr.</u>	Fin.Mgr. Gen.Ret.Sales Mgr.	<u>Acc.Mgr.</u> -	<u>Controller</u> <u>Sales Mgr.</u>	Div.Fin.Cont. Gen.Mgr.	Group Acc. Mkt.Dir.
21	Ops.Mgr. Regional Mgr.	Ops.Div.Mgr. Branch Mgr.	Distr.Dir. -	Distr.Dir. -	<u>Gen.Ops.Mgr.</u> -	<u>Supply Mgr.</u> -	Ops.Mgr. -	- <u>Reg.Mgr.</u>	- <u>Gen.Mgr.</u>	- Gen.Mgr.	<u>Mging.Dir.</u> Mging Dir.
22	Acc. & Fin.Mgr.	<u>Acc. & Fin.Mgr.</u>	<u>Fin. & Serv.Dir.</u>	<u>Fin. & Serv.Dir.</u>	<u>Fin.Controller</u>	Secr./Treasurer	-	<u>Admin.Direc.</u>	<u>Fin.Director</u>	Group Secr./Treas.	<u>Fin.Director</u>
23	Manufacturing Mgr.	Ref.Mgr.	Ref.Mgr.	Ref.Mgr.	<u>Area Ops.Mgr.</u>	Gen.Man.Mgr.	-	<u>Gen.Works Mgr.</u>	Works Director	-	<u>Mging.Dir.</u>
24	Marketing Mgr.	<u>Gen.Mgr.</u>	<u>Mging.Dir.</u>	<u>Mging.Dir.</u>	<u>Sales Mgr.</u>	<u>Gen.Sales Dir.</u>	Mktg.Mgr.	<u>Gen.Mkt.Mgr.</u>	<u>Ops.Dir.</u>	<u>Gen.Mgr.</u>	<u>Mktg.Dir.</u>

NOTE:

- All positions which have been underlined are exact matches of corresponding survey organisation positions, and are thus regarded as being anchor positions. All other positions are supportive positions.
- Additional survey organisation positions have been incorporated for structural standardisation purposes:

Group 10 - Employee Relations Assistant
Group 12 - Employee Relations Assistant, Head Office
Group 15 - Employee Relations Manager.

The organisations forming the Structural Comparison System community were further required to supply copies of their established salary range structures, revealing minimum, midpoint and maximum salary values for each range, as well as the number of ranges applicable to respective pay structures. These ranges were utilised in conjunction with the anchor and supportive positions, not only to standardise structures on a one-time basis in terms of number of applicable ranges, but also to supply relevant midpoint salary data in monetary terms such that a competitive average community pay structure could be calculated and analysed. To ensure the collation of relevant midpoint values, therefore, it was necessary to ensure that formal salary range values supplied were applicable as at May 1974. These participating organisation formal salary range values are illustrated in the form of pay structures for each organisation, effective May 1974, in Appendix III.

The Standardisation Process: Through utilisation of the exact positional matches established and revealed as anchor positions in TABLE 26, as well as the weighted positional matches as supportive positions, the identification of key labour grades and supportive labour grades was completed. This identification of such grades thus supplied the necessary standardisation of participating organisation structures, as revealed in TABLE 27. In short then, the positions revealed as anchor and supportive positions in TABLE 26 automatically identify key labour grades and supportive position key labour grades as those grades in the organisational hierarchy within which they are included. These anchor positions are regarded as being the ideal representatives of the labour grades within which they fall, in terms of job evaluation comparability criteria, and in this way are ideal representatives of the group of positions incorporated within such grades. Similarly, supportive positions, once weighted according to necessary factors, may represent those labour grades within which they fall. In this way then the position titles of anchor positions in TABLE 26 were converted into respective participating organisation labour grade numbers as applicable to each corresponding survey organisation labour grade number, and thus revealed in TABLE 27.

Compensation Data Analysis: The standardised labour grade hierarchies as illustrated in TABLE 27 provide the basis for an analysis of the relevant midpoints as applicable to the key labour

TABLE 27

PARTICIPATING ORGANISATION STRUCTURAL STANDARDISATION : KEY LABOUR GRADE IDENTIFICATION 1974

SURVEY ORGANISATION GRADE NUMBER	ORG. A	ORG. B	ORG. C	ORG. D	ORG. E	ORG. F	ORG. G	ORG. H	ORG. I	ORG. J
1	1	15/14	15/14	-	-	15/16	22	17/18	1	W1/W2/W3
2	2	13	13	-	-	14	23	16	3	S1/S2/W5/W6
3	3	12/11	12/11	11	1	12/13	24	14/15	5/A	53/W6
4	4	10	10	12	3	10/11	25	13/14	6/B	54/W8
5	5	9	9	14	4	9	-	13	-	55
6	6	8	8	16	5	8	27	-	7/C	56
7	-	-	-	17	6	7	28	12	8/D	-
8	7	7	7	18	-	6	39	10/11	E	57
9	-	-	-	19	7	-	-	10	F	-
10	8	6	6	-	-	-	-	-	-	15
11	-	-	-	20	8	5	40	9	G	-
12	9	5	5	21	-	-	41	-	-	-
13	-	-	-	51	9	4	-	8	H	21
14	10	4	4	52	-	-	42	-	I	22
15	-	-	-	53	10	-	43	7	-	-
16	11	3	3	54	-	-	44	-	J	23
17	-	-	-	55	-	3	45	6	-	24
18	12	2	2	56	12	2	46	-	K	25
19	-	-	-	57	-	-	47	-	-	26
20	13	1	1	58	13	* 2(10%L)	48	4	* K+3(10%L)	27
21	-	-	-	59	14	* 2(13%L)	49	3	-	28
22	14	A	A	60	-	-	50	2	K+2	29
23	-	-	-	61	-	-	51	-	-	30
24	15	B	B	62	16	* 1(13%L)	53	1	* K+1(20%L)	31

- NOTE: 1. Asterisks indicate supportive position key grades (supportive grades). Percentages in brackets behind such key grade numbers indicate degree of "lightness" (L) or "heaviness" (H) of participating organisation supportive positions when evaluated against the corresponding survey organisation key positions by utilising job evaluation weighting criteria.
2. Those participating organisation key grades which are indicated as having more than one exact match for the corresponding survey organisation key grade have been incorporated as double key grades as indicated.
3. Participating organisations have been allotted alphabetical codes to ensure confidentiality.

grades (anchor points). These relevant anchor points of key labour grades were drafted from the respectation established salary range structures, as illustrated in Appendix III, for each participating organisation onto tables similar to Exhibit G, Appendix I, in the form of a tabulation of total compensation midpoint data, as illustrated by TABLE 28.

Important to note is the fact that the total compensation figures for each organisation consisted of base salary range midpoints adjusted by any relevant bonus factors. In this way, should a participating organisation award an annual Christmas Bonus which is equivalent to one month's salary, then the salary range midpoints are adjusted by a 8,33% factor. Thus, figures in TABLE 28 are salary range midpoints (anchor points) drafted from the relevant salary range structures illustrated in Appendix III, but adjusted according to bonus factors where necessary. The exclusion or inclusion of bonus factors in actual established salary range structures are indicated where applicable in Appendix III.

The tabulation of the total compensation midpoint data, as drafted from participating organisation salary range structures according to the standardised key labour grade structures as indicated in TABLE 27, is illustrated in TABLE 28. This table reveals the deletion of inconsistent supportive position data, plus the calculated Competitive Average Total Compensation Midpoint data for each survey organisation salary group. Although supportive position compensation data has been included alongside anchor position compensation data, it must once again be stressed that such data is only useful in a supportive role, and cannot serve to identify key labour grades as such. Thus, it may be noted in TABLE 28 that only anchor position compensation data (identified as such), which identifies respective key labour grades in TABLE 27, is taken into account when establishing the average key range midpoints, and when calculating individual salary group competitive average total compensation midpoint data.

The Competitive Average Total Compensation Midpoints thus obtained were plotted on semi-log graph paper, a line of best fit was established from this scattergram, and finally a new set of minimum midpoint and maximum salary range values were calculated according to the Structural Comparison Guide, in order to establish a competitive pay structure. This line of best fit, or community trend line, is illustrated in FIGURE 7, while the recommended pay structure values are revealed in TABLE 29.

TABLE 28

TABULATION OF TOTAL COMPENSATION MIDPOINT DATA :

STRUCTURAL COMPARISON : 1974

Salary Group	Position Title	Competitive Total Compensation Midpoint : Monthly Base (Rand)										Competitive Average Total Compensation Midpoint (Salary Group)
		Organisation A	Organisation B	Organisation C	Organisation D	Organisation E	Organisation F	Organisation G	Organisation H	Organisation I	Organisation J	
1	Gen. Labourer	157	151	151	-	-	118	-	145	-	-	145
	Office Messenger	157	151	151	-	-	130	149	145	-	-	
	Cleaner/Tea Server	157	151	151	-	-	118	149	145	-	-	
	KEY RANGE MIDPOINT	157	151	151	-	-	118	149	145	-	-	
2	Fork Lift Truck Op.	184	181	181	178	-	125	174	184	-	189	177
	Artisan's Helper	205	181	181	-	-	137	-	184	-	209	
	Rep. Mach. Op.	184	200	200	195	-	125	174	184	-	209	
	KEY RANGE MIDPOINT	184	181	181	-	-	125	174	184	-	209	
3	Chauffeur	196	197	197	235	-	196	211	238	212	249	221
	Clerical Asst.	196	217	217	-	-	179	-	-	234	-	
	Junior Clerk	217	217	217	235	-	196	211	238	212	249	
	Key Punch Op.	-	-	-	235	-	179	253	263	-	274	
	KEY RANGE MIDPOINT	217	217	217	235	-	196	211	238	212	249	
4	Telex Operator	260	260	260	257	-	273	-	287	271	287	267
	Lab. Tech. I	260	-	-	-	-	-	-	-	-	287	
	Copy Typist	260	260	260	257	-	273	247	287	271	197	
	Telephonist	260	260	260	257	-	301	205	287	271	260	
	KEY RANGE MIDPOINT	260	260	260	257	-	273	247	287	271	287	
5	Senior Steno.	346	294	294	310	-	275	288	344	325	273	312
	Clerk	314	294	294	310	-	332	288	312	298	330	
	Nursing Sister	314	267	267	-	-	-	-	344	-	330	
	KEY RANGE MIDPOINT	314	294	294	310	-	332	-	312	-	330	
6	Sen. Comp. Op.	421	401	401	430	-	451	363	301	-	364	401
	Assigned Steno.	349	401	401	390	-	409	401	329	379	402	
	Lab. Tech. II	-	401	401	-	-	371	-	-	379	402	
	KEY RANGE MIDPOINT	421	401	401	390	-	409	401	-	379	402	
7	Senior Clerk	452	449	449	420	-	476	-	435	400	416	430
	Chairman's Sec.	-	449	449	420	-	476	420	435	-	416	
	KEY RANGE MIDPOINT	-	-	-	420	-	476	420	435	400	-	
8	Computer Prog.	474	470	470	455	-	517	487	480	422	430	468
	KEY RANGE MIDPOINT	474	470	470	455	-	517	487	480	422	430	

TABLE 28 -- continued
 TABULATION OF TOTAL COMPENSATION MIDPOINT DATA :
 STRUCTURAL COMPARISON : 1974

Salary Group	Position Title	Competitive Total Compensation Midpoint : Monthly Base (Rand)										Competitive Average Total Compensation Midpoint (Salary Group)
		Organisation A	Organisation B	Organisation C	Organisation D	Organisation E	Organisation F	Organisation G	Organisation H	Organisation H	Organisation J	
9	Draughtsman	519	519	519	-	-	-	-	534	490	478	500
	Purchasing Asst.	-	519	519	-	-	566	-	510	490	499	
	Asst.Ledgers	-	495	495	500	-	-	-	510	-	499	
	Chemist	519	495	495	-	-	-	-	-	490	525	
	KEY RANGE MIDPOINT	-	-	-	500	-	-	-	510	490	-	
10	Empl.Rel.Asst.	571	569	569	-	-	-	-	-	-	-	570
	KEY RANGE MIDPOINT	571	569	569	-	-	-	-	-	-	-	
11	Eng.Asst.	606	569	569	579	-	594	614	604	623	573	581
	Sec.Head Ledgers	579	-	-	-	-	594	-	-	-	547	
	Senior Comp.Prog.	579	624	624	579	-	594	560	552	-	-	
	Warehouse Sup.	579	652	652	-	-	-	-	604	568	573	
	KEY RANGE MIDPOINT	-	-	-	579	-	594	560	604	568	-	
12	H.O.Emp.Rel.Asst.	689	689	689	616	-	-	641	-	-	-	665
	KEY RANGE MIDPOINT	689	689	689	616	-	-	641	-	-	-	
13	Depot Superint.	789	721	721	-	-	718	-	716	-	797	720
	Office Serv.Mgr.	-	-	-	689	-	-	-	-	682	797	
	Credit Mgr.	754	789	789	-	-	-	-	-	682	834	
	KEY RANGE MIDPOINT	-	-	-	689	-	718	-	716	682	797	
14	Purchasing Mgr.	825	828	828	772	-	788	-	785	-	909	816
	Chief Chemist	825	828	828	-	-	859	737	822	812	828	
	KEY RANGE MIDPOINT	825	828	828	772	-	-	737	-	812	909	
15	Emp.Rel.Mgr.	903	908	908	872	-	864	844	846	-	-	854
	KEY RANGE MIDPOINT	-	-	-	872	-	-	844	846	-	-	
16	Asst.Controller	1 000	993	993	1 037	-	905	867	969	953	1 017	988
	Pub.Rel.Mgr.	955	905	905	990	-	905	-	-	-	-	
	Chief Proj.Eng.	914	993	993	-	-	-	-	-	-	1 017	
	Refinery Supt.	1 000	905	905	-	-	-	-	928	910	-	
	KEY RANGE MIDPOINT	1 000	993	993	990	-	-	867	-	953	1 017	
17	Gen.Sales Mgr.	-	1 089	1 089	-	-	-	-	-	-	1 142	1 096
	Treasurer	1 000	1 040	1 040	1 122	-	1 083	1 113	1 005	-	-	
	Chief Maint.Eng.	1 097	1 137	1 137	-	-	-	-	1 005	-	1 196	
	KEY RANGE MIDPOINT	-	-	-	1 122	-	-	1 113	1 005	-	1 142	

TABLE 28 -- continued
 TABULATION OF TOTAL COMPENSATION MIDPOINT DATA :
 STRUCTURAL COMPARISON : 1974

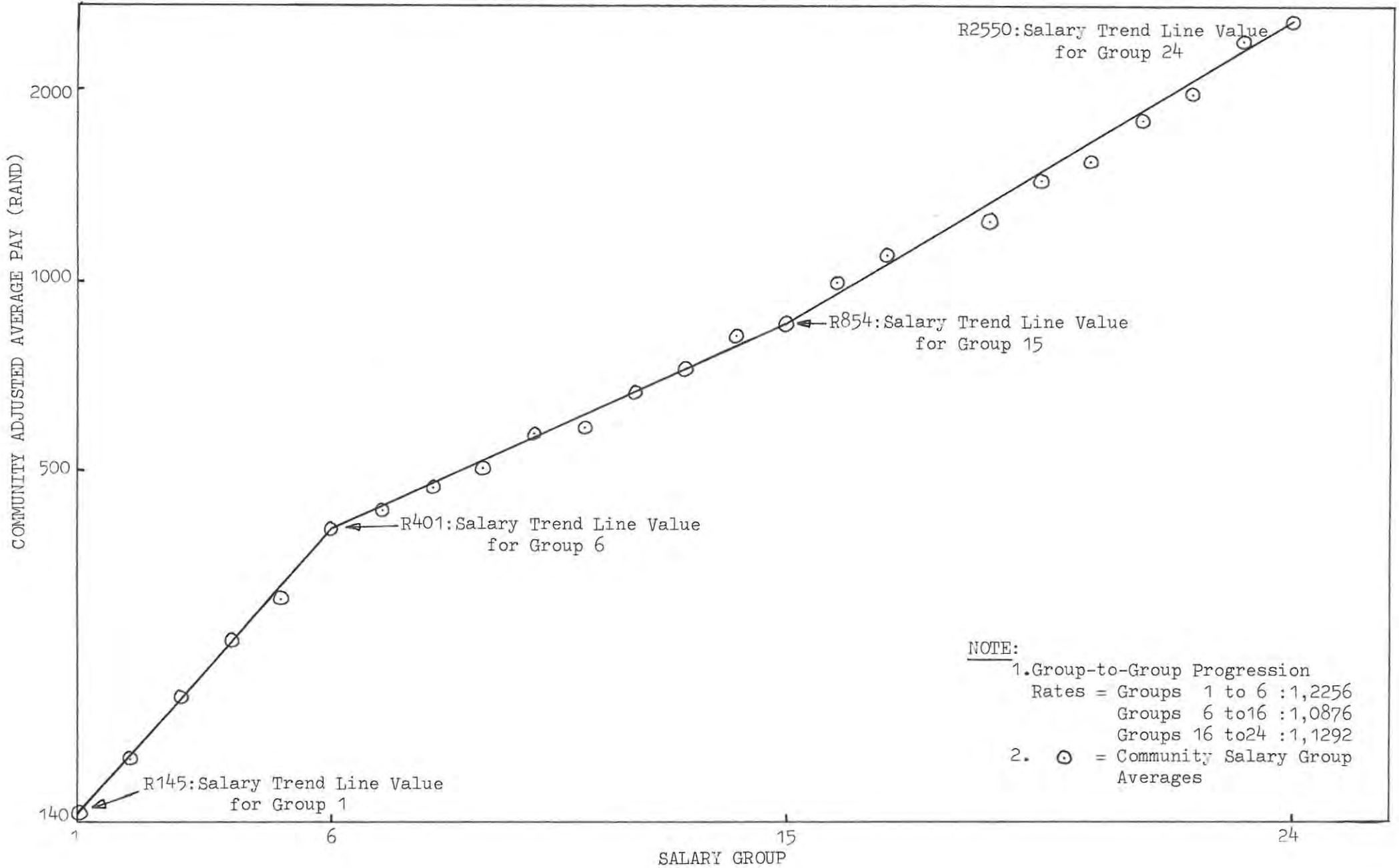
Salary Group	Position Title	Competitive Total Compensation Midpoint : Monthly Base (Rand)										Competitive Average Total Compensation Midpoint (Salary Group)
		Organisation A	Organisation B	Organisation C	Organisation D	Organisation E	Organisation F	Organisation G	Organisation H	Organisation I	Organisation J	
18	Chief Ops.Eng.	1 225	1 237	1 237	-	-	1 188	-	-	-	-	1 238
	Secretary	1 225	1 237	1 237	1 254	-	-	1 275	1 052	1 146	1 291	
	Tech.Serv.Mgr.	1 225	-	-	-	-	-	-	1 101	1 146	-	
	KEY RANGE MIDPOINT	1 225	1 237	1 237	1 254	-	-	1 275	-	1 146	1 291	
19	Resale Sales Mgr.	1 474	1 397	1 397	1 366	-	-	1 464	-	1 295	1 450	1 427
	Mech.Mgr.	1 384	1 397	1 397	-	-	-	-	-	-	1 544	
	KEY RANGE MIDPOINT	-	-	-	1 366	-	-	1 464	-	-	1 450	
20	Asst.Acc.Mgr.	-	1 516	1 516	1 534	-	-	1 681	1 411	1 525	1 534	1 532
	Resale Sales Mgr. (Cape Town)	1 530	1 516	1 516	1 358	-	-	-	1 411	1 432	1 634	
	KEY RANGE MIDPOINT	1 530	1 516	1 516	1 534	-	-	1 681	1 411	1 432	1 634	
21	Operations Mgr.	1 728	1 516	1 516	1 757	-	-	-	-	-	1 833	1 794
	Regional Mgr.	1 841	-	-	-	-	-	1 930	1 655	1 618	1 623	
	KEY RANGE MIDPOINT	-	-	-	1 757	-	-	1 930	1 655	-	1 833	
22	Acc. and Fin.Mgr.	1 915	1 963	1 963	2 012	-	-	2 216	1 961	1 628	2 067	1 966
	KEY RANGE MIDPOINT	1 915	1 963	1 963	2 012	-	-	2 216	1 961	-	2 067	
23	Manufacturing Mgr.	2 031	2 361	2 361	2 304	-	-	2 544	2 318	-	2 325	2 391
	KEY RANGE MIDPOINT	-	-	-	2 304	-	-	2 544	-	-	2 325	
24	Marketing Mgr.	2 393	2 453	2 453	2 639	-	-	2 921	2 318	2 605	2 616	2 550
	KEY RANGE MIDPOINT	2 393	2 453	2 453	2 639	-	-	2 921	2 318	2 605	2 616	

NOTE:

1. Total compensation midpoint data for those positions regarded as being anchor positions, and thus identifying midpoints applicable to key labour grades, is identifiable by those individual survey position figures which are equal to the key range midpoint figures.
2. Organisation D has annual bonus factor included in salary ranges.
3. Organisation C pays bonus of two month's salary to employees with over five years of service, and one month's salary to employees with over one year of service.
4. All other organisations pay Annual Christmas Bonuses of one month's salary.
5. All such bonus factors have been taken into consideration in the above figures.
6. Figures for Organisation E have been excluded on request.

FIGURE 7

COMMUNITY SALARY TREND LINE: STRUCTURAL COMPARISON SYSTEM: 1974



The following tables allow a comparison of the recommended Structural Comparison System midpoints with various other relevant data in order to provide an insight into variance of midpoints.

TABLE 30

COMPARISON OF RECOMMENDED PAY STRUCTURE TO PRESENT SURVEY
ORGANISATION PAY STRUCTURE : MONTHLY BASE : STRUCTURAL COMPARISON 1974

SALARY GROUP	RECOMMENDED STRUCTURE (MIDPOINTS : RAND)	PRESENT STRUCTURE (MIDPOINTS : RAND)	% RECOMMENDED VARIES FROM PRESENT
1	145	120	+ 20,8
2	180	160	+ 12,5
3	220	223	- 1,4
4	270	285	- 5,3
5	330	322	+ 2,5
6	405	363	+ 11,6
7	440	411	+ 7,1
8	475	446	+ 6,5
9	518	486	+ 6,6
10	565	529	+ 6,8
11	610	576	+ 5,9
12	665	626	+ 6,2
13	722	681	+ 6,0
14	785	742	+ 5,8
15	855	817	+ 4,7
16	965	901	+ 7,1
17	1 090	993	+ 9,8
18	1 230	1 157	+ 6,3
19	1 390	1 301	+ 6,8
20	1 570	1 462	+ 7,4
21	1 775	1 643	+ 8,0
22	2 000	1 847	+ 8,3
23	2 260	2 076	+ 8,9
24	2 550	2 333	+ 9,3
AVERAGE VARIANCE			= + 7,01

NOTE:

1. Average Variance = Groups 1 to 6 : + 6,80%
Groups 6 to 15 : + 6,7%
Groups 15 to 24 : + 7,7%
2. Recommended structure group-to-group
progression rates = Groups 1 to 6 : 1,2256)
Groups 6 to 15 : 1,0876) *
Groups 15 to 24 : 1,1292)
3. Present structure group-to-group
progression rates = Groups 1 to 8 : 1,2063
Groups 8 to 18 : 1,0940
Groups 18 to 24 : 1,1297

* (Before midpoint adjustments to the nearest R5)

TABLE 31

COMPARISON OF RECOMMENDED PAY STRUCTURE TO COMPETITIVE AVERAGE TOTAL
COMPENSATION MIDPOINTS : MONTHLY BASE : STRUCTURAL COMPARISON 1974

SALARY GROUP	RECOMMENDED STRUCTURE (MIDPOINTS : RAND)	COMPETITIVE AVERAGE TOTAL COMPENSATION (MIDPOINTS : RAND)	% RECOMMENDED MIDPOINT VARIES FROM COMPETITIVE AVERAGE TOTAL COMPENSATION MIDPOINT
1	145	145	0,0
2	180	177	+ 1,7
3	220	221	- 0,5
4	270	267	+ 1,1
5	330	312	+ 5,8
6	405	401	+ 1,0
7	440	430	+ 2,3
8	475	468	+ 1,5
9	518	500	+ 3,6
10	565	570	- 0,9
11	610	581	+ 5,0
12	665	665	0,0
13	722	720	+ 0,3
14	785	816	- 3,8
15	855	854	+ 0,1
16	965	988	- 2,3
17	1 090	1 096	- 0,6
18	1 230	1 238	- 0,7
19	1 390	1 427	- 2,6
20	1 570	1 532	+ 2,5
21	1 775	1 794	- 1,1
22	2 000	1 966	+ 1,7
23	2 260	2 391	- 5,5
24	2 550	2 550	0,0
AVERAGE VARIANCE			= + 0,36

NOTE:

Group-to-group progression rates = Groups 1 to 6 : 1,2256)
 Groups 6 to 15 : 1,0876) *
 Groups 15 to 24 : 1,1292)

* (Before midpoint adjustments to the nearest R5)

II. Discussion

Those key positions selected for survey purposes through use of the job analysis procedure outlined in the Structural Comparison Guide provided a significantly broad enough base for the standardisation process, as revealed by the number of exact comparisons identified as anchor positions in TABLE 26. However, due to the fact that the utilisation of this process, plus the utilisation of the proposed job evaluation

system, revealed that certain survey organisation survey positions required formal re-evaluations they were consistently evaluated as being more applicable to either one salary group higher or one salary group lower than the existing allocated group, it was necessary to include a number of key positions specifically for the purposes of standardising structures. These positions were included in order to prevent, as far as was possible, a complete lack of both supportive and anchor position comparisons within certain salary groups or labour grades, a factor which may have reduced the reliability of the standardisation process. As illustrated in TABLE 26, although there are certain survey organisation salary group key positions which do not have comparable matches either in the form of anchor positions or supportive positions for corresponding participating organisation salary groups, and thus cause a lack of a comparison base for individual salary groups, these instances are isolated and do not necessarily reduce the level of reliability. Generally, it may be noted that the majority of salary groups of participating organisations have either one or more anchor positions or supportive positions which form comparable matches with corresponding survey organisation positions.

The point to emphasise is that these positions were included in the Structural Comparison System survey, not to prevent possible lack of comparison between occasional survey organisation and participating organisation salary groups, but rather to prevent a lack of comparison between specific survey organisation salary groups and the complete range of participating organisation salary groups.

The illustrated structural standardisation in terms of salary group/labour grade numbers (TABLE 27) reveals that certain supportive positions have been identified as supportive key labour grades for Organisations F and I, while the remainder of the salary groups indicated have been identified as key labour grades. These supportive key labour grades have been incorporated due to the fact that these particular organisations did not have anchor positions at the upper management and executive levels. Thus, these supportive grades have been identified with corresponding adjustment factors included. However, it must be mentioned that these grades were utilised for comparison purposes only, and their corresponding adjusted total compensation data was not taken into consideration when competitive average total compensation midpoints were calculated for TABLE 28.

The data for Organisation E has been excluded from TABLE 28 due to the fact that such organisation did not wish to have its salary range data adjusted and included for analysis purposes. However, formal salary ranges were supplied by this organisation and this allowed a structural standardisation to be completed, as illustrated in TABLE 27. Although the exclusion of midpoint data relevant to Organisation E salary ranges narrowed the survey community base, the actual data base was considered broad enough to warrant reliable results. In order to test the effect of such exclusion, the competitive total compensation midpoint data for Organisation E was included in a separate data analysis which revealed that, on the average, the community competitive average total compensation midpoints thus calculated were only affected by +0,08%, the highest percentage for any particular salary group being +0,2%.

The group-to-group progression rates calculated from the community trend line established by plotting the community competitive average total compensation midpoints, as illustrated in FIGURE 7, reveal that the recommended pay structure varied from the existing pay structure by an overall average of 7,01%. These group-to-group progression rates are revealed in the TABLE 32 below.

TABLE 32
POST SURVEY RECOMMENDED GROUP-TO-GROUP PROGRESSION RATES : STRUCTURAL
COMPARISON SYSTEM : 1974

SALARY GROUP	CUT OFF VALUES (RAND)	GROUP-TO-GROUP PROGRESSION RATE
1	145)	
6	401)	1,2256
6	401)	
15	854)	1,0876
15	854)	
24	2 550)	1,1292

NOTE:

These progression rates are applicable to trend line values prior to midpoint adjustments to the nearest R5.

The actual costs that would have been involved should the survey organisation have decided to implement the recommended structure as based on the Structural Comparison System survey results, are revealed in TABLE 33. An overall comparison basis is provided in TABLE 34.

TABLE 33

COSTS OF IMPLEMENTING RECOMMENDED STRUCTURE : STRUCTURAL COMPARISON 1974

SALARY GROUP	NO. OF EMPLOYEES IN SALARY GROUP	POTENTIAL COST BASED ON CHANGE IN MIDPOINT (RAND)	NO. OF SALARIES BELOW RECOMMENDED MINIMUM	COST TO ADJUST SALARIES TO RECOMMENDED MINIMUM (RAND)
1	548	13 643	85	588
2	285	5 700	22	152
3	107	-	1	5
4	354	-	1	14
5	323	2 579	1	20
6	132	5 544	3	50
7	264	7 660	40	1 149
8	189	5 479	8	178
9	79	2 526	2	31
10	234	8 430	7	289
11	46	1 563	-	-
12	62	2 418	4	109
13	80	3 280	2	61
14	52	3 536	-	-
15	59	2 242	1	70
16	18	1 152	-	-
17	14	1 358	-	-
18	11	803	-	-
19	7	623	-	-
20	7	756	-	-
21	3	396	-	-
22	1	153	-	-
23	2	368	-	-
24	1	217	-	-
TOTAL	2 878	70 426	177	2 716

TABLE 34

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON SYSTEM : 1974

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
1	120	145	-13,8	145	-13,8	145	0,0	0,0	+20,8
2	160	168	- 4,8	177	- 9,6	180	+ 7,1	+ 1,7	+12,5
3	223	212	+ 5,2	221	+ 0,9	220	+ 3,8	- 0,5	- 1,4
4	285	263	+ 8,4	267	+ 6,7	270	+ 2,7	+ 1,1	- 5,3
5	322	309	+ 4,2	312	+ 3,2	330	+ 6,8	+ 5,8	+ 2,5
6	363	408	-11,0	401	- 9,5	405	- 0,7	+ 1,0	+11,6
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 1 THROUGH 6 :							+ 3,3	+ 1,5	+ 6,8

NOTE:

1. Present structure group-to-group progression rate = 20,6% (Groups 1 through 8).
2. Recommended structure group-to-group progression rate = 22,5% (Groups 1 through 6, before adjustments to nearest R5).

TABLE 34 - - continued

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON SYSTEM : 1974

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
6	363	408	-11,0	401	- 9,5	405	- 0,7	+ 1,0	+11,6
7	411	476	-13,7	430	- 4,4	440	- 9,7	+ 2,3	+ 7,1
8	446	477	- 7,0	468	- 4,7	475	- 0,4	+ 1,5	+ 6,5
9	486	-	-	500	- 2,8	518	-	+ 3,6	+ 6,6
10	529	570	- 7,2	570	- 7,2	565	- 0,9	- 0,9	+ 6,8
11	576	594	- 3,1	581	- 0,9	610	+ 2,7	+ 5,0	+ 5,9
12	626	689	- 9,1	665	- 5,9	665	- 3,5	0,0	+ 6,2
13	681	718	- 5,2	720	- 5,4	722	+ 0,6	+ 0,3	+ 6,0
14	742	827	-10,2	816	- 9,1	785	- 5,1	- 3,8	+ 5,8
15	817	-	-	854	- 4,3	855	-	+ 0,1	+ 4,7
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 6 THROUGH 15 :							- 2,1	+ 0,9	+ 6,7

NOTE:

1. Present structure group-to-group progression rate = 9,4% (Groups 8 through 18).
2. Recommended structure group-to-group progression rate = 8,76% (Groups 6 through 15, before adjustments to nearest R5).

TABLE 34 -- continued

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON SYSTEM : 1974

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
15	817	-	-	854	- 4,3	855	-	+ 0,1	+ 4,7
16	901	996	- 9,5	988	- 8,8	965	- 3,1	- 2,3	+ 7,1
17	993	-	-	1 096	- 9,4	1 090	-	- 0,6	+ 9,8
18	1 095	1 233	-11,2	1 238	-11,6	1 230	- 0,2	- 0,7	+ 6,3
19	1 206	-	-	1 427	-15,5	1 390	-	- 2,6	+ 6,8
20	1 370	1 521	- 9,9	1 532	-10,6	1 570	+ 3,2	+ 2,5	+ 7,4
21	1 556	-	-	1 794	-13,3	1 775	-	- 1,1	+ 8,0
22	1 766	1 947	- 9,3	1 966	-10,2	2 000	+ 2,7	+ 1,7	+ 8,3
23	2 005	-	-	2 391	-16,1	2 260	-	- 5,5	+ 8,9
24	2 277	2 433	- 6,4	2 550	-10,7	2 550	+ 4,8	0,0	+ 9,3
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 15 THROUGH 24 :							+ 1,5	- 0,9	+ 7,7

NOTE:

1. Present structure group-to-group progression rate = 12,97% (Groups 18 through 24).
2. Recommended structure group-to-group progression rate = 12,92% (Groups 15 through 24, before adjustments to nearest R5).

A COMPARISON OF THE MIDPOINT SYSTEM RESULTS AND THE
STRUCTURAL COMPARISON SYSTEM RESULTS : 1974 SURVEY

I. Method of Comparison

Numerous comparisons may be made between various data bases as established by utilising the two systems. However, in order to provide the most meaningful comparison of those statistics regarded as being most important in the calculations of the two recommended pay structures, an overall comparison basis has been provided in the form of TABLES 25 and 34. The relevant statistics and comparisons thus compiled are revealed in TABLE 35.

A graphical representation of the trend lines established through calculation of competitive average total compensation midpoints for the respective systems has also been included and is illustrated by FIGURE 8. Mention must be made of the fact that this graph represents a comparison of actual trend lines, rather than midpoint structures representing recommended structures as derived from such trend line values. This trend line comparison is necessary due to the fact that actual trend line values are only utilised as a base for the calculation of recommended structure midpoint values in the Structural Comparison System Guide (as illustrated in Section VII of Phase IV, Chapter VII). Thus, due to the fact that the Midpoint System trend line values have not been adjusted along similar lines, and because trend line values may be regarded as being the closest representatives of the actual survey community competitive average total compensation midpoints, it is necessary that a graphical comparison be made at this level. A graphical representation of the actual recommended structure midpoints has not been provided, as adjusted Structural Comparison System recommended midpoints vary only slightly from the actual trend line values, which would have only a minor effect on the graphical representation of FIGURE 8, as the Midpoint System recommended midpoints do not vary from the actual trend line values at all.

II. Discussion

The data analysis according to the Structural Comparison System Guide has resulted in a recommended pay structure with midpoints which vary, on the overall average, from the Midpoint System recommended pay structure midpoints by +3.3%. However, closer scrutiny of the actual

TABLE 35

COMPARISON OF TREND LINE VALUES, RECOMMENDED STRUCTURE MIDPOINTS,
OIL COMMUNITY AVERAGES AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON vs. MIDPOINT SYSTEMS : 1974

Salary Group	Midpoint System Trend Line Values (Rand)	Struc. Comp. Trend Line Values (Rand)	Struc. Comp. Trend Line Values compared to Midpoint Trend Line Values (% Deviation)	Midpoint System Midpoints (Rand)	Struc. Comp. System Midpoints (Rand)	Struc. Comp. Midpoints compared to Midpoint Midpoints (% Deviation)	Midpoint System Oil Community Averages (Rand)	Struc. Comp. System Oil Community Averages (Rand)	Struc. Comp. Oil Community Averages compared to Midpoint Oil Community Averages (% Deviation)	Midpoint System Total Community Averages (Rand)	Struc. Comp. System Total Community Averages (Rand)	Struc. Comp. Total Community Averages compared to Midpoint Total Community Averages (% Deviation)
1	145	145	0,0	145	145	0,0	128	145	+13,3	128	145	+13,3
2	178	178	0,0	178	180	+ 1,1	153	168	+ 9,8	167	177	+ 6,0
3	218	218	0,0	218	220	+ 0,9	211	212	- 0,5	218	221	+ 1,4
4	267	267	0,0	267	270	+ 1,1	275	263	- 4,4	273	267	- 2,2
5	327	327	0,0	327	330	+ 0,9	310	309	- 0,3	322	312	- 3,1
6	401	401	0,0	401	405	+ 1,0	399	408	-11,0	401	401	0,0
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 1 THROUGH 6 :			0,0			+ 0,8			+ 1,2			+ 2,6

NOTE:

1. Midpoint System group-to-group progression rate = 22,56% (Groups 1 through 6).
2. Structural Comparison System group-to-group progression rate = 22,56% (Groups 1 through 6, before adjustments to nearest R5).

TABLE 35 - - continued

COMPARISON OF TREND LINE VALUES, RECOMMENDED STRUCTURE MIDPOINTS,
OIL COMMUNITY AVERAGES AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON vs. MIDPOINT SYSTEMS : 1974

Salary Group	Midpoint System Trend Line Values (Rand)	Struc. Comp. Trend Line Values (Rand)	Struc. Comp. Trend Line Values compared to Midpoint Trend Line Values (% Deviation)	Midpoint System Midpoints (Rand)	Struc. Comp. System Midpoints (Rand)	Struc. Comp. Midpoints compared to Midpoint Midpoints (% Deviation)	Midpoint System Oil Community Averages (Rand)	Struc. Comp. System Oil Community Averages (Rand)	Struc. Comp. Oil Community Averages compared to Midpoint Oil Community Averages (% Deviation)	Midpoint System Total Community Averages (Rand)	Struc. Comp. System Total Community Averages (Rand)	Struc. Comp. Total Community Averages compared to Midpoint Total Community Averages (% Deviation)
6	401	401	0,0	401	405	+ 1,0	399	408	+ 2,3	401	401	0,0
7	436	436	0,0	436	440	+ 0,9	428	476	+11,2	441	430	- 2,5
8	473	474	+ 0,2	473	475	+ 0,4	486	477	- 1,9	468	468	0,0
9	514	516	+ 0,4	514	518	+ 0,8	539	-	-	521	500	- 4,0
10	558	561	+ 0,5	558	565	+ 1,3	-	570	-	-	570	-
11	606	610	+ 0,7	606	610	+ 0,7	590	594	+ 0,7	590	581	- 1,5
12	658	664	+ 0,9	658	665	+ 1,1	-	689	-	-	665	-
13	715	722	+ 1,0	715	722	+ 1,0	695	718	+ 3,3	709	720	+ 1,6
14	776	785	+ 1,2	776	785	+ 1,2	787	827	+ 5,1	781	816	+ 4,5
15	843	854	+ 1,3	843	855	+ 1,4	-	-	-	-	854	-
16	916	964	+ 5,2	916	965	+ 5,3	914	996	+ 9,0	916	988	+ 7,9
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 6 THROUGH 16 :			+ 1,0			+ 1,4			+ 4,2			+ 0,8

NOTE:

1. Midpoint System group-to-group progression rate = 8,61% (Groups 6 through 16).
2. Structural Comparison System group-to-group progression rate = 8,76% (Groups 6 through 15, before adjustments to nearest R5).

TABLE 35 -- continued

COMPARISON OF TREND LINE VALUES, RECOMMENDED STRUCTURE MIDPOINTS,
OIL COMMUNITY AVERAGES AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON vs. MIDPOINT SYSTEMS : 1977

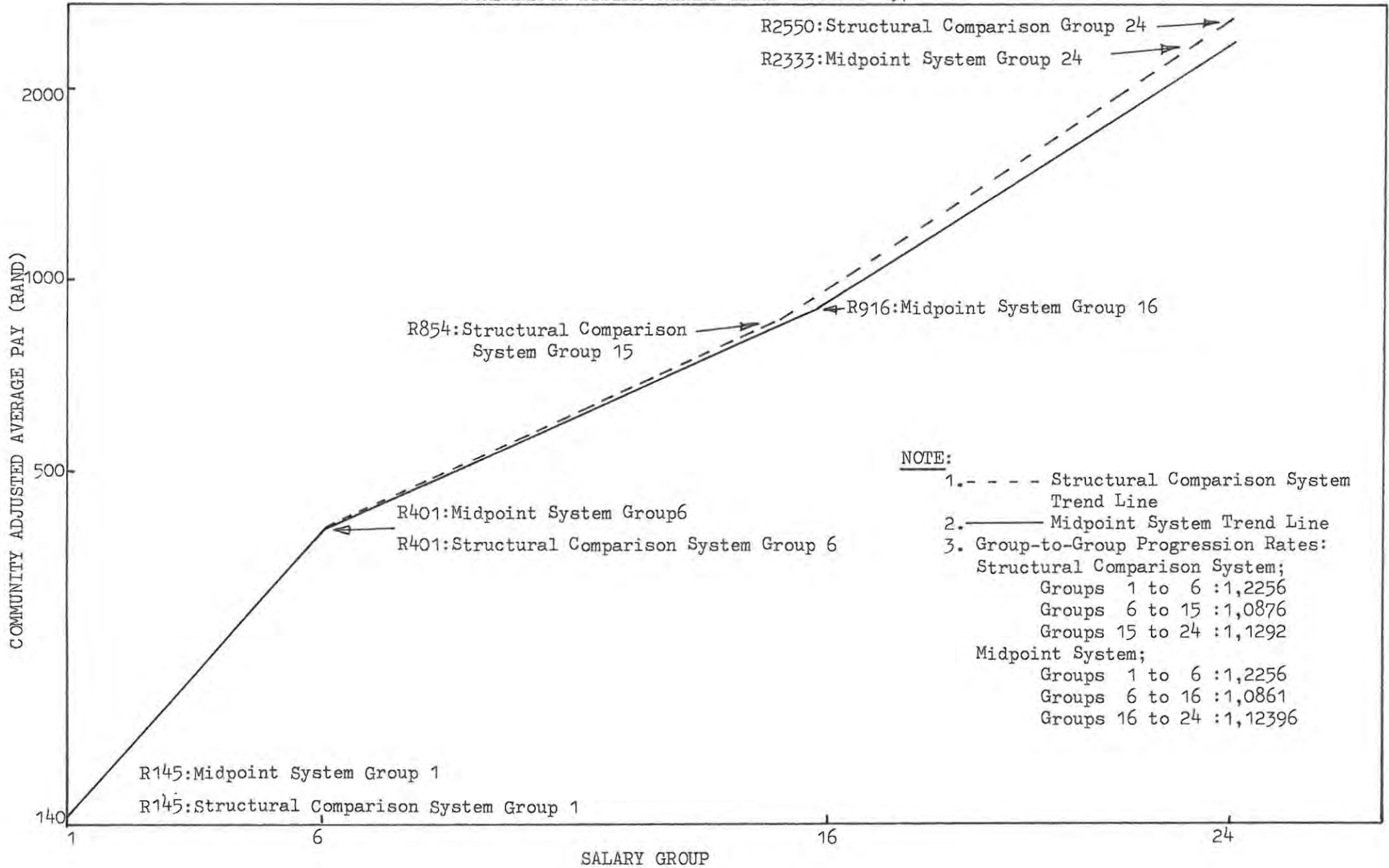
Salary Group	Midpoint System Trend Line Values (Rand)	Struc.Comp. Trend Line Values (Rand)	Struc.Comp. Trend Line Values compared to Midpoint Trend Line Values (% Deviation)	Midpoint System Midpoints (Rand)	Struc.Comp. System Midpoints (Rand)	Struc.Comp. Midpoints compared to Midpoint Midpoints (% Deviation)	Midpoint System Oil Community Averages (Rand)	Struc.Comp. System Oil Community Averages (Rand)	Struc.Comp. Oil Community Averages compared to Midpoint Oil Community Averages (% Deviation)	Midpoint System Total Community Averages (Rand)	Struc.Comp. System Total Community Averages (Rand)	Struc.Comp. Total Community Averages compared to Midpoint Total Community Averages (% Deviation)
16	916	964	+ 5,2	916	965	+ 5,3	914	996	+ 8,9	916	988	+ 7,9
17	1 030	1 089	+ 5,7	1 030	1 090	+ 5,8	1 034	-	-	1 023	1 096	+ 7,1
18	1 157	1 230	+ 6,3	1 157	1 230	+ 6,3	1 074	1 233	+14,8	1 101	1 238	+12,4
19	1 301	1 389	+ 6,8	1 301	1 390	+ 6,8	1 253	-	-	1 212	1 427	+17,7
20	1 462	1 568	+ 7,3	1 462	1 570	+ 7,4	1 330	1 521	+14,4	1 436	1 532	+ 6,7
21	1 643	1 771	+ 7,8	1 643	1 775	+ 8,0	1 616	-	-	1 605	1 794	+11,8
22	1 847	2 000	+ 8,3	1 847	2 000	+ 8,3	1 843	1 947	+ 5,6	1 895	1 966	+ 3,7
23	2 076	2 258	+ 8,8	2 076	2 260	+ 8,9	2 067	-	-	2 060	2 391	+16,1
24	2 333	2 550	+ 9,3	2 333	2 550	+ 9,3	2 311	2 433	+ 5,3	2 333	2 550	+ 9,3
AVERAGE DEVIATION PERCENTAGE SALARY GROUP 16 THROUGH 24 :			+ 7,3			+ 7,3			+ 9,8			+10,3

NOTE:

1. Midpoint System group-to-group progression rate = 12,4% (Groups 16 through 24).
2. Structural Comparison System group-to-group progression rate = 12,92% (Groups 15 through 24, before adjustments to nearest R5).

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FIGURE 8
 COMPARISON OF MIDPOINT SYSTEM AND STRUCTURAL
 COMPARISON SYSTEM SALARY TREND LINES : 1974



structures and a comparison of the lower, middle, and upper ranges of salary groups, as delineated according to respective progression rates, reveals a clearer indication of just where such structures vary to a greater extent.

On this basis, for salary groups one through six, six through sixteen, and sixteen through twenty-four, the Structural Comparison System midpoint structure varies from the Midpoint System midpoint structure by averages of +0,8%, +1,4%, and +7,3% respectively. In short then, there are on the average, only minor differences between actual midpoint values at the lower and middle sections of the structures, whereas major differences in these values occur at the upper levels. Although, as mentioned previously, the Structural Comparison System trend line values were adjusted in order to obtain midpoint values, whereas the Midpoint System values remained unadjusted, this fact had little effect on these comparative figures, as revealed by the respective trend line comparisons. The average deviation figures for the trend line values, for the same salary group ranges as mentioned above, are 0,0%, +1,0% and +7,3%.

A basic interpretation of these figures, then, indicates that the results obtained from the two systems tend to vary to a greater extent at the upper management and executive levels, while figures for the lower and middle levels of the hierarchy do not vary to any significant degree. The factors causing such a situation are numerous, but emphasis may be placed on the following: (1) The key positions selected for comparison purposes at the upper management and executive levels were too few in number to allow a reliable calculation of various salary group averages, whereas the range of key positions selected at the lower levels was far wider, and therefore more representative of each salary group. However, note may be made of the fact that the surveying of salary group midpoints, rather than of actual salaries, as proposed by the Structural Comparison System, tends to overcome this disadvantage to a large extent. (2) The analysis of executive positions in terms of normal job comparability criteria is a difficult and subjective task to perform, a factor which tends to reduce the reliability basis for position-to-position comparison and weighting purposes, and further creates fluctuations in within salary group compensation figures. These fluctuations tend to reduce the validity of the competitive average total compensation (community average)

figures for systems which rely on an analysis of actual salaries. However, to a certain degree this disadvantage is overcome by the Structural Comparison System, as this system relies on the analysis of key range midpoints, which are those total compensation figures which are deemed by the various participating organisations to be the representative competitive rates of pay for the complete ranges or groups of jobs within those key ranges.

The unadjusted competitive average total compensation midpoints, or total community averages as revealed in TABLE 35 tend to support the abovementioned interpretation, with the exception that, whereas trend line values for the two systems do not vary at all for salary groups one to six, the unadjusted total community averages vary by an average of +2,6% for the same range of salary groups. However, this discrepancy may well be due to the fact that the survey community had been paying highly unrealistic rates at the lowest salary group levels, and a realisation of this fact resulted in an attempt to readjust such rates. Thus, for example, survey community competitive average total compensation midpoints for salary groups one and two are R128 and R167 for the Midpoint System, but the corresponding trend line values are R145 and R178 respectively, an adjustment which was necessary to accommodate the abovementioned logic, as well as provide a realistic group-to-group progression rate.

However, it may be noted that competitive average total compensation midpoints applicable to the same salary groups for the Structural Comparison System survey did not require any such adjustment, as these values did not vary significantly from the trend line values. The competitive averages in this case are R145 and R177 for salary groups one and two respectively, and the corresponding trend line values are R145 and R178 respectively.

In short then, it may be stated that on an overall basis for data gathering and analysis which has provided results which are acceptable in terms of results provided by the existing survey organisation Midpoint System utilised for conducting surveys. However, as the Structural Comparison System has revealed discrepancies at certain levels of the final pay structures as derived from data analysed according to the two systems, further reliability analysis must be reserved until further

comparable survey statistics have been scrutinised.

A final basis of comparison may be provided in the cost analysis of implementing the respective structures. The potential cost of implementing the Midpoint System recommended pay structure based on the changes in midpoints was R58 968 as opposed to a cost of R70 426 applicable to the implementation of the Structural Comparison System recommended pay structure. Further the actual cost involved in adjusting those salaries falling below the recommended minimum to the recommended minimum amounted to R2 365 for the Midpoint System, as opposed to R2 716, for the Structural Comparison System. However, these immediate costs tend to reflect cost differences in actual structure implementation, and therefore emphasise the actual variations in monetary midpoints, whereas stress must be placed on costs involved in the actual process of surveying. As stressed in earlier chapters in the long term the Structural Comparison System actual surveying costs in terms of time and labour devoted to each successive survey should prove to be minimal in comparison with conventional systems, due to the simplicity of data analysis once the structural standardisation process is completed. However, this cost/benefit analysis is beyond the scope of this text.

In conclusion, and for future survey purposes, three important factors were noted from the comparison of the 1974 survey results, namely, that (1) more attention should be paid to broadening the base for comparison purposes at the upper management and executive levels, (2) care must be taken to note any overadjustments by participating organisations to formal salary range structures at the lower levels in order to provide "realistic" ranges for unskilled Non-White workers, and (3) it may be hypothesised that, assuming the Midpoint System to a large extent relies on the analysis of actual salaries paid to employees to establish midpoint total compensation, while the Structural Comparison System relies entirely on an analysis of salary range midpoints, the comparison of trend line values revealed that the survey community was paying actual salaries which were, in effect, below those rates which were regarded as being the competitive "going rates" within that community, especially at upper management and executive levels.

CHAPTER X

THE 1977 SALARY SURVEY

A further comprehensive survey was conducted by the survey organisation utilising both the existing survey guide, namely the Midpoint System, as well as the Structural Comparison System Guide in order to once again compare results obtained.

This survey was conducted on a basis which was as similar as possible to that utilised in the 1974 survey in order to allow cross-survey reliability comparisons to be made. However, where specific weaknesses and disadvantages were noted in the 1974 survey procedures, attempts were made to improve on such areas in the 1977 survey process.

Once again, although data from the General Information Questionnaire (Exhibit A, Appendix I) was summarised for comparison purposes, the summary has not been presented. Only the basic fringe-benefit which directly affects total compensation, namely, the annual bonus, has been incorporated as a factor adjusting base salary midpoints.

SCOPE OF SURVEY

I. Geographic Area

The Republic of South Africa.

II. Date of Competitive Data

April/May 1977.

III. Participating Organisations

African Explosives and Chemical Industries Limited: Manufacturers and marketers of explosives, industrial chemicals, plastics, vinyl products and fertilisers with major factories in Transvaal, Orange Free State and Cape Province.

Number of employees : 11614
Sales value : R456 million

Anglo American Corporation of South Africa Limited: The corporation is the head of an international group of mining, industrial and investment companies. Administers and develops the companies of the group, and makes investments in them and companies which it does not administer.

Capital employed : R967 million
Profits after tax : R94,9 million

B.P. Southern Africa (Pty) Limited: Marketing company. Has marketing offices, bulk plants and warehouses throughout the Republic of South Africa, South West Africa, Mocambique, Rhodesia, Malawi, Lesotho, Botswana, Swaziland, and Transkei. Has 50% interest in Sapref Refinery in Durban of 200 000 barrels of oil per day capacity.

Number of employees : 2280
Sales value : R420 million

Caltex Oil (S.A.) (Pty) Limited: Marketing company and refinery. Has marketing offices, bulk plants and warehouses throughout the Republic of South Africa, South West Africa, Mocambique, Rhodesia, Malawi, Lesotho, Botswana, Swaziland, and Transkei. Has one refinery in Cape Town of 58 000 barrels of oil per day capacity.

Number of employees : 2454
Sales value : + R400 million

Dunlop South Africa Limited: Manufacturers of rubber, and rubber like products and products allied to them either by technology or marketing conditions in which competitive efficiency requires a capital intensive manufacturing approach. Principal products are tyres, tubes, conveyor belts, hose, vinyl flooring, carpets, sports goods and foam products.

Number of employees : 4708
Sales value : R83 million

Ford Motor Company of South Africa (Pty) Limited: Automotive manufacturing assembly, comprising car and light truck assembly plant, heavy truck assembly plant, engine manufacturing assembly plant, and parts depot. Total operation based in Port Elizabeth.

Number of employees : 4676
Sales value : R191 million

International Business Machines South Africa (Pty) Limited: Market and service wide range of office machines and computers, primarily in main centres of the Republic of South Africa.

Number of employees : 1473
Sales value : R50 million to R100 million

Massey Ferguson (South Africa) Limited: Manufacturer, importer and distributor of agricultural, industrial, and construction machinery through a network of franchised dealers covering the Republic of South Africa, South West Africa, Botswana, Lesotho and Swaziland.

Number of employees : 2119
Sales value : R59 million

Metal Box South Africa Limited: Manufacturers of packaging containers, closures and components in metals, plastics and board, and are builders of machinery and equipment for the packaging and related industries.

Number of employees : 7174
Sales value : R142 million

Shell Oil South Africa (Pty) Limited: Marketing company. Has marketing offices, bulk plants and warehouses throughout the Republic of South Africa, South West Africa, Lesotho, Botswana, Swaziland, and Transkei. Has 50% interests in Sapref Refinery in Durban of 200 000 barrels of oil per day capacity.

Number of employees : 2187
Sales value : R440 million

The South African Breweries Limited: Largest manufacturer and marketer of beer, wine and spirits in the Republic of South Africa. Holding and Operating Company. Principal operating activities are in brewing (Beer Division), wine and spirits (Stellenbosch Wine Trust Ltd.), department stores (O.K. Bazaars), furniture (Afcol and Amrel), shoe manufacture (Shoe Corporation), food (Food Corporation), hotels (Southern Sun and Transito Hotels), banking (U.D.C. Holdings), real estate (Retco), and soft drinks (Schweppes).

Number of employees : 52000
Sales value (group) : R1195 million

South Africa Petroleum Refineries (Pty) Limited: Refining company situated in Durban, in which the marketing companies B.P. Southern Africa (Pty) Ltd., and Shell Oil South Africa (Pty) Ltd., have equal interests.

Number of employees : 1205
Refining capacity : 200 000 barrels per day

Stewarts and Lloyds of South Africa Limited: This company operates in the Republic of South Africa, Rhodesia, Malawi, and South West Africa. The Group comprises four divisions: a division engaged in manufacture and marketing of tubing, a foundry division, a trading division, and a manufactured products division.

Number of employees : 9600
Sales value : R208 million

Total South Africa (Pty) Limited: Marketing company. Has marketing offices, bulk plants, and warehouses throughout the Republic of South Africa, South West Africa, Mocambique, Lesotho, Botswana, Swaziland, and Transkei. Has a 30% interest in the National Petroleum Refinery which is operated by South Africa Coal, Oil and Gas Corporation Ltd., and has a capacity of 70 000 barrels of oil per day.

Number of employees : 1244
Sales value : R200 million

Unilever South Africa (Pty) Limited: Manufacturers, distributors and marketers of a wide range of soaps, detergents (Lever Brothers (Pty) Ltd., and Hudson and Knight (Pty) Ltd.), edible fats and sundry foods (van den Bergh and Jurgens (Pty) Ltd.), tea and coffee (Pitco Ltd., and Glenton and Mitchell (Pty) Ltd.), toilet preparations (Elida Gibbs (Pty) Ltd.), ice-cream (T. Wall and Sons (Pty) Ltd.), chemicals (Silicote and Chemical Industries (Pty) Ltd.), flooring (Nairn Industries (Pty) Ltd.), warehousing and distribution (S.A. Warehousing Services (Pty) Ltd.), and market research (Consumer Research Services (Pty) Ltd.).

Number of employees : 6799

Sales value (group) : R241,5 million

Mobil Oil Southern Africa (Pty) Limited: Marketing company and refinery. Has marketing offices, bulk plants and warehouses throughout the Republic of South Africa, South West Africa, Mocambique, Rhodesia, Malawi, Lesotho, Botswana, Swaziland and Transkei. Has one refinery in Durban of 100 000 barrels of oil per day capacity.

Number of employees : 3354 (including refinery)

Sales value : R450 million

IV. Survey Positions

Group	1	General Labourer
Group	2	Fork Lift Operator Artisan's Helper
Group	3	Chauffeur Junior Clerk Reproducing Machine Operator
Group	4	Key Punch Operator Copy Typist
Group	5	Clerk Telephonist Laboratory Technician
Group	6	Warehouseman/Storeman Assigned Stenographer

Group	7	Senior Clerk Computer Operator I Chairman's Secretary
Group	8	Programmer II Senior Laboratory Technician
Group	9	Assistant, Purchasing Assistant, Ledgers Programmer I
Group	10	Salesman, General Trade Employee Relations Assistant, Region Payroll Supervisor, Refinery
Group	11	Engineering Assistant, Cape Town Programmer/Analyst I Warehouse Superintendent, Refinery
Group	12	Section Head, Ledgers Employee Relations Assistant, Compensation and Benefits Chief Draughtsman
Group	13	District Manager, General Trade Maintenance Zone Supervisor, Refinery
Group	14	Transport Co-ordinator, Region Financial Analyst, Cape Town Legal Advisor, Cape Town.
Group	15	Employee Relations Manager, Region Chief Chemist, Cape Town Instrument/Electrical Superintendent, Refinery Island View "A" Superintendent, Refinery
Group	16	Assistant Controller, General Accounting, Cape Town Data Processing Manager, Cape Town Chief Maintenance Superintendent, Refinery
Group	17	Real Estate Manager, Cape Town Transport Manager, Cape Town Chief Project Engineer, Refinery

Group 18	Treasurer, Cape Town Secretary and Legal Counsel, Cape Town Controller, Cape Town Employee Relations Manager, Cape Town
Group 19	Resale Sales Manager, Northern Region Systems and Computer Manager, Cape Town Technical Manager, Refinery
Group 20	Resale Sales Manager, Cape Town Assistant Accounting and Finance Manager, Cape Town
Group 21	Regional Manager, Northern Region Operations Manager, Cape Town Relations Manager, Cape Town
Group 22	Accounting and Finance Manager, Cape Town
Group 23	Manufacturing Manager, Refinery
Group 24	Marketing Manager, Cape Town

The scope of the 1977 survey was broadened in comparison with the 1974 survey in that the number of participating organisations was increased from thirteen to sixteen, and the number of positions surveyed was increased from fifty-five to sixty. To a large extent the same positions were included as key positions for survey comparison purposes, specifically at the upper management and executive levels as it was necessary to determine a reliability factor by determining to what extent the two systems provided comparable differences in 1974 and 1977 survey trend line values. However, it may be noted that a number of those positions which required re-evaluating in terms of comparability criteria used for weighting purposes by the Structural Comparison System Guide in the 1974 survey, were in fact either re-evaluated and placed into appropriate salary groups, or excluded completely from the 1977 survey¹.

Since the 1974 survey the survey organisation made the following changes in the survey community participating organisation component:

¹See TABLE 19 for details of possible re-evaluations for these positions.

1. Excluded : Kodak (South Africa) (Pty) Limited.
South African Coal, Oil and Gas Corporation Ltd.

2. Included : Afrox Limited
Massey Ferguson (South Africa) Limited
Metal Box South Africa Limited
Stewarts and Lloyds of South Africa Limited

Kodak (South Africa) (Pty) Ltd. was excluded as they had a small operation in South Africa and it was not possible to obtain many adequate position-to-position matches. As far as the South African Coal, Oil and Gas Corporation was concerned, their labour market situation is regarded as being somewhat different to that of the survey organisation inasmuch as this organisation is situated in a rural area with a township exclusive to it, while the salaries paid are lower than those of the other participating organisations, a fact which is offset by a better benefit package.

The four new participating organisations are all large by South African standards and are all engaged in manufacturing. These particular organisations were selected to enable an enlarging of the spread of manufacturing positions under survey, and to further obtain position-to-position matches within other functions.

RATIONALE

According to the survey organisation's policy of conducting a comprehensive compensation survey on a regular three-yearly basis, 1977 was logically such a survey year.

However, a number of contributory factors stressed the need for a comprehensive survey to be undertaken at such a time. As a result of the unsettled situation within the national labour market as a whole, due to the country wide Non-White riots which had taken place during 1976, it was necessary to gauge the extent to which survey community participating organisations had adjusted established pay structures in order to realign Non-White wages and salaries with what was regarded as being "fair" rates of pay, and in this way reduce the wage gap that existed between White and Non-White pay levels. To a large extent these adjustments would affect the lower sections of organisational pay structures, as the large

majority of the Non-White labour force were unskilled and semi-skilled employees, and therefore occupied positions which were incorporated within those labour grades with corresponding salary ranges at the lower levels of the hierarchy.

A further factor which necessitated the conducting of such a survey was the reaction to such Non-White unrest by the survey organisation's international Head Office, which stipulated that there was to be an overall adjustment to salary levels in order to accommodate Non-White demands for equitable pay rates. Thus, in order to justify such an adjustment it became necessary to gauge the corresponding movements in competitive pay structures.

On the basis of these factors, an analysis of the distribution of Non-White manpower within the survey organisation salary groups, and the corresponding Non-White average salaries applicable to those same salary groups, was completed as a basis for the survey organisation 1977 salary survey rationale. These analyses are presented in TABLE 36 and TABLE 37. These tables thus provide a picture of the rate of progression of Non-White manpower within salary groups, as well as the rate of increase of corresponding average salaries as applicable to each salary group. Such an analysis, in conjunction with survey results would thus provide an empirical, rather than an emotional basis for the justification for any lower level pay structure adjustment.

BACKGROUND

Subsequent to the overall adjustment of $\pm 4,7\%$ to the survey organisation pay structure in August 1974, due to the results of the 1974 salary survey, a number of further adjustments were made as revealed below:

1. August 1974 : $\pm 4,78\%$ (groups seven to twenty-four; as a result of the 1974 survey).
2. March 1975 : $+8,0\%$ (groups one to twenty-four).
3. June 1976 : $+10,0\%$ (groups one to twenty-four).

As a result the pay structure salary ranges were adjusted by an average compound figure of $24,4\%$ over the period August 1974 to June 1976, resulting in the pay structure illustrated in TABLE 38.

TABLE 36

SURVEY ORGANISATION DISTRIBUTION OF NON-WHITE MANPOWER
WITHIN SALARY GROUPS : 1972 - DECEMBER 1976

SALARY GROUP	1972		1974		1975		1976	
	MANPOWER	% OF TOTAL	MANPOWER	% OF TOTAL	MANPOWER	% OF TOTAL	MANPOWER	% OF TOTAL
1 - 2	861	82,3	759	61,0	736	59,0	751	56,6
3 - 5	163	15,6	422	33,9	446	35,7	481	36,3
6 - 8	21	2,0	55	4,5	58	4,7	84	6,3
8 - 12	1	0,1	8	0,6	8	0,6	9	0,7
13	-	-	-	-	-	-	1	0,1
TOTAL	1 046		1 244		1 248		1 326	

TABLE 37

SURVEY ORGANISATION AVERAGE SALARIES : MONTHLY BASE :
1972 - DECEMBER 1976

SALARY GROUP	1972 (RAND)		1975 (RAND)		1976 (RAND)	
	WHITE	NON-WHITE	WHITE	NON-WHITE	WHITE	NON-WHITE
1	-	86	-	152	-	171
2	146	116	-	171	-	200
3	153	150	223	211	230	240
4	199	203	289	271	308	275
5	232	223	337	284	358	299
6	269	261	418	360	424	374
7	328	-	424	385	453	420
8	340	309	472	433	535	454
9	-	-	514	430	560	527
10	-	-	549	-	595	350
11	-	-	578	534	656	-
12	576	457	640	550	709	668
13	-	-	-	-	779	610

TABLE 38

SURVEY ORGANISATION PAY STRUCTURE AS AT APRIL 1977 : MONTHLY BASE

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	144	180	216
2	170	212	255
3	208	260	312
4	254	317	381
5	312	390	468
6	382	477	573
7	415	519	623
8	450	563	675
9	489	611	734
10	531	664	797
11	576	720	864
12	626	782	939
13	680	850	1 020
14	738	923	1 107
15	802	1 003	1 203
16	872	1 090	1 308
17	980	1 225	1 470
18	1 101	1 376	1 652
19	1 238	1 547	1 857
20	1 390	1 737	2 085
21	1 562	1 953	2 343
22	1 756	2 195	2 634
23	1 974	2 468	2 961
24	2 218	2 772	3 327

NOTE:

1. Group-to-group progression rates : Groups 1 - 6 = 1,2256
Groups 6 - 16 = 1,0861
Groups 16 - 24 = 1,12396
2. 50% spread in range.
3. All ranges for groups 1 to 19 include Christmas Bonus of one month's salary.

In order to provide a comparable basis as regards salary and pay structural adjustments, details of general salary adjustments and pay structure adjustments are provided in TABLE 39 for the period May 1974 to May 1977, for those organisations participating in the survey.

TABLE 39

SURVEY COMMUNITY ORGANISATIONS : COMPOUNDED PAY STRUCTURE ALTERATIONS
AND GENERAL SALARY INCREASES OF PARTICIPATING ORGANISATION :
MAY 1974 to MAY 1977

ORGANISATION	% COMPOUNDED PAY STRUCTURE ALTERATION	% COMPOUNDED GENERAL SALARY INCREASE
B.P.	28,6	28,6
CALTEX	25,5	27,1
SHELL	28,6	28,6
TOTAL	21,3	not applicable
SAPREF	28,6	28,6
MOBIL	24,4	21,0
A.E.+ C.I.	30,1	not applicable
AFROX	20,0	not applicable
ANGLO-AMERICAN	not applicable	not applicable
DUNLOP	38,5	not applicable
FORD	31,0	23,3
IBM	35,5	not applicable
MASSEY FERGUSON	44,4	42,3
METAL BOX	30,0	30,0
S.A. BREWERIES	20,0	not applicable
STEWARTS AND LLOYDS	30,0	not applicable
UNILEVER	37,1	37,6

NOTE:

1. For all cases where the words "not applicable" appear, this is indicative of the fact that such organisations do not grant general across-the-board salary increases.
2. Anglo-American does not have established salary ranges.

The abovementioned data was supplemented by the results of major salary surveys conducted by two professional organisations utilising the national labour market of the Republic of South Africa as a survey community base. These results indicated that salary levels had shown an upward trend as follows:

1. Peromnes Salary Surveys (Pty) Ltd. : average of 8,9% during the period April 1976 to April 1977. ²

2

"Peromnes Salary Survey - April 1977" (Johannesburg, Peromnes Salary Surveys (Pty) Ltd., April 1977).

2. Urwick International (Pty) Ltd. : average of 8% during the period March 1976 to March 1977, and an average of 4,5% during August 1977 to March 1977. ³

Further, from June 1976 (the date of the survey organisation's previous general across-the-board adjustment) to April/May 1977. The Consumer Price Index indicated an increase of 9,4%, and forecasts indicated potential increase of 10,4% for the twelve month period ending May 1977. In this respect, a further vitally important fact stressing the need to review the labour market competitive salary rate situation, was the fact that during the previous five to six years the survey organisation's major competitors had been maintaining an extremely high correlation between movements of the Consumer Price Index and movements of their own pre-tax salaries, irrespective of the 1975 Government Manifesto which in essence had stipulated that Commerce and Industry should make every endeavour to limit their cost-of-living general adjustment salary increases to 70% of the Consumer Price Index for the period October 1975 to end March 1977. The following TABLE 40 reveals the increase in salaries as opposed to the increase in the Consumer Price Index for the survey organisation's major competitors, namely, the Oil Community organisations plus a number of international organisations with national interests throughout the Republic of South Africa.

TABLE 40

PARTICIPATING ORGANISATION SALARY INCREASES VERSUS CONSUMER PRICE INDEX INCREASES : 1974 - 1976

YEAR	% INCREASE IN ACTUAL SALARIES	% CUMULATIVE INCREASE IN ACTUAL SALARIES	% INCREASE IN CPI	% CUMULATIVE INCREASE IN CPI
1971	7,7	7,7	7,3	7,3
1972	8,9	17,3	8,2	16,1
1973	8,9	27,7	8,8	26,4
1974	13,1	44,5	14,7	44,9
1975	12,3	62,2	11,4	61,5
1976	11,5	80,9	11,8	80,6

On the basis of these background statistics, plus the fact that the survey organisation pay structure adjustments and general salary increase figures were lagging in comparison with those of major competitors, a fact which had been underlined by the data revealed in TABLE 40, which illustrates the fact that competitive organisations regarded it as being imperative to maintain salary levels which were as competitive as possible within the labour market, and in this way prevent the probable loss of employees through salary levels lagging behind inflation rates, a decision was made to conduct a comprehensive compensation survey. Once again the Structural Comparison System Guide was to be utilised in conjunction with the Midpoint System in order to gauge the effectiveness and reliability of this guide.

THE MIDPOINT SYSTEM SURVEY : 1977

I. Method and Results

The same Midpoint System method as that utilised during the 1974 survey was applied for the collection and analysis of data.

The TABLE 41 group-to-group progression rates were applied as weighting factors according to necessary salary group weightings of individual positions which had been compared on an inter-organisational position-to-position comparison basis, as estimated against various weighting criteria. These rates represent the progression rates applicable to the 1977 pre-survey survey organisation pay structure (TABLE 39).

TABLE 41
SURVEY ORGANISATION PRE-SURVEY GROUP-TO-GROUP PROGRESSION RATES : 1977

SALARY GROUP	PROGRESSION RATES
1 to 6	1,2256
6 to 16	1,0861
16 to 24	1,12396

These progression rates were utilised as weighting factors when weighting was necessary in terms of multiples of one-half salary groups. Such salary group weightings were calculated for each participating organisation position according to criteria such as reporting relationships,

functional responsibility, and scope and magnitude of responsibilities. These overall weightings in terms of multiples of one-half of the survey organisation salary group concerned were then converted to monetary values utilising the above progression rates.

Utilising this basis as a means for ensuring job comparability, and taking into consideration basic elements of compensation, namely, base salary adjusted by annual bonus factors, competitive average total compensation midpoints were calculated such that a line of best fit, or community trend line, could be established in order to calculate a proposed competitive pay structure.

Note may be made of the fact that, whereas the trend line values obtained by utilising the Midpoint System during the 1974 survey were utilised as the recommended pay structure midpoints, while the trend line values obtained from the Structural Comparison System were in fact used as a base and adjusted according to the System Guide in order to obtain recommended structure midpoints, (Section VII, Phase IV, Chapter VII), it was decided to adopt such a procedure for the Midpoint System trend line values of the 1977 survey data. In this way then these values were utilised as a base in order to calculate recommended structure midpoint values.

The sequence of data analysis from the stage of tabulation of Adjusted Total Compensation Midpoint Data is presented in the following tabulations and illustrations.

TABLE 42

TABULATION OF ADJUSTED TOTAL COMPENSATION MIDPOINT DATA :

MIDPOINT SYSTEM : 1977

Salary Group	Position Title	Total Compensation Midpoint : Monthly Base (Rand)																Competitive Av. Total Compensation Midpoint (Position Average)	Competitive Av. Total Compensation Midpoint (Salary Group Av.)
		Org. A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
1	Labourer	186	195	187	-	161	181	145	196	180	171	-	138	206	149	140	194	174	174
2	Fork Lift Truck Op. Artisan's Helper	240	230	248	-	226	225	225	-	201	213	309	162	206	212	154	231	220	214
		240	273	248	-	184	-	191	-	201	-	-	146	166	252	-	238		
		AVERAGE	240	252	248	-	205	225	208	-	201	213	309	154	186	232	154	235	
3	Chauffeur Junior Clerk Reproducing Machine Op.	271	273	279	-	287	250	197	285	226	189	-	188	202	250	214	383	250	251
		314	325	-	-	226	266	249	313	215	290	190	378	322	305	292	333	323	323
		AVERAGE	271	299	279	-	257	258	223	250	258	190	308	175	202	278	196	319	
4	Key Punch Operator Copy Typist	314	325	320	-	448	379	-	-	355	285	-	285	-	-	292	383	339	361
		-	325	379	-	390	450	-	355	355	331	343	352	412	375	292	334		
		AVERAGE	314	325	350	-	419	415	-	355	355	308	343	319	412	375	292	359	
5	Clerk Telephonist Laboratory Technician	457	387	420	-	373	379	409	447	421	393	457	428	449	380	336	395	409	428
		376	387	379	-	408	412	369	337	355	293	415	314	361	305	292	438	363	428
		457	387	379	-	-	-	-	418	355	460	-	-	-	447	515	438		
AVERAGE	430	387	393	-	391	396	389	401	377	382	436	371	405	377	381	424		396	
6	Warehouseman/Storeman Assigned Stenographer	549	466	460	-	448	531	-	-	-	354	552	487	479	-	515	383	475	534
		549	466	511	-	522	629	552	553	594	469	669	455	-	503	422	582	534	534
		AVERAGE	549	466	466	-	448	531	-	-	-	354	552	487	479	-	515	383	
7	Senior Clerk Computer Operator I Chairman's Secretary	549	515	555	-	597	531	-	532	500	546	552	548	-	451	487	505	528	632
		457	466	460	-	522	-	650	-	421	542	608	496	414	-	515	505	505	632
		668	563	675	-	597	629	595	630	594	683	809	580	718	503	574	665	632	632
AVERAGE	503	491	508	-	560	531	650	532	461	544	580	522	414	451	501	505		517	
8	Programmer II Senior Lab. Technician	441	563	555	-	-	-	-	-	594	650	669	-	-	-	574	582	579	617
		-	506	-	-	597	677	-	553	500	659	-	-	753	613	726	582	617	617
		AVERAGE	441	535	555	-	597	677	-	553	547	655	669	-	753	613	650	582	

TABLE 42 -- continued

TABULATION OF ADJUSTED TOTAL COMPENSATION MIDPOINT DATA :

MIDPOINT SYSTEM : 1977

Salary Group	Position Title	Total Compensation Midpoint : Monthly Base (Rand)																Competitive Av. Total Compensation Midpoint (Position Average)	Competitive Av. Total Compensation Midpoint (Salary Group Av.)
		Org. A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
9	Assistant Purchasing	885	-	-	-	781	-	651	597	702	660	-	-	622	-	-	582	685	664
	Assistant Ledgers	-	679	621	-	-	628	-	583	594	725	735	-	-	-	640	582	643	
	Programmer I	525	679	675	-	597	747	709	-	702	728	809	635	-	589	726	665	676	
	AVERAGE	705	679	648	-	689	688	680	590	666	704	772	635	622	589	683	610		
10	Sales Rep. Gen. Trade	569	679	654	-	695	688	626	-	701	654	-	685	702	813	639	667	675	679
	Empl. Rel. Asst. Region	668	679	-	-	-	-	-	-	-	-	-	-	-	-	-	665	671	
	Payroll Supv. Refinery	-	-	-	647	781	747	-	913	702	713	-	-	-	-	-	768	688	
	AVERAGE	619	679	654	-	695	688	626	-	701	654	-	685	702	813	639	666		
11	Engineering Assistant	668	679	815	-	781	-	862	711	-	771	-	899	-	752	835	711	771	823
	Programmer/Analyst I	873	755	815	-	781	883	-	-	726	843	1 059	-	996	-	834	747	847	
	Warehouse Supervisor	-	820	-	555	-	-	770	-	-	545	-	872	-	680	582	-	683	
	AVERAGE	771	717	815	-	781	883	862	711	726	807	1 059	899	996	752	835	729		
12	Section Head Ledgers	-	820	708	-	695	747	-	760	702	939	-	820	683	-	-	701	767	(583)
	Empl. Rel. Asst. Comp. & Benefits	972	820	977	-	-	883	-	-	776	1 202	783	837	-	-	-	747	887	
	Chief Draughtsman	-	820	-	850	-	966	886	-	904	871	-	-	902	854	726	796	858	
	AVERAGE	972	820	977	850	-	925	886	-	904	819	1 202	783	870	854	726	772		
13	District Mgr. Gen. Trade	807	820	900	-	924	-	852	-	1 084	849	-	1 042	-	-	-	834	901	878
	Maint. Zone Supv. Refinery	-	786	-	900	-	888	961	-	932	747	-	862	892	-	834	771	857	
	AVERAGE	807	803	900	900	924	888	907	-	1 008	798	-	952	892	-	834	803		
14	Transport Co-ord. Region	807	913	977	-	755	964	-	-	-	-	-	-	993	970	-	911	947	
	Financial Analyst	-	906	-	-	-	-	-	-	-	1 009	1 059	1 015	985	-	837	969		
	Legal Advisor	972	-	977	-	957	-	-	876	-	-	-	-	-	1 004	747	922		
	AVERAGE	890	910	977	-	856	964	-	876	-	1 009	1 059	1 015	985	993	987	792		
15	Empl. Rel. Mgr. Region	1 082	991	-	-	-	1 109	-	1 198	1 071	-	1 854	-	898	1 007	970	1 064	1 124	1 133
	Chief Chemist	-	991	-	-	1 047	-	1 138	985	-	-	-	1 038	-	834	1 100	1 047		
	Instrument/Elec. Supt.	-	1 077	-	1 079	-	1 143	-	-	1 264	-	-	-	-	-	-	1 197	1 152	
	Island View "A" Supt.	-	1 104	-	937	-	-	1 146	-	-	-	-	-	-	-	-	988	1 044	
AVERAGE	1 082	1 057	-	1 008	-	1 126	1 146	1 198	1 168	-	1 854	-	898	1 007	970	1 053			

TABLE 42 -- continued
 TABULATION OF ADJUSTED TOTAL COMPENSATION MIDPOINT DATA :
 MIDPOINT SYSTEM : 1977

Salary Group	Position Title	Total Compensation Midpoint : Monthly Base (Rand)																Competitive Av. Total Compensation Midpoint (Position Average)	Competitive Av. Total Compensation Midpoint (Salary Group Av.)
		Org.A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
16	Asst. Controller, Gen. Acc.	1 107	1 199	977	-	1 039	1 194	-	1 117	1 264	1 111	1 494	-	-	1 206	1 186	1 157	1 171	
	Data Processing Manager	1 226	1 077	1 439	-	1 004	-	-	-	1 214	1 140	1 576	-	1 170	-	1 157	1 067	1 207	
	Chief Maint. Supt.	-	991	-	982	-	1 134	1 257	-	1 163	1 169	-	-	-	-	1 053	1 300	1 131	
	AVERAGE	1 167	1 089	1 208	982	1 022	1 164	1 257	1 117	1 214	1 140	1 535	-	1 170	1 206	1 132	1 175	1 172	
17	Real Estate Manager, CTO	1 441	1 067	1 439	-	924	-	-	-	-	-	1 402	-	-	-	-	-	1 255	
	Transport Manager, CTO	1 403	-	1 617	-	1 168	-	-	-	-	-	-	-	-	-	-	-	1 296	
	Chief Project Eng., Ref.	-	1 292	-	1 104	-	1 311	1 361	1 606	-	1 250	-	-	-	-	1 090	1 197	1 276	
	AVERAGE	1 441	1 180	1 439	1 104	924	1 311	1 361	1 606	-	1 250	1 402	-	-	-	1 090	1 197	1 275	
18	Treasurer	1 619	1 292	-	-	1 168	1 522	-	1 507	1 556	1 427	2 029	-	-	-	-	1 345	1 496	
	Sec. & Legal Counsel	1 530	1 129	1 569	-	-	-	-	1 485	-	2 263	-	-	-	1 466	1 325	1 513	1 535	
	Controller	1 477	1 632	1 439	-	1 269	1 354	1 539	1 462	1 628	1 597	-	-	-	-	-	1 513	1 491	
	Empl. Rel. Manager, CTO	1 981	-	1 764	-	-	1 744	-	1 737	-	1 452	2 403	-	-	1 542	1 461	-	1 761	
AVERAGE	1 542	1 351	1 504	-	1 219	1 438	1 539	1 485	1 592	1 512	2 146	-	-	1 466	1 325	1 457	1 506		
19	Resale Sales Mgr., North	1 720	1 733	1 617	-	1 103	1 564	-	-	-	1 467	-	-	-	1 460	-	1 510	1 522	
	Systems & Computer Mgr.	1 763	1 452	1 847	-	1 739	1 616	1 597	-	1 943	1 306	2 013	1 843	2 050	-	1 538	1 703	1 724	
	Technical Mgr., Refinery	-	1 834	-	-	-	1 642	-	-	-	-	-	-	-	-	-	-	1 738	
	AVERAGE	1 763	1 643	1 847	-	1 739	1 629	1 597	-	1 943	1 306	2 013	1 843	2 050	-	1 538	1 703	1 740	
20	Resale Sales Mgr., CTO	1 763	1 881	1 569	-	1 426	-	-	-	1 943	1 795	-	-	-	1 736	1 813	1 856	1 754	
	Asst. Accts. & Fin. Mgr.	-	-	-	-	-	-	-	1 729	-	-	2 450	1 759	1 945	2 248	1 813	-	1 991	
	AVERAGE	-	-	-	-	-	-	-	1 729	-	-	2 450	1 759	1 945	2 248	1 813	-	1 991	
21	Regional Manager, North	-	1 991	-	-	-	2 025	2 074	-	2 278	-	-	-	-	1 994	2 082	2 103	2 078	
	Operations Manager, CTO	2 073	2 199	2 076	-	1 426	-	-	-	2 143	-	-	-	-	-	-	2 221	2 023	
	Relations Mgr., CTO	2 474	2 114	1 961	-	1 985	2 010	2 436	2 610	2 319	1 745	3 206	1 785	-	2 000	1 960	2 482	2 321	
AVERAGE	2 073	2 095	2 076	-	1 426	2 025	2 074	-	2 278	2 143	-	-	-	1 994	2 082	2 162	2 039		
22	Acct. & Finance Mgr.	2 073	2 335	2 756	-	2 431	-	2 416	2 239	2 278	2 341	3 393	2 277	2 374	2 224	1 744	2 438	2 477	
23	Manufacturing Manager	-	2 472	-	2 591	-	2 676	3 276	-	2 719	2 580	-	2 243	-	-	-	2 723	2 572	
24	Marketing Manager	2 703	2 762	3 063	-	2 454	3 007	-	-	-	4 176	3 385	-	3 115	2 476	-	3 016	3 016	

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FIGURE 9

COMMUNITY SALARY TREND LINE: MIDPOINT SYSTEM: 1977

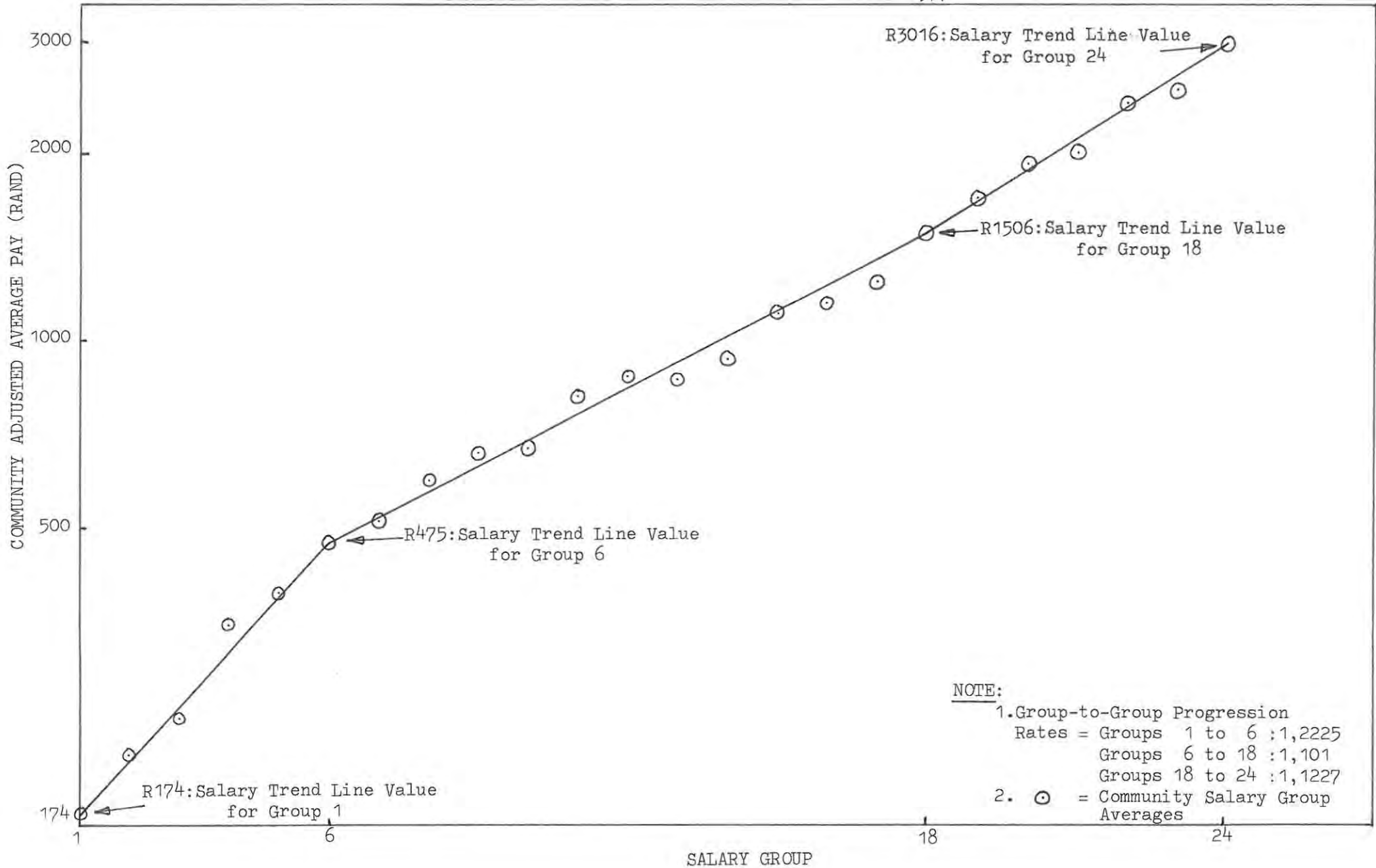


TABLE 43

SURVEY ORGANISATION RECOMMENDED PAY STRUCTURE :
MONTHLY BASE : MIDPOINT SYSTEM 1977

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	140	175	210
2	170	215	258
3	208	260	312
4	256	320	384
5	312	390	468
6	380	475	570
7	420	525	630
8	460	575	690
9	508	635	762
10	560	700	840
11	616	770	924
12	676	845	1 014
13	744	930	1 116
14	820	1 025	1 230
15	904	1 130	1 356
16	996	1 245	1 494
17	1 096	1 370	1 644
18	1 204	1 505	1 806
19	1 354	1 690	2 028
20	1 520	1 900	2 280
21	1 704	2 130	2 556
22	1 916	2 395	2 874
23	2 152	2 690	3 228
24	2 412	3 015	3 618

NOTE:

1. Group-to-group progression rates
 - = Groups 1 to 6 : 1,2225) Before midpoint
 - Groups 6 to 18 : 1,101) adjustments to
 - Groups 18 to 24 : 1,1227) nearest R5.
2. 50% spread in all ranges.
3. All ranges for groups 1 to 19 include Christmas Bonus of one month's salary.

TABLE 44

COMPARISON OF RECOMMENDED PAY STRUCTURE TO PRESENT SURVEY
 ORGANISATION PAY STRUCTURE : MONTHLY BASE : MIDPOINT SYSTEM 1977

SALARY GROUP	RECOMMENDED STRUCTURE (MIDPOINTS : RAND)	PRESENT STRUCTURE (MIDPOINTS : RAND)	% RECOMMENDED VARIES FROM PRESENT
1	175	180	- 2,7
2	215	212	+ 1,3
3	260	260	0,0
4	320	317	+ 0,8
5	390	390	0,0
6	475	477	- 0,3
7	525	519	+ 1,2
8	575	563	+ 2,1
9	635	611	+ 3,9
10	700	664	+ 5,4
11	770	720	+ 6,9
12	845	782	+ 8,0
13	930	850	+ 9,4
14	1 025	923	+ 11,1
15	1 130	1 003	+ 12,6
16	1 245	1 090	+ 14,2
17	1 370	1 225	+ 11,8
18	1 505	1 376	+ 9,4
19	1 690	1 547	+ 9,2
20	1 900	1 737	+ 9,4
21	2 130	1 953	+ 9,1
22	2 395	2 195	+ 9,1
23	2 690	2 468	+ 9,0
24	3 015	2 772	+ 8,8
AVERAGE VARIANCE =			+ 6,2

NOTE: 1. Average variance = Groups 1 to 6 : - 0,15%
 Groups 6 to 18 : + 7,4%
 Groups 18 to 24 : + 9,1%

2. Recommended structure group-to-group
 progression rates : Groups 1 to 6 : 1,2225)
 : Groups 6 to 18 : 1,101) *
 : Groups 18 to 24 : 1,1227)

* (Before midpoint adjustments to nearest R5).

3. Present structure group-to-group
 progression rates : Groups 1 to 6 : 1,2256
 Groups 6 to 16 : 1,0861
 Groups 16 to 24 : 1,12396

TABLE 45

COMPARISON OF RECOMMENDED PAY STRUCTURE TO COMPETITIVE AVERAGE TOTAL
COMPENSATION MIDPOINTS : MONTHLY BASE : MIDPOINT SYSTEM 1977

SALARY GROUP	RECOMMENDED STRUCTURE (MIDPOINTS: RAND)	COMPETITIVE AVERAGE TOTAL COMPENSATION (MIDPOINTS : RAND)	% RECOMMENDED MIDPOINT VARIES FROM COMPETITIVE AVERAGE TOTAL COMPENSATION MIDPOINT
1	175	174	+ 0,6
2	215	219	+ 1,8
3	260	251	+ 3,6
4	320	353	- 9,3
5	390	396	- 1,5
6	475	475	0,0
7	525	517	+ 1,5
8	575	602	- 4,5
9	635	664	- 4,4
10	700	679	+ 3,1
11	770	823	- 6,4
12	845	883	- 4,3
13	930	878	+ 5,9
14	1 025	947	+ 8,2
15	1 130	1 133	+ 0,3
16	1 245	1 172	+ 6,2
17	1 370	1 275	+ 7,5
18	1 505	1 506	- 0,1
19	1 690	1 740	- 2,9
20	1 900	1 991	- 4,6
21	2 130	2 039	+ 4,5
22	2 395	2 477	- 3,3
23	2 690	2 572	+ 4,5
24	3 015	3 016	0,0
AVERAGE VARIANCE			= + 0,12

NOTE:

1. Group-to-group progression rates = Groups 1 to 6 : 1,2225)
 Groups 6 to 18 : 1,101) *
 Groups 18 to 24 : 1,1227)

+ (Before midpoint adjustments to nearest R5).

TABLE 46

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

MIDPOINT SYSTEM : 1977

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
1	180	182	- 1,3	174	+ 3,4%	175	- 4,0	+ 0,6	- 2,7
2	212	236	-10,1	219	- 3,0	215	- 9,0	- 1,8	+ 1,3
3	260	277	- 6,0	251	+ 3,6	260	- 6,0	+ 3,6	0,0
4	317	352	- 9,8	353	-10,1	320	- 9,1	- 9,3	+ 0,8
5	390	400	- 2,6	396	- 1,5	390	- 2,6	- 1,5	0,0
6	477	481	- 0,8	475	+ 0,4	475	- 1,2	0,0	- 0,3
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 1 THROUGH 6 :							- 5,3	- 1,4	- 0,15

NOTE:

1. Present structure group-to-group progression rate = 22,6% (Groups 1 through 6).
2. Recommended structure group-to-group progression rate = 22,3% (Groups 1 through 6, before adjustments to nearest R5).

TABLE 46 -- continued

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

MIDPOINT SYSTEM : 1977

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Community Averages (% Deviation)
6	477	481	- 0,8	475	+ 0,4	475	- 1,2	0,0	- 0,3
7	519	516	- 0,7	517	+ 0,4	525	+ 1,8	+ 1,5	+ 1,2
8	563	532	+ 5,9	602	- 6,4	575	+ 8,1	- 4,5	+ 2,1
9	611	680	-10,2	664	- 8,0	635	- 6,7	- 4,4	+ 3,9
10	664	662	+ 0,4	679	- 2,2	700	+ 5,8	+ 3,1	+ 5,4
11	720	771	- 6,6	823	-12,5	770	- 0,1	- 6,4	+ 6,9
12	782	905	-13,5	883	-11,4	845	- 6,6	- 4,3	+ 8,0
13	850	867	- 1,9	878	- 3,1	930	+ 7,3	+ 5,9	+ 9,4
14	923	908	+ 1,6	947	- 2,5	1 025	+12,9	+ 8,2	+11,1
15	1 003	1 049	- 4,4	1 133	-11,5	1 130	+ 7,7	- 0,3	+12,6
16	1 090	1 094	- 0,3	1 172	- 7,0	1 245	+13,8	+ 6,2	+14,2
17	1 225	1 216	+ 0,6	1 275	- 3,9	1 370	+12,5	+ 7,5	+11,8
18	1 376	1 404	- 2,0	1 506	- 8,6	1 505	+ 7,2	- 0,1	+ 9,4
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 6 THROUGH 18 :							+ 4,8	+ 1,0	+ 7,4

NOTE:

1. Present structure group-to-group progression rate = 8,6% (Groups 6 through 16).
2. Recommended structure group-to-group progression rate = 10,1% (Groups 6 through 18, before adjustments to nearest R5).

TABLE 46 -- continued

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

MIDPOINT SYSTEM : 1977

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
18	1 376	1 404	- 2,0	1 506	- 8,6	1 505	+ 7,2	- 0,1	+ 9,4
19	1 547	1 748	-11,5	1 740	-11,1	1 690	- 3,3	- 2,9	+ 9,2
20	1 737	-	-	1 991	-12,8	1 900	-	- 4,6	+ 9,4
21	1 953	1 916	+ 1,9	2 039	- 4,2	2 130	+11,1	+ 4,5	+ 9,1
22	2 195	2 556	-14,1	2 477	-11,4	2 395	- 6,3	- 3,3	+ 9,1
23	2 468	2 532	- 2,5	2 572	- 4,0	2 690	+ 6,3	+ 4,6	+ 9,0
24	2 772	2 746	+ 1,0	3 016	- 8,1	3 015	+ 9,8	0,0	+ 8,8
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 18 THROUGH 24 :							+ 4,1	+ 0,3	+ 9,1

NOTE:

1. Present structure group-to-group progression rate = 12,4% (Groups 16 through 24).
2. Recommended structure group-to-group progression rate = 12,3% (Groups 18 through 24, before adjustments to nearest R5).

TABLE 47

COSTS OF IMPLEMENTING RECOMMENDED STRUCTURE : MIDPOINT SYSTEM 1977

SALARY GROUP	NO. OF EMPLOYEES IN SALARY GROUP	POTENTIAL COST BASED ON CHANGE IN MIDPOINT (RAND)	NO. OF SALARIES BELOW RECOMMENDED MINIMUM	COST TO ADJUST SALARIES TO RECOMMENDED MINIMUM (RAND)
1	541	-	-	-
2	299	-	6	42
3	113	-	2	9
4	368	1 104	5	78
5	324	-	7	183
6	139	-	3	246
7	255	1 530	31	985
8	192	2 304	5	123
9	81	1 701	2	31
10	230	8 280	21	941
11	46	2 300	14	496
12	64	4 032	14	439
13	81	6 480	-	-
14	52	5 304	-	-
15	59	7 493	1	26
16	19	2 945	-	-
17	16	2 320	-	-
18	11	1 419	-	-
19	7	1 001	-	-
20	7	1 141	-	-
21	3	531	-	-
22	1	200	-	-
23	2	444	-	-
24	1	243	-	-
TOTAL	2 908	50 772	111	3 599

II. Discussion

The recommended group-to-group progression rates as calculated from the community trend line provided the basis for a recommended pay structure which indicated an average upward adjustment of 6,2% in order to realign the survey organisation pay structure with community competitive rates of pay. The recommended group-to-group progression rates are revealed in TABLE 48.

TABLE 48
POST SURVEY RECOMMENDED GROUP-TO-GROUP PROGRESSION
RATES : MIDPOINT SYSTEM 1977

SALARY GROUP	CUTOFF VALUES (RAND)	GROUP-TO-GROUP PROGRESSION RATES
1	175) . . .	
6	475) . . .	1,2225
6	475) . . .	
18	1 505) . . .	1,101
18	1 505) . . .	
24	3 015) . . .	1,1227

NOTE: As applicable before midpoint adjustments to nearest R5.

Once again note may be made of the fact that the progression rate for salary groups one to six is extremely high, differing by only 0,3% when compared with the existing pay structure progression rates for the same groups. Subsequent to the 1974 salary survey it was suggested that the high progression rate in the lower pay structure ranges was attributable to the necessity for a rapid escalation in Non-White pay levels. Coupled with this factor was the influence of the 1976 Non-White riots throughout the Republic of South Africa which resulted in the survey organisation International Head Office requiring a further rapid escalation of actual salaries and corresponding adjustments to pay structure levels.

However, as a result of the 1977 survey data analysis, a negative adjustment of the survey organisation pay structure was recommended for salary groups one to six (see TABLE 46). This recommendation stemmed from the fact that, due to the abovementioned factors, an overreaction to the situation resulted in an unrealistic adjustment to this lower section of the pay structure. This overreaction is highlighted by the

fact that the Oil Community organisations as a whole tended to adjust the lower pay structure salary ranges unrealistically, as revealed by the fact that the proposed midpoints for survey organisation salary groups one to six were all significantly lower than the Oil Community averages, with an average deviation of $-5,3\%$, as opposed to an average deviation of $+4,9\%$, for the remainder of the salary groups.

The recommended progression rates provided a pay structure which in fact, on the average, resulted in midpoint rates of pay for the survey organisation which were $0,12\%$ higher than those rates which were regarded as being competitive within the labour market by the survey community (see TABLE 45). This level of average variance between the recommended midpoints and the competitive average total compensation midpoints is at an acceptable level in terms of the limit values provided by the Structural Comparison Guide, and adapted for the Midpoint System purposes. (See Phase IV, Section VI of Chapter VII).

The potential and actual costs involved in the implementation of the recommended structure are illustrated in TABLE 47 and indicate that such costs are certainly not excessive. In fact, although the number of employees employed by the survey organisation increased slightly over the 1974 figure, the potential costs of implementation based on the change in midpoint values was less for the 1977 survey recommended structure than for the 1974 recommended structure. However, this fact was once again attributable to the necessity for a negative adjustment to the lower section of the pay structure, as a result of Non-White salary adjustments.

On the other hand, the actual costs of adjusting salaries to the recommended minimum within each salary group was significantly higher for the 1977 recommended structure even though the number of actual salaries falling below the recommended minimum was significantly lower for the 1974 recommended pay structure.

In short, the Midpoint System data analysis revealed that whereas a significant upward trend in competitive pay rates at the middle and upper levels of the survey organisation pay structure emphasise the need for positive adjustment, certain unsettled conditions in the labour market resulted in an initial overadjustment which tended to have an

eventual stagnating effect on the lower level salary ranges of the pay structures, as indicated by the necessity for a negative adjustment.

THE STRUCTURAL COMPARISON SYSTEM SURVEY : 1977

I. Method and Results

The Structural Comparison System Guide was once again utilised to process and analyse the same key positions utilised by the Midpoint System. The personal interviews conducted with representatives of the participating organisations provided an opportunity to re-evaluate the range of positions which had been identified as anchor positions and supportive positions by the 1974 survey standardisation procedure. This task was undertaken in order to provide an acceptable degree of reliability for such standardisation procedure. Although the details of the correlations between individual position ratings for both surveys will not be reproduced, note may be made of the fact that the average correlation obtained for the ratings of all those positions identified as anchor positions during the 1974 survey standardisation procedure and re-evaluated during the 1977 survey, was very high, the figure being 0,89. This figure indicates an acceptable level of reliability. Note may also be made of the fact that those positions which had been identified as requiring re-evaluation during the 1974 position evaluation and weighting interviews, by the Structural Comparison System procedure, were either re-evaluated and thus reclassified for the 1977 survey purposes, or were excluded from the survey base altogether.

On this basis, the structural standardisation as completed during the 1974 survey was carried forward to the 1977 survey and utilised as a basis for analysis of relevant participating organisation formal salary range midpoint data. Thus, the standardisation of structures in terms of salary group/range numbers, as illustrated in TABLE 27, was once again utilised as a reliable basis for data analysis.

In short, then, on the assumption that the structural standardisation of participating organisation pay structures is completed on a one-time basis, the standardised structures in TABLE 27 have been carried forward and utilised as a basis for data analysis in TABLE 49.

The Standardisation Base: Although the same core-base of participating organisations were agreeable to providing data for Structural Comparison System purposes, the exclusion of Kodak South Africa (Pty) Ltd., as a survey participant prevented the analysis of this organisation's salary range data. However, the exclusion of this organisation was offset by the fact that Ford Motor Company of South Africa (Pty) Ltd., was agreeable to providing formal salary range data for analysis purposes. Fortunately a structural standardisation of this organisation's pay structure had been completed during the 1974 survey.

Thus, the Structural Comparison System survey community consisted of the following organisations, as drawn from the survey organisation's 1977 survey community:

1. Caltex Oil (S.A.) (Pty) Ltd.
2. Shell Oil South Africa (Pty) Ltd.
3. B.P. Southern Africa (Pty) Ltd.
4. International Business Machines South Africa (Pty) Ltd.
5. Ford Motor Company of South Africa (Pty) Ltd.
6. Total South Africa (Pty) Ltd.
7. Dunlop South Africa Ltd.
8. The South African Breweries Ltd.
9. Unilever South Africa (Pty) Ltd.
10. Mobil Oil Southern Africa (Pty) Ltd.

These organisations were required to supply copies of their established salary range structures as applicable at 1st May 1977, revealing minimum midpoint and maximum salary values for each range, as well as the number of ranges applicable to each pay structure. These base organisation formal salary range values are illustrated in the form of pay structures, as applicable at 1st May 1977, in Appendix III.

Compensation Data Analysis: As mentioned, the standardised labour grade hierarchies illustrated in TABLE 27 were once again utilised as a basis for the analysis of the relevant participating organisation salary range midpoints as applicable to the key labour grades (anchor points). The relevant midpoints, or anchor points, were drafted from the respective salary range structures illustrated in Appendix III, onto

tables representing a tabulation of total compensation midpoint data, as illustrated by TABLE 49. These total compensation figures consisted of base salary range midpoints adjusted by applicable bonus factors.

In this way the anchor position and supportive position data was presented in tabulation form such that Competitive Average Total Compensation Midpoints could be calculated for the purposes of establishing a Community Trend Line, and hence a competitive pay structure. Thus, utilising the same techniques and procedures as outlined in the Structural Comparison System Guide, a series of results were obtained as revealed by the following tables and figures.

TABLE 49
 TABULATION OF TOTAL COMPENSATION MIDPOINT DATA :
 STRUCTURAL COMPARISON : 1977

Survey Organisation Salary Groups	Competitive Total Compensation Midpoint : Monthly Base (Rand)									Competitive Av. Total Compensation Midpoint (Salary Group)
	Organisation A	Organisation B	Organisation C	Organisation D	Organisation E	Organisation F	Organisation G	Organisation H	Organisation I	
1	195	193	194	-	-	162	-	196	-	188
2	230	222	219	-	-	213	273	250	183	227
3	273	264	256	281	255	288	363	328	260	285
4	325	320	314	309	339	366	414	388	317	344
5	387	379	376	374	400	422	479	421	-	405
6	466	471	437	452	471	493	553	-	-	480
7	-	-	-	497	561	563	-	500	487	522
8	587	578	573	547	-	655	634	648	606	604
9	-	-	-	602	667	-	-	702	720	673
10	708	704	698	-	-	-	900	-	-	753
11	-	-	-	-	788	737	-	832	-	773
12	856	850	843	728	-	-	-	-	-	819
13	-	-	-	840	929	872	1 133	985	1 048	968
14	1 035	1 020	1 015	952	-	-	1 283	-	1 202	1 085
15	-	-	-	1 080	1 096	-	-	1 163	-	1 113
16	1 251	1 224	1 227	1 235	-	-	1 442	-	1 405	1 297

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TABLE 49 -- continued

TABULATION OF TOTAL COMPENSATION MIDPOINT DATA :

STRUCTURAL COMPARISON : 1977

Survey Organisation Salary Groups	Competitive Total Compensation Midpoint : Monthly Base (Rand)									Competitive Av. Total Compensation Midpoint (Salary Group)
	Organisation A	Organisation B	Organisation C	Organisation D	Organisation E	Organisation F	Organisation G	Organisation H	Organisation I	
17	-	-	-	1 412	-	-	1 617	1 384	-	1 471
18	1 514	1 528	1 530	1 616	1 436	-	1 825	-	1 633	1 583
19	-	-	-	1 734	-	-	2 050	-	-	1 892
20	1 881	1 873	1 872	2 021	1 712	-	2 308	1 943	1 909	1 940
21	-	-	-	2 351	1 986	-	2 592	2 278	-	2 302
22	2 336	2 341	2 334	2 690	2 343	-	2 917	2 699	2 204	2 483
23	-	-	-	3 163	-	-	3 283	-	-	3 223
24	2 934	2 927	2 920	3 713	2 765	-	3 692	3 190	3 325	3 183

NOTE:

1. In order to ensure confidentiality of salary data, participating organisations have been coded alphabetically.
2. Alphabetical coding of organisations in TABLE 27 and TABLE 49 are identical, except that, due to exclusion and inclusion of certain organisations, Organisation J in TABLE 27 refers to Organisation G in TABLE 49.
3. The above table contains compensation midpoint data for participating organisations as drawn from formal salary range midpoint data in Appendix III, adjusted by relevant bonus factors.
4. Organisation D has annual bonus factor included in salary ranges.
5. All other organisations pay Annual Christmas Bonuses of one month's salary.

FIGURE 10

COMMUNITY SALARY TREND LINE: STRUCTURAL COMPARISON SYSTEM: 1977

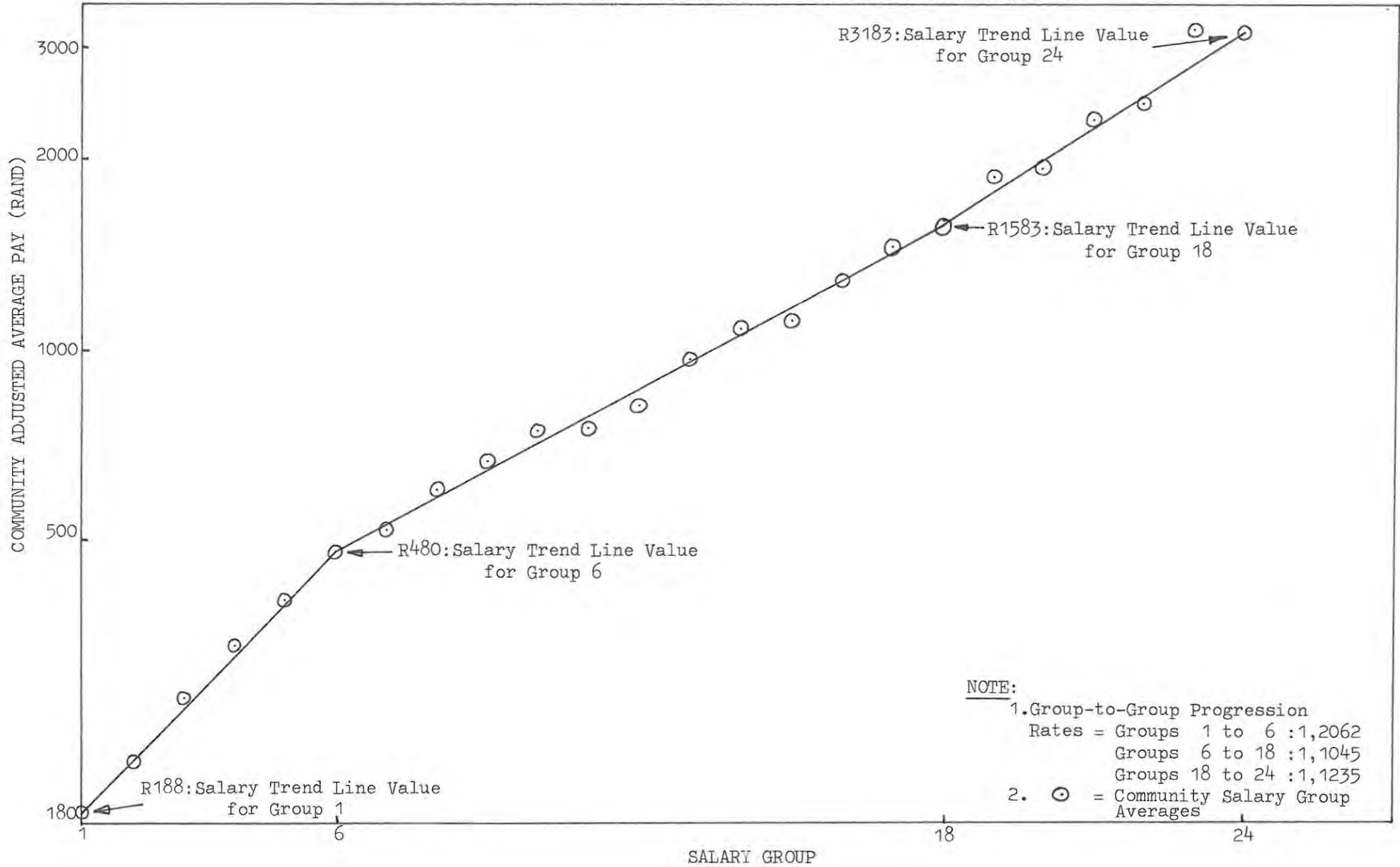


TABLE 51

COMPARISON OF RECOMMENDED PAY STRUCTURE TO PRESENT SURVEY ORGANISATION
PAY STRUCTURE : MONTHLY BASE : STRUCTURAL COMPARISON 1977

SALARY GROUP	RECOMMENDED STRUCTURE (MIDPOINTS : RAND)	PRESENT STRUCTURE (MIDPOINTS : RAND)	% RECOMMENDED VARIES FROM PRESENT
1	190	180	+ 5,6
2	227	212	+ 7,1
3	275	260	+ 5,8
4	330	317	+ 4,1
5	400	390	+ 2,6
6	480	477	+ 0,6
7	530	519	+ 2,1
8	585	563	+ 3,9
9	650	611	+ 6,4
10	715	664	+ 7,7
11	790	720	+ 9,7
12	875	782	+ 11,9
13	965	850	+ 13,5
14	1 065	923	+ 15,4
15	1 175	1 003	+ 17,1
16	1 300	1 090	+ 19,3
17	1 435	1 225	+ 17,1
18	1 585	1 376	+ 15,2
19	1 780	1 547	+ 15,1
20	2 000	1 737	+ 15,1
21	2 245	1 953	+ 15,0
22	2 520	2 195	+ 14,8
23	2 835	2 468	+ 14,9
24	3 185	2 772	+ 15,0
AVERAGE VARIANCE =			+ 10,6

NOTE:

- Average Variance = Groups 1 to 6 : + 4,3%
Groups 6 to 18 : + 9,4%
Groups 18 to 24 : +15,0%
- Recommended structure group-to-group progression rates = Groups 1 to 6 : 1,2062)
Groups 6 to 18 : 1,1045) *
Groups 18 to 24 : 1,1235)
- Present structure group-to-group progression rates = Groups 1 to 6 : 1,2256
Groups 6 to 16 : 1,0861
Groups 16 to 24 : 1,12396

* (Before midpoint adjustments to nearest R5).

TABLE 52

COMPARISON OF RECOMMENDED PAY STRUCTURE TO COMPETITIVE AVERAGE TOTAL
COMPENSATION MIDPOINTS : MONTHLY BASE : STRUCTURAL COMPARISON 1977

SALARY GROUP	RECOMMENDED STRUCTURE (MIDPOINTS: RAND)	COMPETITIVE AVERAGE TOTAL COMPENSATION (MIDPOINTS : RAND)	% RECOMMENDED MIDPOINT VARIES FROM COMPETITIVE AVERAGE TOTAL COMPENSATION MIDPOINT
1	190	188	+ 1,1
2	227	227	0,0
3	275	285	- 3,5
4	330	344	- 4,1
5	400	405	- 1,2
6	480	480	0,0
7	530	522	+ 1,5
8	585	604	- 3,1
9	650	673	- 3,4
10	715	753	- 5,1
11	790	773	+ 2,2
12	875	819	+ 6,8
13	965	968	- 0,3
14	1 065	1 085	- 1,8
15	1 175	1 113	+ 5,6
16	1 300	1 297	+ 0,2
17	1 435	1 471	+ 2,4
18	1 585	1 583	+ 0,1
19	1 780	1 892	- 5,9
20	2 000	1 940	+ 3,1
21	2 245	2 302	- 2,5
22	2 520	2 483	+ 1,5
23	2 835	-	-
24	3 185	3 185	+ 0,1
AVERAGE VARIANCE			= - 0,26

NOTE:

Group-to-group progression rates = Groups 1 to 6 : 1,2062)
 Groups 6 to 18 : 1,1045) *
 Groups 18 to 24 : 1,1235)

* (Before midpoint adjustments to nearest R5).

TABLE 53

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON SYSTEM : 1977

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
1	180	186	- 3,2	188	- 4,3	190	+ 2,1	+ 1,1	+ 5,6
2	212	221	- 4,1	227	- 6,6	227	+ 2,7	0,0	+ 7,1
3	260	270	- 3,7	285	- 5,3	275	+ 1,9	- 3,5	- 5,8
4	317	331	- 4,2	344	- 7,8	330	- 0,3	- 4,1	+ 4,1
5	390	391	- 0,3	405	- 3,7	400	+ 2,3	- 1,2	+ 2,6
6	477	472	+ 1,1	480	- 0,6	480	+ 1,7	0,0	+ 0,6
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 1 THROUGH 6 :							+ 1,7	- 1,3	+ 4,3

NOTE:

1. Present structure group-to-group progression rate = 22,6% (Groups 1 through 6).
2. Recommended structure group-to-group progression rate = 20,6% (Groups 1 through 6, before adjustments to nearest R5).

TABLE 53 -- continued

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON SYSTEM : 1977

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
6	477	472	+ 1,1	480	- 0,6	480	+ 1,7	0,0	+ 0,6
7	519	563	- 7,8	522	- 0,6	530	- 5,9	+ 1,5	+ 2,1
8	563	598	- 5,9	604	- 6,8	585	- 2,2	- 3,1	+ 3,9
9	611	-	-	673	- 9,2	650	-	- 3,4	+ 6,4
10	664	703	- 5,5	753	-11,8	715	+ 1,7	- 5,1	+ 7,7
11	720	737	- 2,3	773	- 6,9	790	+ 7,2	+ 2,2	+ 9,7
12	782	850	- 8,0	819	- 4,5	875	+ 2,9	+ 6,8	+11,9
13	850	-	-	968	-12,2	965	-	- 0,3	+13,5
14	923	1 023	- 9,8	1 085	-14,9	1 065	+ 4,1	- 1,8	+15,4
15	1 003	-	-	1 113	- 9,9	1 175	-	+ 5,6	+17,1
16	1 090	1 234	-11,7	1 297	-15,6	1 300	+ 5,3	+ 0,2	+19,3
17	1 225	-	-	1 471	-16,7	1 435	-	+ 2,4	+17,1
18	1 376	1 524	- 9,7	1 583	-13,1	1 585	+ 4,0	+ 0,1	+15,2
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 6 THROUGH 18 :							+ 2,1	+ 0,4	+ 9,4

NOTE:

1. Present structure group-to-group progression rate = 8,6% (Groups 6 through 16).
2. Recommended structure group-to-group progression rate = 10,5% (Groups 6 through 18, before adjustments to nearest R5).

TABLE 53 -- continued

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON SYSTEM : 1977

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
18	1 376	1 524	- 9,7	1 583	-13,1	1 585	+ 4,0	+ 0,1	+15,2
19	1 547	-	-	1 892	-18,2	1 780	-	- 5,9	+15,1
20	1 737	1 875	- 7,4	1 940	-10,5	2 000	+ 6,7	+ 3,1	+15,1
21	1 953	-	-	2 302	+15,2	2 245	-	- 2,5	+15,0
22	2 195	2 337	- 6,1	2 483	-11,6	2 520	+ 7,8	+ 1,5	+14,8
23	2 468	-	-	-	-	2 835	-	-	+14,9
24	2 772	2 927	- 5,3	3 183	-12,9	3 185	+ 8,8	+ 0,1	+15,0
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 18 THROUGH 24 :							+ 6,8	- 0,6	+15,0

NOTE:

1. Present structure group-to-group progression rate = 12,4% (Groups 16 through 24).
2. Recommended structure group-to-group progression rate = 12,4% (Groups 18 through 24, before adjustments to nearest R5).

TABLE 54

COSTS OF IMPLEMENTING RECOMMENDED STRUCTURE : STRUCTURAL COMPARISON 1977

SALARY GROUP	NO. OF EMPLOYEES IN SALARY GROUP	POTENTIAL COST BASED ON CHANGE IN MIDPOINT (RAND)	NO. OF SALARIES BELOW RECOMMENDED MINIMUM	COST TO ADJUST SALARIES TO RECOMMENDED MINIMUM (RAND)
1	541	5 410	-	-
2	299	4 485	6	114
3	113	1 695	2	33
4	368	4 784	5	118
5	324	3 240	7	1 281
6	139	417	3	258
7	255	2 805	31	1 109
8	192	4 224	5	163
9	81	3 159	2	55
10	230	11 730	21	1 193
11	46	3 220	14	720
12	64	5 952	14	775
13	81	9 315	-	-
14	52	7 384	-	-
15	59	10 148	1	62
16	19	3 990	-	-
17	16	3 360	-	-
18	11	2 299	-	-
19	7	1 631	-	-
20	7	1 841	-	-
21	3	876	-	-
22	1	325	-	-
23	2	734	-	-
24	1	413	-	-
TOTAL	2 908	93 437	111	5 881

II. Discussion

The calculated group-to-group progression rates based on the cut-off values revealed in FIGURE 10 indicate that an adjustment of +10,6% on the average would have been required to realign the survey organisation pay structure with competitive labour market rates. These group-to-group progression rates are revealed in TABLE 55.

TABLE 55

POST SURVEY RECOMMENDED GROUP-TO-GROUP PROGRESSION RATES :
STRUCTURAL COMPARISON SYSTEM : 1977

SALARY GROUP	CUT OFF VALUES (RAND)	GROUP-TO-GROUP PROGRESSION RATE
1	190)	. . .
6	480)	. . .
6	480)	. . .
18	1 585)	. . .
18	1 585)	. . .
24	3 185)	. . .
		1,2062
		1,1045
		1,1235

NOTE: These progression rates are applicable to trend line values prior to midpoint adjustments to the nearest R5.

Note may once again be made of the fact that the greatest upward trend in competitive rates had been indicated at the higher levels of the pay structure, as revealed by an average increase of +15,0% for salary groups eighteen to twenty-four, when comparing recommended structure midpoints with present survey organisation midpoints. Similar comparisons at the lower levels reveal an average increase of +4,3% for salary groups one to six, and an average of +9,4% for salary groups six to eighteen.

A determined effort had been made during this survey to ensure that the anchor positions established during the 1974 survey standardisation process at the executive levels of the pay structure were once again carefully re-evaluated for reliability purposes, and to ensure as broad a base as possible. However, due to the fact that the top salary groups, by nature of the work involved, contain a very limited range of positions, thus making the task of finding exact

intra-organisational position matches even more difficult, and due to the fact that certain organisations do not analyse executive positions in terms of normal job content facts, certain salary groups remain a problem with regard to broadness of base for community average midpoint calculation purposes.

Due to these reasons it may be noted that certain salary groups in the tabulation of total compensation midpoint data (TABLE 49), are not well represented, in terms of key range midpoint data, at the higher levels of the structure. For example, salary group twenty-three contains only two such key range midpoints, and as a result of the fact that both of the participating organisations involved tend to have established competitive midpoints which are generally higher than those of the remaining participating organisations, this has resulted in a competitive average total compensation midpoint for salary group twenty-three which is in fact higher than that for salary group twenty-four, the values being R3223 and R3183 respectively.

However, this does not necessarily reduce the reliability of either the standardisation process as a whole, or the salary group in particular. Due to the basic logic of the Structural Standardisation System, namely, that the total compensation midpoints contained within participating organisations' formal salary ranges represent those rates which are regarded as being the competitive going rate for the particular groups of positions involved, rather than an average of the actual salaries paid for each position within each group, it becomes absolutely necessary to take such rates into consideration, irrespective of whether or not such rates are generally higher or lower for any particular organisation. It is thus the overall trend of competitive rates indicated by the community salary trend line which is important rather than individual salary group rates. In this way, should a participating organisation reveal consistently high total compensation midpoints, this is bound to affect those salary groups which have fewer representative key range midpoints.

The abovementioned anomaly did not affect the general trend line, as indicated by the fact that the average percentage deviation of the trend line values from the actual total community averages, or the competitive average total compensation midpoints, is -0,4% excluding

salary group twenty-three, and +0,11% including salary group twenty-three, both of which fall within the range -0,50% to +0,50% as set by the Structural Comparison System Guide. (Chapter VIII, Phase III, Section VI).

A COMPARISON OF THE MIDPOINT SYSTEM RESULTS AND
THE STRUCTURAL COMPARISON SYSTEM RESULTS : 1977 SURVEY

I. Method of Comparison

The basis utilised for comparison purposes is similar to that utilised for the 1974 survey in that the various data has been tabulated and differences in various components revealed in the form of individual percentage deviations, as well as average deviations for relevant pay structure levels. This overall comparison is revealed in TABLE 56.

A graphical representation of the trend lines applicable to the two system competitive average total compensation midpoints is illustrated by FIGURE 11. Although these trend line values had been utilised as bases for the calculation of recommended structure midpoints for both systems, whereas such values had not been adjusted for the Midpoint System, during the 1974 analysis, it was still necessary to compare actual trend line values rather than recommended structure midpoint values as these trend line values are the representative bases of the competitive total compensation midpoints averages, or community averages. Further, these trend line values are utilised as a basis for midpoint value calculations and are simply adjusted to provide figures to the nearest R5, a factor which has minor effects in terms of a comparison basis.

II. Discussion

As a result of this overall comparison, it may be established that the Structural Comparison System trend line values are on the average 4,03% higher than those of the Midpoint System, whereas the actual competitive average total compensation midpoints are on the average 3,99% higher in the case of the Structural Comparison System. These averages once again emphasise the fact that the survey community under consideration was paying rates which were, on the average, $\pm 4,0\%$ lower than those rates regarded as being competitive "going rates" for the

labour market concerned, this observation being based on the underlying logic of the Structural Comparison System.

Scrutiny of the various levels of the pay structure reveals that once again the greatest difference between the two systems, with regard to trend line values, took place at the upper or management levels of the structure, such differences between individual figures providing an average figure of +5,2% for salary groups eighteen to twenty-four, as opposed to +4,5% for groups one to six, and +3,0% for groups six to eighteen, all such figures representing the average difference of the Structural Comparison System figures over the Midpoint System figures.

A further scrutiny of individual salary group differentials reveals that there are large differences between the two systems at salary groups one, two and three levels, indicating, once again, inconsistencies in pay policies applicable to the Non-White labour force. Assuming that the Structural Comparison System reflects the competitive labour market rates in the form of average formal salary range midpoints, as opposed to a reflection of adjusted actual/midpoint rates by the Midpoint System, it may then be assumed that the participating organisations were generally paying rates which were too low for those categories of employees falling within the lower three labour grades. This once again reveals inconsistent pay policies when considering previous survey figures.

It may further be noted that individual salary group discrepancies between the two systems increase at a gradual but consistent rate from salary group six to salary group twenty-four, such discrepancies being 1,1% at salary group six, 5,0% at salary group eighteen, and 5,5% at salary group twenty-four. This consistently widening gap between the two trend lines is emphasised by the group-to-group progression rates, such rates being 10,5% for the Structural Comparison System, as opposed to 10,1% for the Midpoint System, for salary groups six to eighteen, and 12,4% and 12,3% respectively for salary groups eighteen to twenty-four.

These figures further underline the discrepancies between the two systems at the upper management and executive levels; the higher the salary group within the pay structure, the greater the discrepancy. However, these differences are not significantly large, as emphasised by the differences in terms of real monetary values for salary group

TABLE 56

COMPARISON OF TREND LINE VALUES, RECOMMENDED STRUCTURE MIDPOINTS,
OIL COMMUNITY AVERAGES AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON vs. MIDPOINT SYSTEMS : 1977

Salary Group	Midpoint System Trend Line Values (Rand)	Struc.Comp. Trend Line Values (Rand)	Struc.Comp. Trend Line Values compared to Midpoint Trend Line Values (% Deviation)	Midpoint System Midpoints (Rand)	Struc.Comp. System Midpoints (Rand)	Struc.Comp. Midpoints compared to Midpoint Midpoints (% Deviation)	Midpoint System Oil Community Averages (Rand)	Struc.Comp. System Oil Community Averages (Rand)	Struc.Comp. Oil Community Averages compared to Midpoint Oil Community Averages (% Deviation)	Midpoint System Total Community Averages (Rand)	Struc.Comp. System Total Community Averages (Rand)	Struc.Comp. Total Community Averages compared to Midpoint Total Community Averages (% Deviation)
1	174	188	+ 8,0	175	190	+ 8,6	182	186	+ 2,2	174	188	+ 8,0
2	213	227	+ 6,6	215	227	+ 5,6	236	221	- 6,4	219	227	+ 3,7
3	260	274	+ 5,4	260	275	+ 5,8	277	270	- 2,5	251	285	+13,5
4	318	330	+ 3,8	320	330	+ 3,1	352	331	- 6,0	353	344	+ 2,5
5	389	398	+ 2,3	390	400	+ 2,6	400	391	- 2,3	396	405	+ 2,3
6	475	480	+ 1,1	475	480	+ 1,1	481	472	- 1,9	475	480	+ 1,1
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 1 THROUGH 6 :			+ 4,5				+ 4,5				- 2,8	+ 3,9

NOTE:

1. Midpoint System group-to-group progression rate = 22,25% (Groups 1 through 6, before adjustments to nearest R5).
2. Structural Comparison System group-to-group progression rate = 20,6% (Groups 1 through 6, before adjustments to nearest R5).

TABLE 56 -- continued

COMPARISON OF TREND LINE VALUES, RECOMMENDED STRUCTURE MIDPOINTS,
OIL COMMUNITY AVERAGES AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON vs. MIDPOINT SYSTEMS : 1977

Salary Group	Midpoint System Trend Line Values (Rand)	Struc.Comp. Trend Line Values (Rand)	Struc.Comp. Trend Line Values compared to Midpoint Trend Line Values (% Deviation)	Midpoint System Midpoints (Rand)	Struc.Comp. System Midpoints (Rand)	Struc.Comp. Midpoints compared to Midpoint Midpoints (% Deviation)	Midpoint System Oil Community Averages (Rand)	Struc.Comp. System Oil Community Averages (Rand)	Struc.Comp. Oil Community Averages compared to Midpoint Oil Community Averages (% Deviation)	Midpoint System Total Community Averages (Rand)	Struc.Comp. System Total Community Averages (Rand)	Struc.Comp. Total Community Averages compared to Midpoint Total Community Averages (% Deviation)
6	475	480	+ 1,1	475	480	+ 1,1	481	472	- 1,9	475	480	+ 1,1
7	523	530	+ 1,3	525	530	+ 1,0	516	563	+ 9,1	517	522	+ 1,0
8	576	586	+ 1,7	575	585	+ 1,7	532	598	+12,4	602	604	+ 0,3
9	634	647	+ 2,1	635	650	+ 2,4	680	-	-	664	673	+ 1,4
10	698	714	+ 2,3	700	715	+ 2,1	662	703	+ 6,2	679	753	- 3,8
11	769	789	+ 2,6	770	190	+ 2,6	771	737	- 4,4	823	773	- 6,1
12	846	872	+ 3,1	845	875	+ 3,6	905	850	- 6,1	883	819	- 7,2
13	932	963	+ 3,3	930	965	+ 3,8	867	-	-	878	968	+10,3
14	1 026	1 063	+ 3,6	1 025	1 065	+ 3,9	908	1 023	+12,7	947	1 085	+14,6
15	1 129	1 174	+ 4,0	1 130	1 175	+ 4,0	1 049	-	-	1 133	1 113	- 1,8
16	1 244	*1 297	+ 4,3	1 245	1 320	+ 4,4	1 094	1 234	+12,8	1 172	1 297	+10,7
17	369	1 432	+ 4,6	1 370	435	+ 4,7	216	-	-	1 275	1 471	+15,4
18	1 507	1 583	+ 5,0	1 505	1 585	+ 5,3	1 404	1 524	+ 8,5	1 506	1 583	+ 5,1
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 6 THROUGH 18 :			+ 3,0			+ 3,1			+ 5,5			+ 3,2

NOTE:

1. Midpoint System group-to-group progression rate = 10,1% (Groups 6 through 18, before adjustments to nearest R5).
2. Structural Comparison System group-to-group progression rate = 10,5% (Groups 6 through 18, before adjustments to nearest R5).

TABLE 56 - - continued

COMPARISON OF TREND LINE VALUES, RECOMMENDED STRUCTURE MIDPOINTS,
OIL COMMUNITY AVERAGES AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

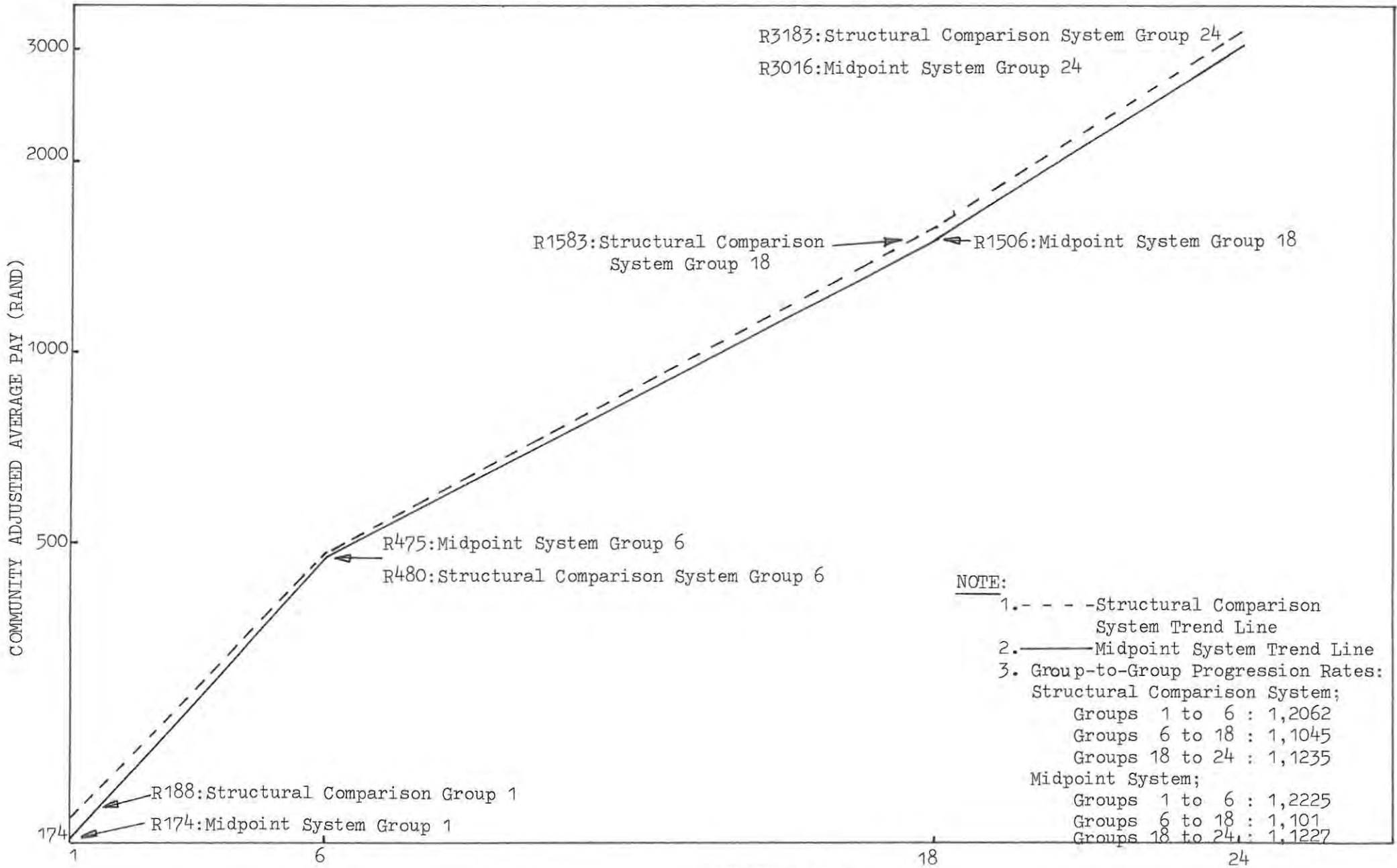
STRUCTURAL COMPARISON vs. MIDPOINT SYSTEMS : 1977

Salary Group	Midpoint System Trend Line Values (Rand)	Struc.Comp. Trend Line Values (Rand)	Struc.Comp. Trend Line Values compared to Midpoint Trend Line Values (% Deviation)	Midpoint System Midpoints (Rand)	Struc.Comp. System Midpoints (Rand)	Struc.Comp. Midpoints compared to Midpoint Midpoints (% Deviation)	Midpoint System Oil Community Averages (Rand)	Struc.Comp. System Oil Community Averages (Rand)	Struc.Comp. Oil Community Averages compared to Midpoint Oil Community Averages (% Deviation)	Midpoint System Total Community Averages (Rand)	Struc.Comp. System Total Community Averages (Rand)	Struc.Comp. Total Community Averages compared to Midpoint Total Community Averages (% Deviation)
18	1 507	1 583	+ 5,0	1 505	1 585	+ 5,3	1 404	1 524	+ 8,5	1 506	1 583	+ 5,1
19	1 692	1 778	+ 5,1	1 690	1 780	+ 5,3	1 748	-	-	1 740	1 892	+ 8,1
20	1 900	1 997	+ 5,1	1 900	2 000	+ 5,3	-	1 875	-	1 991	1 940	- 2,6
21	2 133	2 244	+ 5,2	2 130	2 245	+ 5,4	1 916	-	-	2 039	2 302	+12,9
22	2 395	2 520	+ 5,2	2 395	2 520	+ 5,2	2 556	2 337	- 8,6	2 477	2 483	+ 0,2
23	2 688	2 832	+ 5,4	2 690	2 835	+ 5,4	2 532	-	-	2 572	-	-
24	3 016	3 183	+ 5,5	3 015	3 185	+ 5,6	2 746	2 927	+ 6,6	3 016	3 183	+ 5,5
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 18 THROUGH 24 :			+ 5,2			+ 5,4			+ 2,2			+ 5,0

NOTE:

1. Midpoint Systems group-to-group progression rate = 12,3% (Groups 18 through 24, before adjustments to nearest R5).
2. Structural Comparison System group-to-group progression rate = 12,4% (Groups 18 through 24, before adjustments to nearest R5).

FIGURE 11
 COMPARISON OF MIDPOINT SYSTEM AND STRUCTURAL
 COMPARISON SYSTEM SALARY TREND LINES : 1977



twenty-four, the Structural Comparison competitive average total compensation midpoint being R167 greater than the corresponding Midpoint System value. The discrepancies had further, on the average, dropped from 7,3% to 5,2% for salary groups eighteen to twenty-four when comparing the 1974 survey figures with the 1977 survey figures. Nevertheless, due to various factors, the collection of reliable and valid data at the upper management levels is a potential problem area as stressed by the discrepancies between the two systems for both the 1974 and the 1977 surveys.

As mentioned, although attempts had been made to increase both the base of comparability as well as the overall reliability in terms of consistency of results obtained, the naturally restricted range of executive positions available for comparison purposes, plus the difficulties involved in analysing and evaluating such positions have posed problems which proved difficult to overcome.

However, although a comparison basis between the respective systems may be provided subsequent to each survey, it is impossible at this stage to utilise either system results as a yardstick against which a measure of success for the results of the other system may be determined. Thus, on this basis, a simple comparison is provided, and degree of reliability as a measure of success is provided in a comparison with national survey organisation (Peromnes and Urwick) data in a forthcoming chapter.

Generally, then, it may be stated that, although the Structural Comparison System trend line values and recommended midpoint values were generally higher than the corresponding Midpoint System rates, these discrepancies tended to be consistent at all levels of the pay structure, as emphasised by the lack of fluctuations between various salary group differentials. On such a basis, and on the basis of a lack of any particularly large discrepancy, it may be assumed that the Structural Comparison System has provided reliable results in terms of the comparison with the Midpoint System results for the survey years 1974 and 1977.

A further comparison may be made on the basis of potential immediate costs to the survey organisation of implementing the respective

recommended structures. Due to the fact that the Structural Comparison System recommended structure midpoints were on the average $\pm 4,0\%$ higher than those of the Midpoint System recommended structure midpoints, the potential cost of implementing such a structure, as based on actual changes in midpoints would have been R42 665 greater than the potential cost of implementing the Midpoint System recommended structure on the same basis. Further, the actual costs involved in adjusting those salaries falling below the respective salary range minima would have been R2 282 greater for the Structural Comparison System.

Both costs represent fairly significant increases over the Midpoint System implementation costs. However, these cost emphasise potential costs of implementation, and are greater for the Structural Comparison System only as a result of the fact that such recommended structure midpoints were greater on the average in terms of monetary value. On this basis, then, for the potential costs, as based on midpoint adjustments, to be higher by R42 665, one would have to assume that all employees are paid at the midpoint rate, and this is highly unrealistic. A further factor which reduces the potential costs, as based on change in Midpoint, for the Midpoint System is that the recommended structure indicates the need for negative adjustments to certain salary groups at the lower levels of the pay structure. An example of such a case is salary group one, which contains by far the greatest number of employees, and a negative adjustment indicates no potential cost. On the other hand, the Structural Comparison recommended structure does not indicate the need for negative adjustments, and as a result the potential cost applicable to the salary groups in question provides an immediate increase of R15 247 over the total applicable to the Midpoint System.

Thus, although this cost analysis does provide a basis for comparison in that it emphasises the extent of discrepancy between the two systems in terms of monetary value to the survey organisation, this does not necessarily indicate that the one system is more acceptable in terms of providing a more realistic analysis of market trends and rates. The most important long run cost to the organisation is represented by the number of man-hours required to complete successive surveys, and the basic aim of the Structural Comparison System is to greatly reduce such a number, and thereby reduce long-run costs.

CHAPTER XI

THE 1980 SALARY SURVEY

The Midpoint System and Structural Comparison System Guides were once again utilised as salary survey bases during the first quarter of 1980, such that results obtained from each could be compared.

The same methods and techniques as utilised during the 1974 and 1980 surveys were once again applied in order to collect and analyse data for reliability purposes on a cross-survey comparison basis. However, whereas both the number and quality of the survey positions and participating organisations were altered subsequent to the 1974 survey, these variables were unchanged for the 1980 survey. In this way the same survey community participating organisations and survey positions as applicable to the 1977 survey were once again utilised for the 1980 survey.

SCOPE OF SURVEY

I. Geographic Area

The Republic of South Africa.

II. Date of Competitive Data

January 1980.

III. Participating Organisations

The participating organisations which formed the survey community for the 1977 survey once again formed a basis for comparison of competitive market rates. These organisations are listed below (details are supplied in Chapter X):

1. African Explosives and Chemical Industries Limited.
2. Anglo-American Corporation of South Africa Limited.
3. B.P. Southern Africa (Pty) Limited.

4. Caltex Oil (S.A.) (Pty) Limited.
5. Dunlop South Africa Limited.
6. Ford Motor Company of South Africa (Pty) Limited.
7. International Business Machines South Africa (Pty) Limited.
8. Massey Ferguson (South Africa) Limited.
9. Metal Box South Africa Limited.
10. Mobil Oil Southern Africa (Pty) Limited.
11. Shell Oil South Africa (Pty) Limited.
12. The South African Breweries Limited.
13. South African Petroleum Refineries (Pty) Limited.
14. Stewarts and Lloyds of South Africa Limited.
15. Total South Africa (Pty) Limited.
16. Unilever South Africa (Pty) Limited.

IV. Survey Positions

Those positions utilised for comparison purposes during the 1977 survey were once again used as survey positions, as listed in Chapter X.

The decision to maintain the same survey community organisations and survey positions was made on the assumption that a more reliable basis for comparison of data, would thus be provided, and in this way facilitate a reliability calculation.

RATIONALE

Once again the survey organisation's policy of conducting a comprehensive compensation survey on a three-yearly basis resulted in the necessity to conduct a survey during 1980. Further, an agreement between certain Oil Community organisations to the effect that each such organisation conduct a comprehensive survey on a regular cyclical basis in order to provide survey data for utilisation by its partner Oil Community organisations, emphasised the necessity for the survey organisation to fulfill this obligation, 1980 being the year in which the cycle was once again completed for the survey organisation.

Further, salary surveys completed by other organisations indicated a significant movement in salary levels over the previous twelve months, and due to the fact that these movements had not been taken into account

by the survey organisation, it thus became necessary to survey the national labour market in order to assess the competitiveness of the pay structure. As an example of these salary movements TABLE 57 illustrates the movements of average base salaries during the period January 1979 to January 1980, for the national community.

TABLE 57

AVERAGE BASE SALARY MOVEMENTS : JANUARY 1979 to JANUARY 1980

LEVEL	% AVERAGE BASE SALARY ADJUSTMENT
TOP EXECUTIVES	12,8
SENIOR MANAGEMENT	7,2
MIDDLE MANAGEMENT	9,6
SUPERVISORY AND SKILLED	7,0
LOWER AND SEMI-SKILLED	3,9
UNSKILLED	16,6
OVERALL	8,6

BACKGROUND

The survey organisation pay structure was adjusted according to competitive rates analysed during the 1977 salary survey, and received subsequent adjustments as follows, these adjustment factors being based on the Consumer Price Index (C.P.I.) and survey data received from Oil Community organisations conducting annual surveys.

1. August 1977 : +6,2% (groups one to twenty-four; as a result of the 1977 survey).
2. August 1978 : +8,0% (groups one to twenty-four).
3. March 1979 : +6,0% (groups one to twenty-four).

As a result of these adjustments, the survey organisation pay structure, prior to the 1980 salary survey, is illustrated in TABLE 58.

TABLE 58

SURVEY ORGANISATION PAY STRUCTURE AS AT JANUARY 1980 : MONTHLY BASE

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	160	200	240
2	197	246	295
3	238	298	358
4	304	380	456
5	357	446	535
6	435	544	653
7	481	601	721
8	526	658	790
9	582	727	872
10	641	801	961
11	705	881	1 057
12	774	967	1 160
13	852	1 065	1 278
14	938	1 173	1 408
15	1 035	1 294	1 553
16	1 612	1 425	1 742
17	1 254	1 568	1 882
18	1 378	1 723	2 068
19	1 548	1 935	2 322
20	1 740	2 175	2 510
21	1 950	2 438	2 926
22	2 194	2 742	3 290
23	2 464	3 080	3 696
24	2 762	3 452	4 142

NOTE:

1. Group-to-group progression rates : Groups 1 to 6 = 1,2225
Groups 6 to 18 = 1,101
Groups 18 to 24 = 1,1227
2. 50% spread in range.
3. All ranges for groups 1 to 19 include Christmas Bonus of one month's salary.

The following table provides an analysis of general salary adjustments and pay structure adjustments applicable to the various participating organisations for the period May 1977 to January 1980.

TABLE 59

SURVEY COMMUNITY ORGANISATIONS : COMPOUNDED PAY STRUCTURE ALTERATIONS
AND GENERAL SALARY INCREASES OF PARTICIPATING ORGANISATIONS :
AUGUST 1977 to JANUARY 1980

ORGANISATION	% COMPOUNDED PAY STRUCTURE ALTERATION	% COMPOUNDED GENERAL SALARY INCREASE
B.P.	23,5	23,5
CALTEX	21,8	21,8
SHELL	23,5	23,5
TOTAL	19,5	not applicable
SAPREF	23,5	23,5
MOBIL	21,6	20,0
A.E. & C.I.	29,8	not applicable
AFROX	18,0	not applicable
ANGLO-AMERICAN	not applicable	not applicable
DUNLOP	25,8	not applicable
FORD	23,5	19,5
IBM	28,8	not applicable
MASSEY FERGUSON	26,7	26,7
METAL BOX	23,0	23,0
S.A. BREWERIES	19,0	not applicable
STEWARTS & LLOYDS	22,0	not applicable
UNILEVER	28,8	28,0

These individual organisational movements in both pay structure and actual salary levels indicate the diverse range of alterations made by competitors within the same labour market, and stress the need for successive salary surveys to gauge the actual average movement of both structures and salaries.

These statistics are further supplemented by data provided by a national survey conducted by a professional survey organisation, which

indicates the following trends in base salaries for different groups of employees, for the period September 1978 to September 1979¹:

1. White males, excluding artisans : + 8,5%
2. Artisans : +11,0%
3. White females : + 4,6%
4. Black males : +10,2%

An analysis of the Consumer Price Index revealed from September 1978 to September 1979 an upward adjustment of 12,9%. When considering such an increase and the corresponding increase in the survey organisation's actual salaries, statistics reveal that actual salaries were lagging behind the C.P.I. since the 1977 survey. Whereas the survey organisation's major competitors had been maintaining an extremely high correlation between movements of the Consumer Price Index and movement of their own pre-tax salaries for the period 1971 to 1976 (as illustrated by TABLE 40), this trend tended to change over the period 1975 to 1979, as base salary alterations began to lag behind the rapidly increasing C.P.I. The movements in base salaries of participating organisations as opposed to movements in the C.P.I. for the period 1975 to 1979 are revealed in TABLE 60.

TABLE 60

PARTICIPATING ORGANISATION SALARY INCREASES VERSUS CONSUMER PRICE INDEX INCREASES : 1975 - 1979

YEAR	% INCREASE IN ACTUAL SALARIES	% CUMULATIVE INCREASE IN ACTUAL SALARIES	% INCREASE IN C.P.I.	% CUMULATIVE INCREASE IN C.P.I.
1975	BASE YEAR			
1976	8,3	8,3	11,1	11,1
1977	9,9	19,0	11,1	24,0
1978	5,9	26,0	12,1	39,1
1979	9,6	38,1	12,9	57,1

On the basis of these statistics the survey organisation management agreed on the necessity for a comprehensive salary survey, not only to determine a competitive adjustment to the pay structure, but also to gauge the effectiveness in overall pay structure adjustments in

¹"Peromnes Salary Survey - September 1979" (Johannesburg: Peromnes Salary Surveys (Pty) Limited., September, 1979).

relation to changes in the Consumer Price Index. The significance of adjustments to both pay structures and actual salary levels of survey community organisations could in this way be collectively analysed by utilisation of both the existing survey organisation Midpoint System survey guide, as well as the Structural Comparison System survey guide in order to determine the necessary degree of adjustment on an average competitive rate basis. These competitive "going rates" would further indicate the degree of similarity between these actual rate changes and corresponding changes in the C.P.I.

Once again, such a survey provides a basis for comparison between the existing survey system and the Structural Comparison System in order to further determine the degree of reliability and consistency in both the gathering and analysis of survey data.

THE MIDPOINT SYSTEM SURVEY : 1980

I. Method and Results

The method utilised for data gathering, weighting and adjusting, and analysis was exactly the same as that utilised during the 1977 survey.

The survey organisation pre-survey group-to-group progression rates, as indicated in TABLE 61, were utilised as actual salary data adjustment factors as applicable to those participating organisation survey position salary data requiring adjustments in terms of weighting by multiples of one-half of the survey organisation salary groups.

TABLE 61

SURVEY ORGANISATION PRE-SURVEY GROUP-TO-GROUP PROGRESSION RATES : 1980

SALARY GROUP	PROGRESSION RATES
1 to 6	1,2225
6 to 18	1,101
18 to 24	1,1227

The salary data adjusted accordingly for each position applicable to each participating organisation was then tabulated in the form of adjusted total compensation midpoints in order to allow the calculation of

competitive average total compensation midpoints for each relevant survey organisation salary groups. These midpoints were then plotted on semi-log graph paper, and a regression analysis established a community trend line from the resulting scattergram. This community trend line thus allowed calculation of new progression rates.

This sequence of results and calculations is presented in the following tabulations and illustrations.

TABLE 62

TABULATION OF ADJUSTED TOTAL COMPENSATION MIDPOINT DATA :

MIDPOINT SYSTEM : 1980

Salary Group	Position Title	Total Compensation Midpoint : Monthly Base (Rand)																Competitive Av. Total Compensation Midpoint (Salary Group)	
		Org. A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
1	Labourer	219	251	227	-	193	217	195	235	230	218	-	200	242	215	198	250	221	
2	Fork Lift Truck Op. Artisan's Helper	259	292	262	-	253	252	252	-	293	297	343	276	242	251	218	298	275	
		259	338	262	-	253	-	261	-	293	-	-	276	242	304	-	298		
		AVERAGE	259	315	262	-	253	252	257	-	293	297	343	276	242	278	218		298
3	Chauffeur Junior Clerk Rep. Machine Op.	304	338	311	-	343	299	236	341	352	297	-	296	250	304	303	432	322	
		372	398	-	-	-	-	-	372	-	-	420	401	-	372	413	409		
		304	398	311	-	253	298	279	241	352	297	343	276	-	372	218	377		
		AVERAGE	304	378	311	-	298	299	258	318	352	297	381	324	250	349	311		406
4	Key Punch Op. Copy Typist	372	398	377	-	457	426	-	-	416	409	-	370	-	-	344	432	405	
		-	398	377	-	457	450	-	-	416	383	381	415	401	416	438	344		397
		AVERAGE	372	398	377	-	457	438	-	416	400	395	415	386	416	438	344		415
5	Clerk Telephonist Lab. Technician	542	471	495	-	435	441	476	520	493	446	551	505	534	430	396	432	464	
		445	471	447	-	471	476	426	389	416	381	503	370	430	372	345	494		
		542	471	447	-	-	-	-	493	416	521	-	-	-	456	608	494		
		AVERAGE	510	471	463	-	453	459	451	467	442	449	527	438	482	419	450		473
6	Warehouseman Assigned Stone	600	569	560	-	553	596	-	-	-	446	551	575	570	-	608	455	553	
		600	569	589	-	619	746	655	656	594	521	606	527	-	569	498	657		
		AVERAGE	600	569	560	-	553	596	-	-	-	446	551	575	570	-	608		455
7	Senior Clerk Comp. Oper. I Chairman's Sec.	600	618	654	-	720	640	-	642	588	667	667	647	-	569	575	657	622	
		542	569	560	-	619	-	771	-	493	667	734	585	493	-	608	657		
		731	654	748	-	720	746	706	748	650	720	734	684	718	684	677	657		
		AVERAGE	571	594	607	-	670	640	771	642	541	667	701	616	493	569	592		657
8	Programmer II Sen. Lab. Tech.	542	654	654	-	-	-	-	-	650	720	795	-	-	-	677	692	693	
		-	618	-	-	720	816	-	656	588	720	-	-	753	708	726	692		
		AVERAGE	542	636	654	-	720	816	-	656	619	780	795	-	753	708	702		692

TABLE 62 -- continued

TABULATION OF ADJUSTED TOTAL COMPENSATION MIDPOINT DATA :

MIDPOINT SYSTEM : 1980

Salary Group	Position Title	Total Compensation Midpoint : Monthly Base (Rand)																Competitive Av. Total Compensation Midpoint (Salary Group)
		Org. A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
9	Asst. Purchasing	795	-	-	-	876	-	771	716	825	730	-	-	740	-	-	692	777
	Asst. Ledger	-	789	796	-	-	747	-	700	650	730	872	-	-	-	755	692	
	Programmer I	650	789	780	-	720	795	800	-	825	915	872	749	-	851	857	754	
	AVERAGE	723	789	788	-	798	771	786	708	767	792	872	749	740	851	805	713	
10	Sales Rep. Gen. Tr.	678	789	780	-	834	814	839	-	825	730	-	808	835	1 031	755	754	848
	Empl. Rel. Asst.	827	789	-	-	-	-	-	-	-	-	-	-	-	-	-	754	
	Payroll Supervisor	-	-	-	841	876	881	-	1 096	825	915	-	-	-	-	-	808	
	AVERAGE	752	789	780	841	855	848	839	1 096	825	823	-	808	835	1 031	831	772	
11	Engineering Asst.	827	823	960	-	957	-	1 017	853	-	994	-	1 061	-	851	985	808	929
	Prog./Analyst I	997	955	960	-	957	1 051	-	-	825	994	1 296	-	996	-	985	850	
	Warehouse Sup.	-	997	-	666	-	-	909	-	-	666	-	1 029	-	-	754	650	
	AVERAGE	912	925	960	666	957	1 051	963	853	825	885	1 296	1 045	996	851	908	769	
12	Section Head	-	955	831	-	957	889	-	912	825	1 083	-	968	813	887	-	939	966
	Empl. Rel. Asst.	1 152	955	1 149	-	-	1 051	-	-	-	994	1 351	924	996	-	-	850	
	Chief Draughtsman	-	955	-	900	-	1 051	1 045	-	1 062	994	-	-	1 073	887	857	939	
	AVERAGE	1 152	955	990	900	957	997	1 045	912	944	1 024	1 351	946	961	887	857	909	
13	District Mgr.	956	955	1 045	-	1 037	-	1 005	-	1 274	1 083	-	1 230	-	-	-	984	1 034
	Maint. Zone Sup.	-	955	-	1 008	-	1 051	1 134	-	1 095	915	-	1 017	1 061	-	-	917	
	AVERAGE	956	955	1 045	1 008	1 037	1 051	1 069	-	1 185	999	-	1 124	1 061	-	-	984	
	AVERAGE	956	955	1 045	1 008	1 037	1 051	1 069	-	1 185	999	-	1 124	1 061	-	-	984	
14	Transport Co-ord.	956	1 101	1 101	-	876	1 147	-	-	-	-	-	-	-	1 174	1 145	-	1 142
	Financial Analyst	-	1 100	-	-	-	-	-	-	-	1 173	1 482	1 198	1 172	-	-	1 200	
	Legal Advisor	1 094	-	1 101	-	1 054	-	-	1 051	-	-	-	-	-	-	1 185	984	
	AVERAGE	1 025	1 101	1 101	-	965	1 147	-	1 051	-	1 173	1 482	1 198	1 172	1 174	1 165	1 092	
15	Empl. Rel. Mgr.	1 253	1 205	-	-	-	1 320	-	1 438	1 258	-	1 694	-	1 068	1 225	1 144	1 266	1 201
	Chief Chemist	-	1 205	-	-	1 256	-	-	1 366	1 157	-	-	-	1 223	-	984	1 309	
	Instr./Elect. Sup.	-	1 256	-	1 295	-	1 360	-	-	1 485	-	-	-	-	-	-	1 424	
	Island View "A" Sup.	-	1 310	-	1 124	-	-	1 353	-	-	-	-	-	-	-	-	1 175	
	AVERAGE	1 253	1 244	-	1 210	1 256	1 340	1 353	1 402	1 300	-	1 694	-	1 146	1 225	1 064	1 294	

TABLE 62 -- continued

TABULATION OF ADJUSTED TOTAL COMPENSATION MIDPOINT DATA :

MIDPOINT SYSTEM : 1980

Salary Group	Position Title	Total Compensation Midpoint : Monthly Base (Rand)																Competitive Av. Total Compensation Midpoint (Salary Group)
		Org. A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
16	Asst. Controller	1 466	1 457	1 443	-	1 389	1 420	-	1 506	1 517	1 633	1 694	-	-	1 528	1 423	1 528	1 514
	Data Proc. Mgr.	1 621	1 637	1 627	-	1 389	-	-	-	1 457	1 633	1 939	-	1 392	-	1 388	1 516	
	Chief Maint. Sup.	-	1 457	-	1 324	-	1 608	1 495	-	1 517	1 705	-	-	-	-	1 423	1 716	
	AVERAGE	1 544	1 517	1 535	1 324	1 389	1 514	1 495	1 506	1 497	1 657	1 817	-	1 392	1 528	1 411	1 587	
17	Real Estate Mgr.	1 706	1 457	1 667	-	1 300	-	-	-	-	-	1 867	-	-	-	-	-	1 625
	Transport Mgr.	1 734	-	1 873	-	1 472	-	-	-	-	-	-	-	-	-	-	-	
	Chief Proj. Eng.	-	1 765	-	1 325	-	1 620	1 606	1 927	-	1 651	-	-	-	-	1 498	1 516	
	AVERAGE	1 720	1 611	1 770	1 325	1 386	1 620	1 606	1 927	-	1 651	1 867	-	-	-	1 498	1 516	
18	Treasurer	1 918	1 869	-	-	1 390	1 811	-	1 808	1 828	1 826	2 081	-	-	-	-	1 601	1 818
	Sec. and Legal Controller	1 813	1 457	1 851	-	-	-	-	1 782	-	2 081	-	-	-	1 715	1 564	1 800	
	Empl. Rel. Mgr.	1 750	1 875	1 698	-	1 497	1 598	1 816	1 754	1 913	1 957	-	-	-	-	-	1 800	
	AVERAGE	2 347	-	2 081	-	-	2 075	-	2 084	-	1 838	2 425	-	-	1 804	1 724	-	
	AVERAGE	1 957	1 734	1 877	-	1 444	1 828	1 816	1 857	1 871	1 874	2 195	-	-	1 760	1 644	1 733	
19	Resale Sales Mgr.	2 038	1 984	1 908	-	1 939	1 861	-	-	-	2 273	-	-	-	2 073	-	1 797	2 087
	Systems & Com. Mgr.	2 089	1 985	2 179	-	2 069	1 923	1 884	-	2 283	2 164	2 337	2 174	2 440	-	1 814	2 027	
	Tech. Mgr.	-	2 230	-	-	-	923	-	-	-	-	-	-	-	-	-	-	
	AVERAGE	2 064	2 066	2 044	-	2 004	1 902	1 884	-	2 283	2 219	2 337	2 174	2 440	2 073	1 814	1 912	
20	Resale Sales Mgr.	2 059	2 230	2 179	-	2 069	-	-	-	2 283	2 273	-	-	-	2 031	2 139	2 209	2 239
	Asst. Accts. & Fin. Mgr.	-	-	-	-	-	-	-	2 075	-	-	2 821	2 093	2 315	2 630	2 139	-	
	AVERAGE	2 089	2 230	2 179	-	2 069	-	-	2 075	2 283	2 273	2 821	2 093	2 315	2 331	2 139	2 209	
21	Regional Mgr.	-	2 150	-	-	-	2 410	2 447	-	2 577	-	-	-	-	2 333	2 293	2 503	2 368
	Operations Mgr.	2 456	2 376	2 350	-	2 069	-	-	-	-	2 273	-	-	-	-	-	2 643	
	Helicopters Mgr.	2 932	2 417	2 314	-	2 382	2 392	2 874	3 143	3 725	2 714	3 228	2 106	-	2 340	2 437	2 955	
	AVERAGE	2 456	2 263	2 350	-	2 069	2 410	2 447	-	2 577	2 273	-	-	-	2 333	2 293	2 573	
22	Acc. & Fin. Mgr.	3 203	2 670	3 252	-	2 892	-	2 851	2 687	2 677	2 682	3 228	2 587	2 793	2 602	2 058	2 901	2 791
23	Manufacturing Mgr.	-	2 795	-	3 109	-	3 184	2 865	-	3 194	3 068	-	2 647	-	-	-	3 240	3 034
24	Marketing Mgr.	3 203	3 314	3 614	-	2 920	3 578	-	-	-	-	4 456	3 994	-	3 645	2 922	-	3 516

FIGURE 12

COMMUNITY SALARY TREND LINE: MIDPOINT SYSTEM: 1980

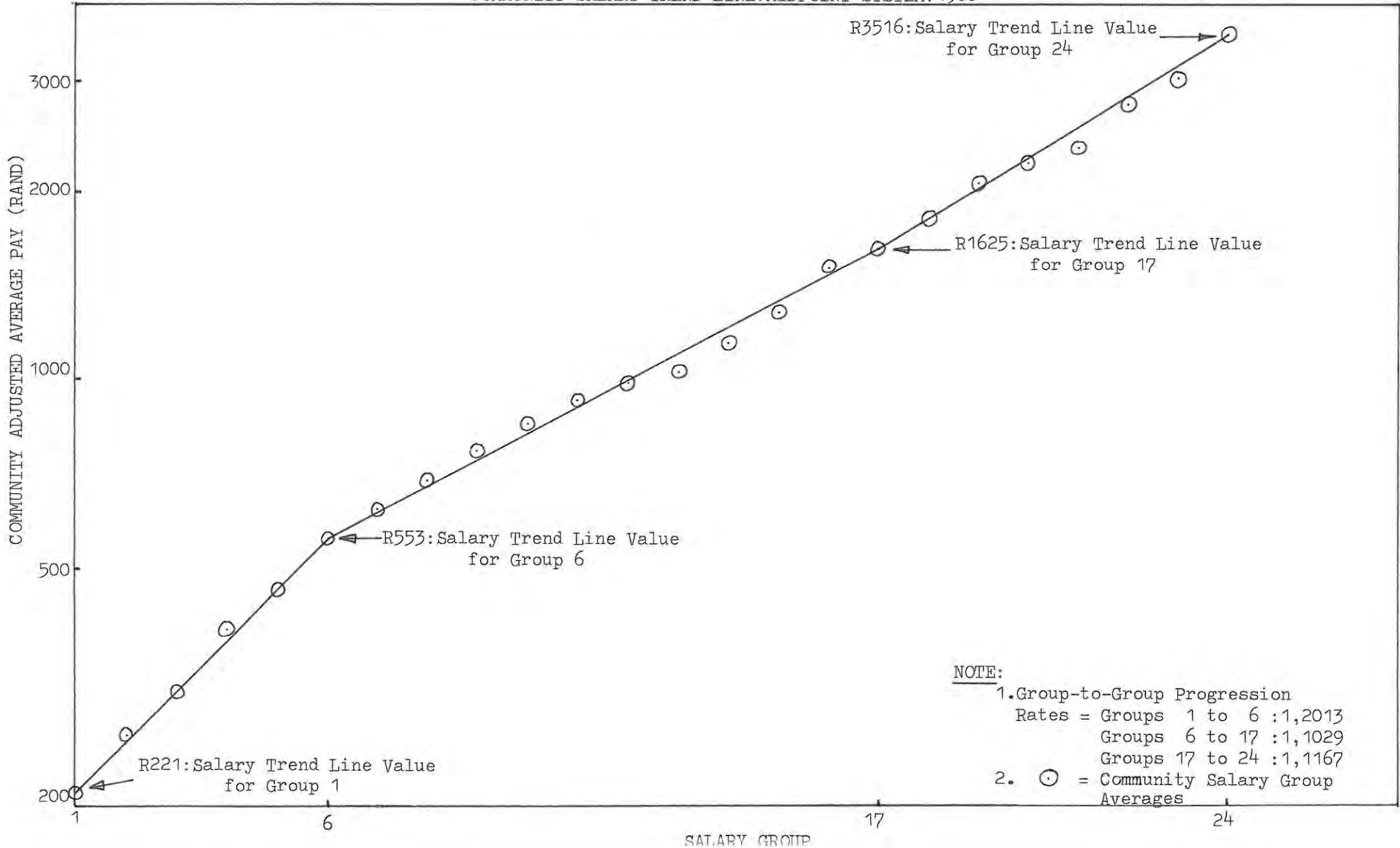


TABLE 63

SURVEY ORGANISATION RECOMMENDED PAY STRUCTURE :
MONTHLY BASE : MIDPOINT SYSTEM 1980

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	180	225	270
2	212	265	318
3	256	320	384
4	308	385	462
5	368	460	552
6	444	555	666
7	488	610	732
8	540	675	810
9	596	745	894
10	656	820	984
11	724	905	1 086
12	796	995	1 194
13	880	1 100	1 320
14	968	1 210	1 452
15	1 068	1 335	1 602
16	1 180	1 475	1 770
17	1 300	1 625	1 950
18	1 452	1 815	2 178
19	1 620	2 025	2 430
20	1 808	2 260	2 712
21	2 020	2 525	3 030
22	2 256	2 820	3 384
23	2 520	3 150	3 780
24	2 812	3 515	4 218

NOTE :

- Group-to-group progression rates = Groups 1 to 6 : 1,2013) Before midpoint
Groups 6 to 17 : 1,1029) adjustments to
Groups 17 to 24 : 1,1167) nearest R5.
- 50% spread in range.
- All ranges for groups 1 to 19 include Christmas Bonus of one month's salary.

TABLE 64

COMPARISON OF RECOMMENDED PAY STRUCTURE TO PRESENT SURVEY
 ORGANISATION PAY STRUCTURE : MONTHLY BASE : MIDPOINT SYSTEM 1980

SALARY GROUP	RECOMMENDED STRUCTURE (MIDPOINTS : RAND)	PRESENT STRUCTURE (MIDPOINTS :RAND)	% RECOMMENDED VARIES FROM PRESENT
1	225	200	+ 12,5
2	265	246	+ 7,7
3	320	298	+ 7,4
4	385	380	+ 1,3
5	460	446	+ 3,1
6	555	544	+ 2,0
7	610	601	+ 1,5
8	675	658	+ 2,6
9	745	727	+ 2,5
10	820	801	+ 2,4
11	905	881	+ 2,7
12	995	967	+ 2,9
13	1 100	1 065	+ 3,3
14	1 210	1 173	+ 3,2
15	1 335	1 294	+ 3,2
16	1 475	1 425	+ 3,5
17	1 625	1 568	+ 3,6
18	1 815	1 723	+ 5,3
19	2 025	1 935	+ 4,7
20	2 260	2 175	+ 3,9
21	2 525	2 438	+ 3,6
22	2 820	2 742	+ 2,8
23	3 150	3 080	+ 2,3
24	3 515	3 452	+ 1,8
AVERAGE VARIANCE =			+ 3,7

NOTE :

- Average variance = Groups 1 to 6 : +5,7%
 Groups 6 to 17 : +2,8%
 Groups 17 to 24 : +3,5%
 - Recommended Structure group-to-group
 progression rates = Groups 1 to 6 : 1,2013)
 Groups 6 to 17 : 1,1029) *
 Groups 17 to 24 : 1,1167)
 - Present Structure group-to-group
 progression rates = Groups 1 to 6 : 1,2225)
 Groups 6 to 18 : 1,101) *
 Groups 18 to 24 : 1,1227)
- * (Before midpoint adjustments to nearest R5).

TABLE 65

COMPARISON OF RECOMMENDED PAY STRUCTURE TO COMPETITIVE AVERAGE TOTAL
COMPENSATION MIDPOINTS : MONTHLY BASE : MIDPOINT SYSTEM 1980

SALARY GROUP	RECOMMENDED STRUCTURE (MIDPOINTS : RAND)	COMPETITIVE AVERAGE TOTAL COMPENSATION (MIDPOINTS : RAND)	% RECOMMENDED MIDPOINT VARIES FROM COMPETITIVE AVERAGE TOTAL COMPENSATION MIDPOINT
1	225	221	+ 1,8
2	265	275	- 3,6
3	320	322	- 0,6
4	385	405	- 4,9
5	460	464	- 0,9
6	555	553	+ 0,4
7	610	622	- 1,9
8	675	693	- 2,6
9	745	777	- 4,1
10	820	848	- 3,3
11	905	929	- 2,6
12	995	986	+ 0,9
13	1 100	1 034	+ 6,4
14	1 210	1 142	+ 6,0
15	1 335	1 291	+ 3,4
16	1 475	1 514	- 2,6
17	1 625	1 625	0,0
18	1 815	1 818	- 0,2
19	2 025	2 087	- 3,0
20	2 260	2 239	+ 0,9
21	2 525	2 368	+ 6,6
22	2 820	2 791	+ 1,0
23	3 150	3 034	+ 3,8
24	3 515	3 516	0,0
AVERAGE VARIANCE =			+ 0,04

NOTE:

Group-to-group progression rates = Groups 1 to 6 : 1,2013
 Groups 6 to 17 : 1,1029
 Groups 17 to 24 : 1,1167

TABLE 66

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

MIDPOINT SYSTEM : 1980

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
1	200	222	- 9,9	221	- 9,5	225	+ 1,4	+ 1,8	+12,5
2	246	272	- 9,6	275	-10,5	265	- 2,6	- 3,6	+ 7,7
3	298	323	- 7,7	322	- 7,5	320	- 0,3	- 0,6	+ 7,4
4	380	401	- 5,2	405	- 6,2	385	- 4,0	- 4,9	+ 1,3
5	446	474	- 3,7	464	- 3,9	460	- 3,0	- 0,9	+ 3,1
6	544	571	- 4,7	553	- 1,6	555	- 2,8	+ 0,4	+ 2,0
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 1 THROUGH 6 :							- 1,9	- 1,3	+ 5,7

NOTE:

1. Present structure group-to-group progression rate = 22,3% (Groups 1 through 6).
2. Recommended structure group-to-group progression rate = 20,1% (Groups 1 through 6, before adjustments to nearest R5).

TABLE 66 -- continued

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

MIDPOINT SYSTEM : 1980

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
6	544	571	- 4,7	553	- 1,6	555	- 2,8	+ 0,4	+ 2,0
7	601	611	- 1,6	622	- 3,4	610	- 0,2	- 1,9	+ 1,5
8	658	638	+ 3,1	693	+ 5,1	675	+ 5,8	- 2,6	+ 2,6
9	727	775	- 6,2	777	- 6,4	745	+ 4,0	- 4,1	+ 2,5
10	801	803	- 0,2	848	- 5,5	820	+ 2,1	- 3,3	+ 2,4
11	881	884	- 0,3	929	- 5,2	905	+ 2,4	- 2,6	+ 2,7
12	967	991	- 2,4	986	- 1,9	995	+ 0,4	+ 0,9	+ 2,9
13	1 065	1 000	+ 6,5	1 034	+ 3,0	1 100	+10,0	+ 6,4	+ 3,3
14	1 173	1 048	+11,9	1 142	+ 2,6	1 210	+15,5	+ 6,0	+ 3,2
15	1 204	1 241	- 3,0	1 291	- 6,7	1 335	+ 7,8	+ 3,4	+ 3,2
16	1 425	1 462	- 2,5	1 514	- 5,9	1 475	+ 0,9	- 2,6	+ 3,5
17	1 568	1 562	+ 0,4	1 625	- 3,5	1 625	+ 4,0	0,0	+ 3,6
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 6 THROUGH 17 :							+ 4,2	0,0	+ 2,8

NOTE:

1. Present structure group-to-group progression rate = 10,1% (Groups 6 through 18).
2. Recommended structure group-to-group progression rate = 10,3% (Groups 6 through 17, before adjustments to nearest R5).

TABLE 66 -- continued

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

MIDPOINT SYSTEM : 1980

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
17	1 568	1 562	+ 0,4	1 625	- 3,5	1 625	+ 4,0	0,0	+ 3,6
18	1 723	1 753	- 1,7	1 818	- 5,2	1 815	+ 3,5	- 0,2	+ 5,3
19	1 935	2 045	- 5,4	2 087	- 7,3	2 025	- 1,0	- 3,0	+ 4,7
20	2 175	2 142	+ 1,5	2 239	- 2,9	2 260	+ 5,5	+ 0,9	+ 3,9
21	2 438	2 285	+ 6,7	2 368	+ 3,0	2 525	+10,5	+ 6,6	+ 3,6
22	2 742	3 004	- 8,7	2 791	+ 1,8	2 820	- 6,1	+ 1,0	+ 2,8
23	3 080	2 952	+ 4,3	3 034	+ 1,5	3 150	+ 6,7	+ 3,8	+ 2,3
24	3 452	3 263	+ 5,8	3 516	- 1,8	3 515	+ 7,7	0,0	+ 1,8
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 17 THROUGH 24 :							+ 3,9	+ 1,1	+ 3,5

NOTE:

1. Present structure group-to-group progression rate = 12,3% (Groups 18 through 24).
2. Recommended structure group-to-group progression rate = 11,7% (Groups 17 through 24, before adjustments to nearest R5).

TABLE 67

COSTS OF IMPLEMENTING RECOMMENDED STRUCTURE : MIDPOINT SYSTEM 1980

SALARY GROUP	NO. OF EMPLOYEES IN SALARY GROUP	POTENTIAL COST BASED ON CHANGE IN MIDPOINT (RAND)	NO. OF SALARIES BELOW RECOMMENDED MINIMUM	COST TO ADJUST SALARIES TO RECOMMENDED MINIMUM (RAND)
1	529	13 225	-	-
2	220	4 180	8	55
3	119	2 618	-	-
4	340	1 700	8	42
5	352	4 928	9	38
6	141	1 551	9	69
7	250	2 250	25	205
8	194	3 298	9	109
9	88	1 584	7	63
10	244	4 636	15	150
11	45	1 080	3	51
12	63	1 764	9	99
13	88	3 080	2	138
14	55	2 035	3	52
15	58	2 378	-	-
16	19	950	1	36
17	16	1 552	-	-
18	11	1 012	-	-
19	7	630	-	-
20	7	595	-	-
21	3	261	-	-
22	1	78	-	-
23	2	160	-	-
24	1	63	-	-
TOTAL	2 853	55 608	108	1 107

II. Discussion

The recommended group-to-group progression rates as calculated from the community trend line provided the basis for a recommended pay structure which indicated an average upward adjustment of 3,7% in order to realign the survey organisation pay structure with community competitive rates of pay. These recommended progression rates are revealed in TABLE 68.

TABLE 68
POST SURVEY RECOMMENDED GROUP-TO-GROUP PROGRESSION
RATES : MIDPOINT SYSTEM 1980

SALARY GROUP	CUTOFF VALUES (RAND)	GROUP-TO-GROUP PROGRESSION RATES
1	225) . . .	1,2013
6	555) . . .	
6	555) . . .	1,1029
17	1 625) . . .	
17	1 625) . . .	1,1167
24	3 515) . . .	

NOTE: As applicable before midpoint adjustments to nearest R5.

These progression rates result in a pay structure which differs from the existing survey organisation pay structure to a greater extent at the lower levels. For example, the recommended structure midpoint for salary group one is 12,5% higher than that of the present structure. This fact conforms with the trends established during the 1974 and 1977 salary surveys, namely, that there tends to be greater movement in salaries and wages at the lower levels of the pay structures, as exemplified by the high fluctuations at these levels over the survey years. This may be attributable to the realisation by participating organisations during the early 1970's that there was a necessity to improve the basic rates payable to the Non-White worker, the majority of whom fall into the unskilled and semi-skilled labour categories, which form the basis of the lower levels of the pay structure. This realisation and subsequent reaction and over-reaction resulted in far greater fluctuations at these levels as opposed to other levels, especially at the salary group one level.

Note may be made of the fact that the smallest change in midpoint values has taken place at the executive levels, as exemplified by the change in midpoint from present to recommended structure by only 1,8% for salary group twenty-four. This minor movement is opposed to the statistics of the 1977 survey, which resulted in an alteration of 8,8% for salary group twenty-four. However, although the progression rate is once again fairly high for the lower levels of the structure, and certainly much higher than those applicable to the middle and upper levels, a trend which has once again been constant throughout successive survey years, both the lower level and the upper level 1980 survey recommended progression rates have dropped by 2,1% and 0,6% respectively.

The overall tendency to improve the lot of the Non-White worker is once again highlighted by the fact that the change in midpoints from present to recommended structure is significantly higher for groups one to six, which contain approximately 83% of the Non-White labour force of the survey organisation, than for either groups six to seventeen or for groups seventeen to twenty-four, the average changes for these three sections being 5,7% as opposed to 2,8% and 3,3% respectively. This trend is even further emphasised by the fact that the recommended structure midpoints are in fact lower in value than the actual Oil Community averages for groups one to six by an average of -1,9% for 1980 and -5,3% for 1977, statistics which are as a result of the overreaction of international oil organisations to the Non-White situation as a result of overseas Head Office pressure to rapidly escalate salaries of this section of the labour force.

An analysis of the potential cost to the survey organisation of adapting the recommended structure, as based on the changes in midpoint values indicates that, although the average recommended alteration to the overall structure is only 3,7% as opposed to the 1977 recommended alteration of 6,2%, the cost figure is higher by R4 836, a fact which is attributable to the 1977 recommended negative adjustments for salary groups one to three.

THE STRUCTURAL COMPARISON SYSTEM SURVEY : 1980

I. Method and Results

The Structural Comparison System Guide was once again utilised to

analyse the data applicable to the standardised structures of TABLE 27 which was once again carried forward as the basis for comparison purposes.

It was not necessary to utilise the structural standardisation procedure phase of the guide, as this standardisation had been completed during the 1974 survey and thoroughly tested for reliability during the 1977 survey. As stressed, this standardisation procedure is to be completed on a "one-time" basis, and should prove to be effective for successive surveys. As a result then, the standardisation of participating organisation pay structures as illustrated in TABLE 27, completed during the 1974 survey, was once again utilised during the 1980 survey. In effect, the preparatory phases of the Structural Comparison System Guide have been completed for the survey organisation, and the logic upon which the whole system is based effectively comes into operation in the reduction of time and cost factors for the 1980 survey. Thus, basically the final phase (Chapter VII, Phase V) of the guide was utilised as a basis for utilisation of relevant sections of the overall guide.

The Standardisation Base: In order to ensure simplicity of application and to utilise the same structural standardisations as employed during the 1977 survey, the same organisations which participated in the 1977 survey were once again utilised as a survey community base for the Structural Comparison survey of 1980. These organisations are as follows:

1. Caltex Oil (S.A.) (Pty) Limited.
2. Shell Oil South Africa (Pty) Limited.
3. B.P. Southern Africa (Pty) Limited
4. International Business Machines South Africa (Pty) Limited.
5. Ford Motor Company of South Africa (Pty) Limited.
6. Total South Africa (Pty) Limited.
7. Dunlop South Africa Limited.
8. The South African Breweries Limited.
9. Unilever South Africa (Pty) Limited.
10. Mobil Oil Southern Africa (Pty) Limited.

Once again these organisations were requested to supply copies of

their established salary range structures as applicable at 1st January 1980, revealing minimum, midpoint and maximum salary values for each range, as well as the number of ranges applicable to each pay structure. These base salary range values are illustrated in the form of pay structures in Appendix III.

Compensation Data Analysis: TABLE 27 standardised labour grade hierarchies were utilised as a basis for the analysis of the relevant participating organisation salary range midpoints. These midpoints were drafted from the respective salary range structures illustrated in Appendix III, adjusted by relevant bonus factors, and tabulated for analysis, as illustrated by TABLE 69.

Competitive Average Total Compensation Midpoints were then calculated, a Community Trend Line established from these midpoints plotted on semi-log graph paper, and finally a recommended pay structure for the survey organisation calculated from the trend line values. This series of results is revealed by the following tables and figures.

TABLE 69

TABULATION OF TOTAL COMPENSATION MIDPOINT DATA :

STRUCTURAL COMPARISON : 1980

Survey Organisation Salary Groups	Competitive Total Compensation Midpoint : Monthly Base (Rand)									Competitive Av. Total Compensation Midpoint (Salary Group)
	Organisation A	Organisation B	Organisation C	Organisation D	Organisation E	Organisation F	Organisation G	Organisation H	Organisation I	
1	251	227	230	-	-	193	229	230	-	227
2	292	262	259	-	-	253	336	294	215	273
3	338	311	304	343	330	343	383	385	304	338
4	398	377	373	377	446	435	452	456	372	410
5	471	447	445	456	521	503	571	495	-	489
6	569	544	542	551	615	586	657	-	456	565
7	-	-	-	606	720	671	-	588	570	631
8	682	682	678	667	-	780	754	761	708	714
9	-	-	-	734	843	-	-	824	851	813
10	823	831	827	-	-	-	1 071	-	-	888
11	-	-	-	808	994	876	-	977	1 031	937
12	997	1 002	998	888	-	-	-	-	-	971
13	-	-	-	1 008	1 173	1 038	1 349	1 157	1 225	1 158
14	1 205	1 202	1 201	1 142	-	-	1 527	-	1 407	1 281

TABLE 69 -- continued

TABULATION OF TOTAL COMPENSATION MIDPOINT DATA :

STRUCTURAL COMPARISON : 1980

Survey Organisation Salary Groups	Competitive Total Compensation Midpoint : Monthly Base (Rand)									Competitive Av. Total Compensation Midpoint (Salary Group)
	Organisation A	Organisation B	Organisation C	Organisation D	Organisation E	Organisation F	Organisation G	Organisation H	Organisation I	
15	-	-	-	1 296	1 383	-	-	1 367	-	1 348
16	1 457	1 443	1 453	1 482	-	-	1 716	-	1 643	1 532
17	-	-	-	1 694	-	-	1 923	1 627	-	1 748
18	1 766	1 770	1 812	1 939	1 926	-	2 172	-	1 910	1 899
19	-	-	-	2 081	-	-	2 438	-	-	2 260
20	2 150	2 210	2 219	2 425	2 273	-	2 747	2 284	-	2 330
21	-	-	-	2 821	2 682	-	3 083	2 677	-	2 815
22	2 670	2 762	2 770	3 228	-	-	3 470	3 171	2 578	2 949
23	-	-	-	3 796	-	-	3 908	-	-	3 852
24	3 315	3 453	3 460	4 456	3 735	-	4 394	3 748	4 279	3 855

NOTE:

1. In order to ensure confidentiality of data, participating organisations have been coded alphabetically.
2. Alphabetical coding of organisations in TABLE 49 and TABLE 69 are identical.
3. The above table contains compensation midpoint data as drawn from formal salary range midpoint data in Appendix III, adjusted by relevant bonus factors.
4. Organisation D has annual bonus factor included in salary ranges.
5. All other organisations pay Annual Christmas Bonuses of one month's salary.

FIGURE 13

COMMUNITY SALARY TREND LINE: STRUCTURAL COMPARISON SYSTEM: 1980

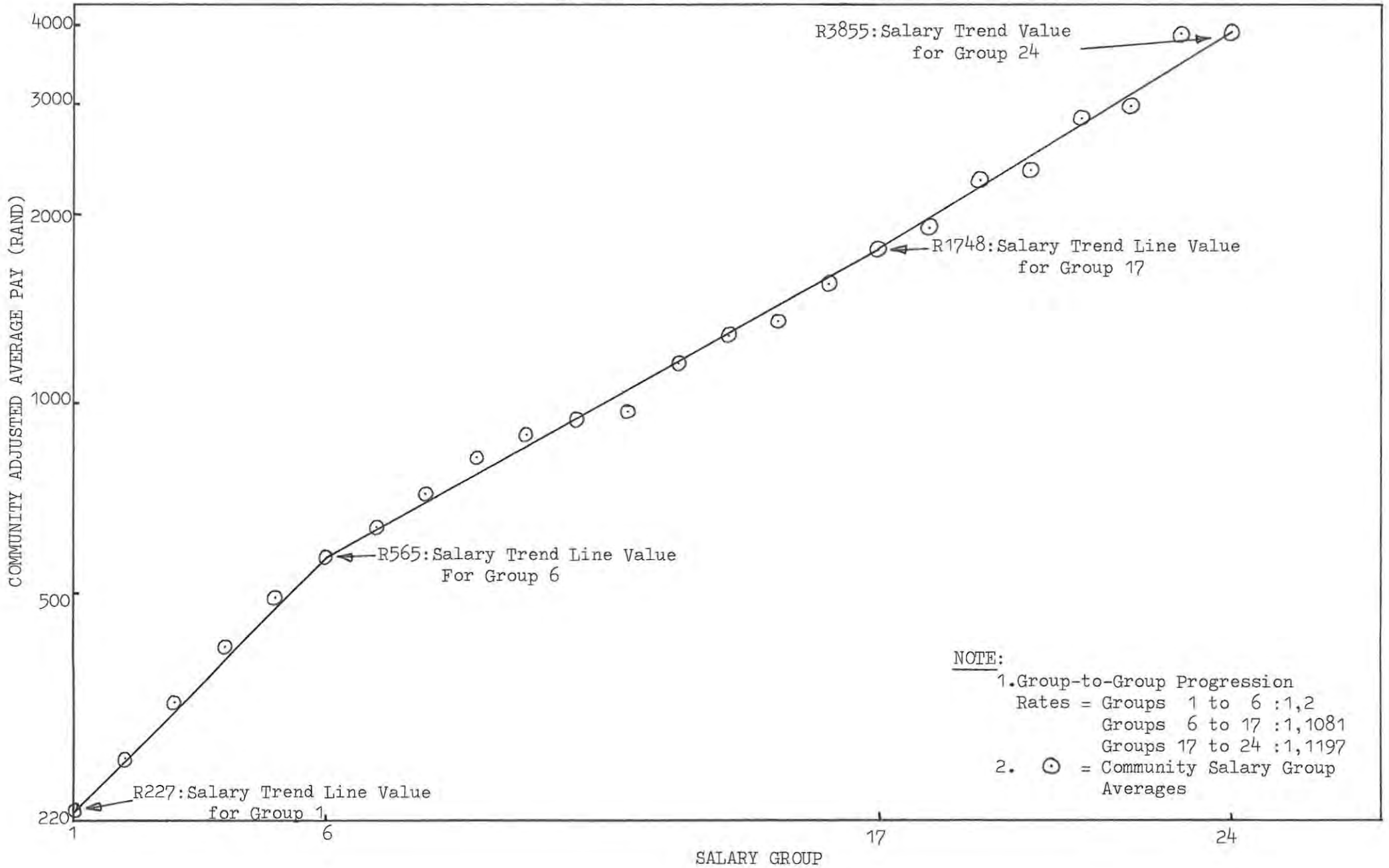


TABLE 70

SURVEY ORGANISATION RECOMMENDED PAY STRUCTURE :
MONTHLY BASE : STRUCTURAL COMPARISON 1980

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	184	230	276
2	216	270	324
3	264	330	396
4	316	395	474
5	376	470	564
6	452	565	678
7	500	625	750
8	556	695	834
9	616	770	924
10	684	855	1 026
11	756	945	1 134
12	836	1 045	1 254
13	928	1 160	1 392
14	1 028	1 285	1 542
15	1 140	1 425	1 710
16	1 264	1 580	1 896
17	1 400	1 750	2 100
18	1 564	1 955	2 346
19	1 752	2 190	2 628
20	1 964	2 455	2 946
21	2 196	2 745	3 294
22	2 460	3 075	3 690
23	2 756	3 445	4 134
24	3 084	3 855	4 626

NOTE:

1. Group-to-group progression rate: Groups 1 to 6 = 1,2)
 Groups 6 to 17 = 1,1081) *
 Groups 17 to 24 = 1,1197)

* (Before midpoint adjustments to nearest R5).

2. 50% spread in range.
 3. All ranges for groups 1 to 19 include annual Christmas Bonus of one month's salary.

TABLE 71

COMPARISON OF RECOMMENDED PAY STRUCTURE TO PRESENT SURVEY ORGANISATION
PAY STRUCTURE : MONTHLY BASE : STRUCTURAL COMPARISON 1980

SALARY GROUP	RECOMMENDED STRUCTURE (MIDPOINTS : RAND)	PRESENT STRUCTURE (MIDPOINTS : RAND)	% RECOMMENDED VARIES FROM PRESENT
1	230	200	+ 15,0
2	270	246	+ 9,8
3	330	298	+ 10,7
4	395	380	+ 3,9
5	470	446	+ 5,4
6	565	544	+ 3,9
7	625	601	+ 4,0
8	695	658	+ 5,6
9	770	727	+ 5,9
10	855	801	+ 6,7
11	945	881	+ 7,3
12	1 045	967	+ 8,1
13	1 160	1 065	+ 8,9
14	1 285	1 173	+ 9,5
15	1 425	1 294	+ 10,1
16	1 580	1 425	+ 10,9
17	1 750	1 568	+ 11,6
18	1 955	1 723	+ 13,5
19	2 190	1 935	+ 13,2
20	2 455	2 175	+ 12,9
21	2 745	2 438	+ 12,6
22	3 075	2 742	+ 12,1
23	3 445	3 080	+ 11,9
24	3 855	3 452	+ 11,7

NOTE:

- Average Variance = Groups 1 to 6 : +8,1%
Groups 6 to 17 : +7,7%
Groups 17 to 24 : +12,4%
- Recommended structure group-to-group
progression rates = Groups 1 to 6 : 1,2)
Groups 6 to 17 : 1,1081) *
Groups 17 to 24 : 1,1197)
- Present structure group-to-group
progression rates = Groups 1 to 6 : 1,2225)
Groups 6 to 18 : 1,101) *
Groups 18 to 24 : 1,1227)

NOTE: * (before 1977 midpoint adjustments to nearest R5).

TABLE 72

COMPARISON OF RECOMMENDED PAY STRUCTURE TO COMPETITIVE AVERAGE TOTAL COMPENSATION MIDPOINTS : MONTHLY BASE : STRUCTURAL COMPARISON 1980

SALARY GROUP	RECOMMENDED STRUCTURE (MIDPOINTS: RAND)	COMPETITIVE AVERAGE TOTAL COMPENSATION (MIDPOINTS : RAND)	% RECOMMENDED MIDPOINT VARIES FROM COMPETITIVE AVERAGE TOTAL COMPENSATION MIDPOINT
1	230	227	+ 1,3
2	270	273	- 1,1
3	330	338	- 2,4
4	395	410	- 3,7
5	470	489	- 3,9
6	565	565	0,0
7	625	631	- 1,0
8	695	714	- 2,7
9	770	813	- 5,3
10	855	888	- 3,7
11	945	937	+ 0,9
12	1 045	971	+ 7,6
13	1 160	1 158	+ 0,2
14	1 285	1 281	+ 0,3
15	1 425	1 348	+ 5,7
16	1 580	1 532	+ 3,1
17	1 750	1 748	+ 0,1
18	1 955	1 899	+ 2,9
19	2 190	2 260	- 3,1
20	2 455	2 330	+ 5,4
21	2 745	2 815	- 2,5
22	3 075	2 949	+ 4,3
23	3 445	-	-
24	3 855	3 855	0,0
AVERAGE VARIANCE =			+ 0,1

NOTE:

Group-to-group progression rates = Groups 1 to 6 : 1,2)
 Groups 6 to 17 : 1,1081) *
 Groups 17 to 24 : 1,1197)

* (Before midpoint adjustments to nearest R5).

TABLE 73

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON SYSTEM : 1980

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present - Midpoints (% Deviation)
1	200	225	-11,1	227	-11,9	230	+ 2,2	+ 1,3	+15,0
2	246	267	- 7,9	273	- 9,9	270	+ 1,1	- 1,1	9,8
3	298	324	- 8,0	338	-11,8	330	+ 1,9	- 2,4	+10,7
4	380	396	- 4,0	410	- 7,3	395	- 0,3	- 3,7	+ 3,9
5	446	467	- 4,5	489	- 8,9	470	- 0,6	- 3,9	+ 5,4
6	544	560	- 2,9	565	- 3,7	565	+ 1,0	0,0	+ 3,9
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 1 THROUGH 6 :							+ 0,9	- 1,6	+ 8,1

NOTE:

1. Present structure group-to-group progression rate = 22,3% (Groups 1 through 6).
2. Recommended structure group-to-group progression rate = 20,0% (Groups 1 through 6, before adjustments to nearest R5).

TABLE 73 -- continued

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON SYSTEM : 1980

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
6	544	560	- 2,9	565	- 3,7	565	+ 1,0	0,0	+ 3,9
7	601	671	-10,4	631	- 4,8	625	- 6,9	- 1,0	+ 4,0
8	658	706	- 6,8	714	- 7,8	695	- 1,6	- 2,7	+ 5,6
9	727	-	-	813	-10,6	770	-	- 5,3	+ 5,9
10	801	827	- 3,1	888	- 9,8	855	+ 3,4	- 3,7	+ 5,7
11	881	876	+ 0,6	937	- 6,0	945	+ 7,9	+ 0,9	+ 6,3
12	967	999	- 3,2	971	- 0,4	1 045	+ 4,5	+ 7,6	+ 8,1
13	1 065	1 038	+ 2,6	1 158	+ 0,6	1 160	+ 2,1	+ 0,2	+ 8,9
14	1 173	1 203	- 2,5	1 281	- 8,4	1 285	+ 6,8	+ 0,3	+ 9,5
15	1 294	-	-	1 348	- 4,0	1 425	-	+ 5,7	+10,1
16	1 425	1 451	- 1,8	1 532	- 2,4	1 580	+ 8,9	+ 3,1	+10,9
17	1 568	-	-	1 748	-10,3	1 750	-	+ 0,1	+11,6
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 6 THROUGH 17 :							+ 2,6	+ 0,4	+ 7,7

NOTE:

1. Present structure group-to-group progression rate = 10,1% (Groups 6 through 18).
2. Recommended structure group-to-group progression rate = 10,8% (Groups 6 through 17, before adjustments to nearest R5).

TABLE 73 -- continued

COMPARISON OF PRESENT MIDPOINTS, PROPOSED MIDPOINTS, OIL COMMUNITY AVERAGES
AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON SYSTEM : 1980

Salary Group	Present Midpoints (Rand)	Oil Community Averages (Rand)	Present Midpoints compared to Oil Community Averages (% Deviation)	Total Community Averages (Rand)	Present Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints (Rand)	Proposed Midpoints compared to Oil Community Averages (% Deviation)	Proposed Midpoints compared to Total Community Averages (% Deviation)	Proposed Midpoints compared to Present Midpoints (% Deviation)
17	1 568	-	-	1 748	-10,3	1 750	-	+ 0,1	+11,6
18	1 723	1 783	- 3,4	1 899	- 9,3	1 955	+ 9,6	+ 2,9	+13,5
19	1 935	-	-	2 260	-14,4	2 190	-	- 3,1	+13,2
20	2 175	2 193	- 0,8	2 330	- 6,7	2 455	+11,9	+ 5,4	+12,9
21	2 438	-	-	2 815	-13,4	2 745	-	- 2,5	+12,6
22	2 742	2 734	+ 0,3	2 949	- 7,0	3 075	+12,5	+ 4,3	+12,1
23	3 080	-	-	3 852	-20,0	3 445	-	-10,5	+11,9
24	3 452	3 409	+ 1,3	3 855	-10,5	3 855	+13,1	0,0	+11,7
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 17 THROUGH 24 :							+11,8	- 0,4	+12,4

NOTE:

1. Present structure group-to-group progression rate = 12,3% (Groups 18 through 24).
2. Recommended structure group-to-group progression rate = 12,0% (Groups 17 through 24, before adjustments to nearest R5).

TABLE 74

COSTS OF IMPLEMENTING RECOMMENDED STRUCTURE : STRUCTURAL COMPARISON 1980

SALARY GROUP	NO. OF EMPLOYEES IN SALARY GROUP	POTENTIAL COST BASED ON CHANGE IN MIDPOINT (RAND)	NO. OF SALARIES BELOW RECOMMENDED MINIMUM	COST TO ADJUST SALARIES TO RECOMMENDED MINIMUM (RAND)
1	529	15 870	-	-
2	220	5 280	8	87
3	119	3 808	-	-
4	340	5 100	8	106
5	352	8 448	9	110
6	141	2 961	9	141
7	250	6 000	25	505
8	194	7 178	9	253
9	88	3 784	7	203
10	244	13 176	15	570
11	45	2 880	3	147
12	63	4 914	9	459
13	88	8 360	2	234
14	55	6 160	3	232
15	58	7 598	-	-
16	19	2 945	1	120
17	16	2 912	-	-
18	11	2 552	-	-
19	7	1 785	-	-
20	7	1 960	-	-
21	3	921	-	-
22	1	333	-	-
23	2	730	-	-
24	1	403	-	-
TOTAL	2 853	116 058	108	4 212

II. Discussion

The recommended group-to-group progression rates and resulting pay structure values indicate an average adjustment of +9,4% to the present survey organisation pay structure in order to ensure competitive midpoint values. These progression rates are revealed in TABLE 75.

TABLE 75

POST SURVEY RECOMMENDED GROUP-TO-GROUP PROGRESSION
RATES : STRUCTURAL COMPARISON SYSTEM:
1980

SALARY GROUP	CUT-OFF VALUES (RAND)	GROUP-TO-GROUP PROGRESSION RATE
1	230) . . .	
6	565) . . .	1,2
6	565) . . .	
17	1 750) . . .	1,1081
17	1 750) . . .	
24	3 855) . . .	1,1197

NOTE:

These progression rates are applicable to trend line values prior to midpoint adjustments to the nearest R5.

These recommended progression rates remain fairly constant when compared with those of the 1977 Structural Comparison survey. The progression rate applicable to the lower section of the pay structure has dropped by 2,6% since 1974, which supports the suggestion that there has been a tendency to "level out" after the overreaction to the Non-White situation during the early 1970's, a factor which resulted in an effort to rapidly escalate rates at the lower levels of the pay structure.

An analysis of the total compensation midpoint data once again reveals that certain salary groups at the executive levels may be affected by the midpoints of those organisations paying consistently high rates, and for which there are relatively few representative anchor points. As a result salary group twenty-three indicates a competitive average total compensation midpoint which is significantly high in value when compared with that of salary group twenty-four, these values being R3 852 and

R3 855 respectively. However, as mentioned, this may be effectively combatted by identification of further anchor positions at these levels, such that further anchor points of participating organisations may be utilised to stabilise the key range midpoint.

This was not undertaken subsequent to the 1977 survey, however, due to the fact that it was preferable to use the same comparison basis in terms of survey community, participating organisations and survey positions for both the 1977 and 1980 surveys in order to facilitate comparison and reliability estimates. This particular anomaly, however, once again fails to affect the reliability of the results to any significant degree as indicated by the fact that the average percentage deviation of the trend line values from the competitive average total compensation midpoints is +0,3% excluding salary group twenty-three, and -0,1% including salary group twenty-three, both of which are well within the -0,5% to +0,5% limits. These facts nevertheless stress the need to pay particular attention to executive pay structure levels and positions in the standardisation process as this is a potential problem area, as emphasised in previous chapters.

Comparisons of proposed and present pay structure midpoints reveal that the greatest movement in pay rates has taken place at the upper levels of the pay structure, namely, salary groups seventeen to twenty-four, which indicate an average increase of 12,4%. However, the middle and lower section corresponding figures are not significantly lower, these figures being 7,7% and 8,1% respectively. These figures indicate a significantly greater average overall pay structure increase than that proposed by the Midpoint System.

A COMPARISON OF THE MIDPOINT SYSTEM RESULTS AND THE STRUCTURAL COMPARISON SYSTEM RESULTS : 1980 SURVEY

I. Method of Comparison

An overall comparison of Midpoint System data and Structural Comparison System data is provided in TABLE 76, the comparison basis being similar to that utilised for the 1974 and 1977 survey data.

Graphical representation in the form of a comparison of trend line values obtained through the analysis procedures of the two systems is supplied in the form of FIGURE 14. Once again the trend line values are utilised for comparison purposes as the respective recommended structure midpoint values represent adjusted values as based on actual trend line values established from the survey community averages.

II. Discussion

The results obtained from the application of the Structural Comparison System once again indicate an overall pay structure with midpoint values which are, on the average, higher than those obtained through application of the Midpoint System, especially at the senior management levels. This has been a constant trend which has developed throughout the three successive surveys.

An analysis of the respective results reveals that the Structural Comparison System trend line values are, on the average, 5,9% higher than those of the Midpoint System, while the competitive average total compensation midpoints, or community averages, are on the average 5,1% higher in the case of the Structural Comparison System. This overall higher value figure is as a result of the gradual increase in the Structural Comparison System values over the Midpoint System values from salary group one, where the figure is 2,7% higher, through salary group seventeen, where the figure is 7,6% higher, to salary group twenty-four, where the figure is 9,6% higher. These figures clearly reveal the tendency for the Structural Comparison System procedure to supply midpoint values which are higher in value than those of the Midpoint System essentially at the senior management levels of the pay structure. This tendency is further highlighted when analysis of recommended structures of the two systems against the existing survey organisation pay structure is made. The Midpoint System recommends an average adjustment of +5,7% for salary groups one to six, +2,8% for salary groups six to seventeen, and +3,9% for salary groups seventeen to twenty-four, while the corresponding figures for the Structural Comparison System are +8,1%, +7,7%, and +12,4% respectively; thus indicating a discrepancy of 8,9% between the two systems in reporting compensation movements at the senior management levels.

TABLE 76

COMPARISON OF TREND LINE VALUES, RECOMMENDED STRUCTURE MIDPOINTS,
OIL COMMUNITY AVERAGES AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON vs. MIDPOINT SYSTEMS : 1980

Salary Group	Midpoint System Trend Line Values (Rand)	Struc.Comp. Trend Line Values (Rand)	Struc.Comp. Trend Line Values compared to Midpoint Trend Line Values (% Deviation)	Midpoint System Midpoints (Rand)	Struc.Comp. System Midpoints (Rand)	Struc.Comp. Midpoints compared to Midpoint Midpoints (% Deviation)	Midpoint System Oil Community Averages (Rand)	Struc.Comp. System Oil Community Averages (Rand)	Struc.Comp. Oil Community Averages compared to Midpoint Oil Community Averages (% Deviation)	Midpoint System Total Community Averages (Rand)	Struc.Comp. System Total Community Averages (Rand)	Struc.Comp. Total Community Averages compared to Midpoint Total Community Averages (% Deviation)
1	221	227	+ 2,7	225	230	+ 2,2	222	225	+ 1,4	221	227	+ 2,7
2	265	272	+ 2,6	265	270	+ 1,9	272	267	- 1,8	275	273	- 0,7
3	319	327	+ 2,5	320	330	+ 3,1	323	324	+ 0,3	322	338	+ 5,0
4	383	392	+ 2,3	385	395	+ 2,6	401	396	- 1,2	405	410	+ 1,2
5	460	471	+ 2,4	460	470	+ 2,2	474	467	- 1,5	464	489	+ 5,4
6	553	565	+ 2,2	555	565	+ 1,8	571	560	- 1,9	553	565	+ 2,2
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 1 THROUGH 6 :			+ 2,5				+ 2,3				- 0,8	+ 2,6

NOTE:

1. Midpoint System group-to-group progression rate = 20,1% (Groups 1 through 6, before adjustments to nearest R5).
2. Structural Comparison System group-to-group progression rate = 20,0% (Groups 1 through 6, before adjustments to nearest R5).

TABLE 76 -- continued

COMPARISON OF TREND LINE VALUES, RECOMMENDED STRUCTURE MIDPOINTS,
OIL COMMUNITY AVERAGES AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

STRUCTURAL COMPARISON vs. MIDPOINT SYSTEMS : 1980

Salary Group	Midpoint System Trend Line Values (Rand)	Struc. Comp. Trend Line Values (Rand)	Struc. Comp. Trend Line Values compared to Midpoint Trend Line Values (% Deviation)	Midpoint System Midpoints (Rand)	Struc. Comp. System Midpoints (Rand)	Struc. Comp. Midpoints compared to Midpoint (Rand) (% Deviation)	Midpoint System Oil Community Averages (Rand)	Struc. Comp. System Oil Community Averages (Rand)	Struc. Comp. Oil Community Averages compared to Midpoint Oil Community Averages (% Deviation)	Midpoint System Total Community Averages (Rand)	Struc. Comp. System Total Community Averages (Rand)	Struc. Comp. Total Community Averages compared to Midpoint Total Community Averages (% Deviation)
6	553	565	+ 2,2	555	565	+ 1,8	571	560	- 1,9	553	565	+ 2,2
7	610	626	+ 2,6	610	625	+ 2,5	611	671	+ 9,8	622	631	+ 1,5
8	673	694	+ 3,1	675	695	+ 3,0	638	706	+10,7	693	714	+ 3,0
9	742	769	+ 3,6	745	770	+ 3,4	775	-	-	777	813	+ 4,6
10	818	852	+ 4,2	820	855	+ 4,3	803	827	+ 3,0	848	888	+ 4,7
11	902	944	+ 4,7	905	945	+ 4,4	884	876	- 0,9	929	937	+ 0,9
12	995	1 046	+ 5,1	995	1 045	+ 5,0	991	999	+ 0,8	986	971	- 1,5
13	1 097	1 159	+ 5,7	1 100	1 160	+ 5,5	1 000	1 038	+ 3,8	1 034	1 158	+ 2,3
14	1 210	1 284	+ 6,1	1 210	1 285	+ 5,8	1 048	1 203	+14,8	1 142	1 281	+12,2
15	1 335	1 423	+ 6,6	1 335	1 425	+ 6,7	1 241	-	-	1 291	1 348	+ 4,4
16	1 472	1 577	+ 7,1	1 475	1 580	+ 7,1	1 462	1 451	- 0,8	1 514	1 532	+ 1,2
17	1 625	1 747	+ 7,5	1 625	1 750	+ 7,7	1 562	-	-	1 625	1 748	+ 7,6
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 6 THROUGH 17 :			+ 4,9			+ 4,8			+ 4,4			+ 3,6

NOTE:

1. Midpoint System group-to-group progression rate = 10,3% (Groups 6 through 17, before adjustments to nearest R5).
2. Structural Comparison System group-to-group progression rate = 10,8% (Groups 6 through 17, before adjustments to nearest R5).

TABLE 76 -- continued

COMPARISON OF TREND LINE VALUES, RECOMMENDED STRUCTURE MIDPOINTS,
OIL COMMUNITY AVERAGES AND TOTAL COMMUNITY AVERAGES : MONTHLY BASE :

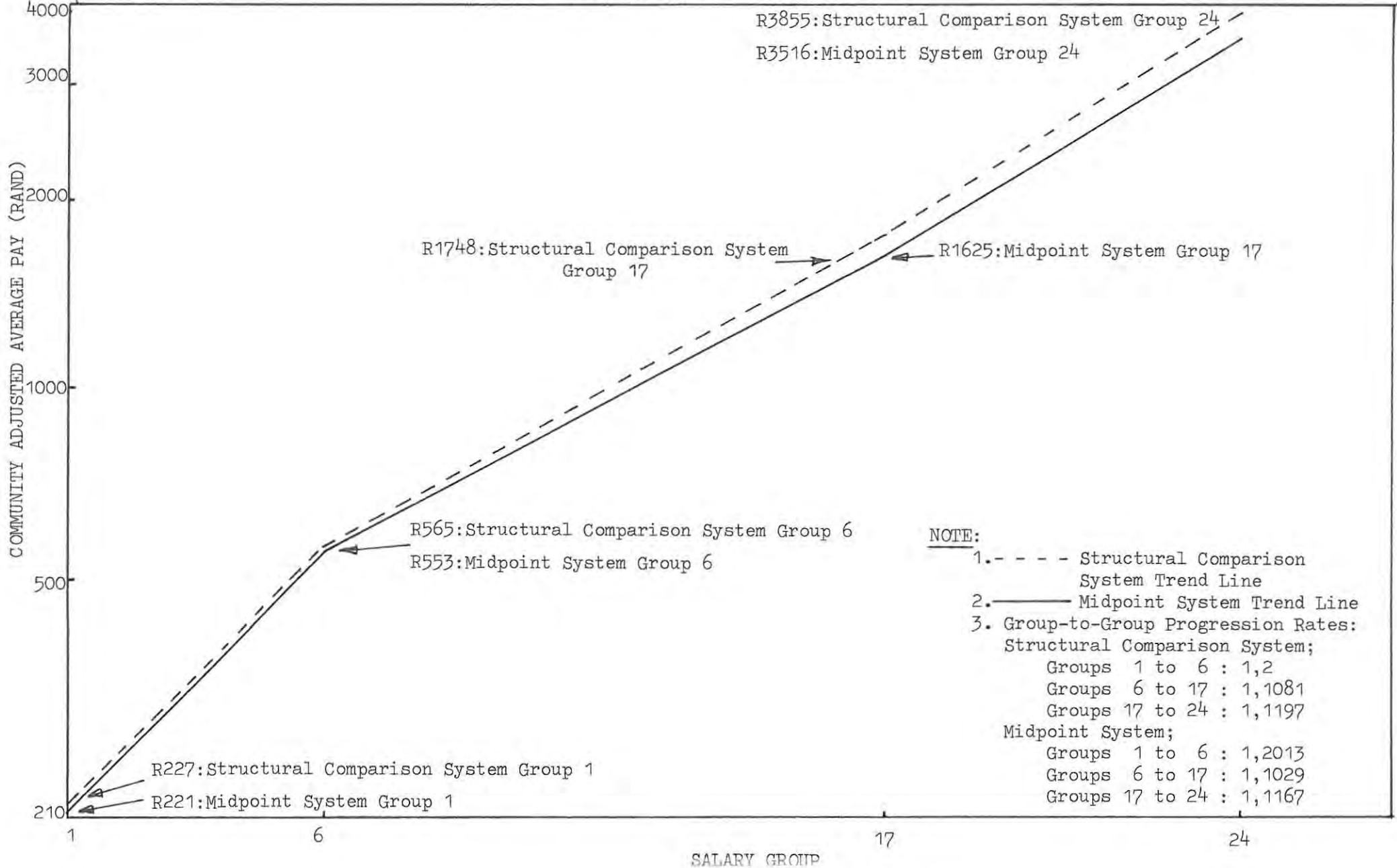
STRUCTURAL COMPARISON vs. MIDPOINT SYSTEMS : 1980

Salary Group	Midpoint System Trend Line Values (Rand)	Struc.Comp. Trend Line Values (Rand)	Struc.Comp. Trend Line Values compared to Midpoint Trend Line Values (% Deviation)	Midpoint System Midpoint (Rand)	Struc.Comp. System Midpoints (Rand)	Struc.Comp. Midpoints compared to Midpoint Midpoints (% Deviation)	Midpoint System Oil Community Averages (Rand)	Struc.Comp. System Oil Community Averages (Rand)	Oil Community Averages compared to Midpoint Oil Community Averages (% Deviation)	Midpoint System Total Community Averages (Rand)	Struc.Comp. System Total Community Averages (Rand)	Struc.Comp. Total Community Averages compared to Midpoint Total Community Averages (% Deviation)
17	1 625	1 747	+ 7,5	1 625	1 750	+ 7,7	1 562	-	-	1 625	1 748	+ 7,6
18	1 813	1 956	+ 7,9	1 815	1 955	+ 7,7	1 753	1 783	+ 1,7	1 818	1 899	+ 4,5
19	2 025	2 190	+ 8,1	2 025	2 190	+ 8,1	2 045	-	-	2 087	2 260	+ 8,3
20	2 261	2 452	+ 8,4	2 260	2 455	+ 8,6	2 142	2 193	+ 2,4	2 239	2 330	+ 4,1
21	2 525	2 756	+ 9,1	2 525	2 745	+ 8,7	2 285	-	-	2 368	2 815	+ 8,9
22	2 620	3 075	+ 9,0	2 820	3 075	+ 9,0	3 004	2 734	- 8,9	2 791	2 949	+ 5,7
23	3 148	3 443	+ 9,4	3 150	3 445	+ 9,4	2 952	-	-	3 034	-	-
24	3 516	3 855	+ 9,6	3 515	3 855	+ 9,7	3 263	3 409	+ 4,5	3 516	3 855	+ 9,6
AVERAGE DEVIATION PERCENTAGE SALARY GROUPS 17 THROUGH 24 :			+ 8,6				+ 8,6				- 0,1	+ 8,4

NOTE:

1. Midpoint System group-to-group progression rate = 11,7% (Groups 17 through 24, before adjustments to nearest R5).
2. Structural Comparison System group-to-group progression rate = 11,8% (Groups 17 through 24, before adjustments to nearest R5).

FIGURE 14
 COMPARISON OF MIDPOINT SYSTEM AND STRUCTURAL
 COMPARISON SYSTEM SALARY TREND LINES : 1980



However, it may be suggested that this discrepancy is as a result of the tendency for the Midpoint System to reflect movements in actual salaries, while the Structural Comparison System reflects movements in competitive market rates in the form of salary range midpoint values, and thus the two systems are essentially reporting movements in two different compensation areas, but measured against a similar standard, namely, the existing survey organisation pay structure. This standard of measurement may add to the discrepancy in that the survey organisation pay structure was adjusted according to the Midpoint System recommendations subsequent to both the 1974 and 1977 surveys, and as a result the higher midpoint values recommended by the Structural Comparison System were not taken into account, which resulted in a cumulative increase in structural movements reported by the Structural Comparison System, as revealed when such results are compared against the existing pay structure.

To illustrate this point, should the Structural Comparison System recommended structure have been adopted by the survey organisation subsequent to the 1977 survey, and the Structural Comparison data measured against the resulting structure in 1980, then the average recommended pay structure adjustment figures applicable to the Structural Comparison data would be reduced to 3,9% for salary groups one to six, 4,3% for salary groups six to seventeen, and 5,9% for salary groups seventeen to twenty-four. These figures do not as a result vary significantly from the corresponding figures of the Midpoint System.

Despite these discrepancies, general trends in salary practices have been reflected by the final data analysis of both systems. As an example, both systems reflect substantial movements in salary levels at the salary group one to six section of the pay structure. The Midpoint System reflects a movement of 12,5% for salary group one, while the corresponding Structural Comparison System figure is 15,0%. Thus, both systems are reflecting the reactions of organisations to the Non-White labour situation, these figures corresponding not only for the 1980 survey but also the 1974 and 1977 surveys.

As a result of the higher midpoint values reflected by the Structural Comparison System, the corresponding potential cost of adopting the recommended structure, as based on the change in midpoint values, is significantly higher for the Structural Comparison system, such figure

being R116 058 as opposed to R55 608 for the Midpoint System. However, once again the cost figure applicable to the Structural Comparison System would be significantly reduced should the 1980 survey data be compared against a pay structure based on the Structural Comparison recommended structure of 1977, this figure being reduced from R116 058 to R69 707, an effective cost reduction of 60,1%. Similarly, the cost figure of adjusting all salaries below recommended minimum to the minimum figure is reduced significantly.

Thus, although the cost figures applicable to the respective systems have been calculated to determine the potential cost to the survey organisation of adopting the recommended structure at that point in time, such figures are not calculated to provide a basis for cost comparisons, as these figures are naturally higher for the Structural Comparison System, by virtue of the fact that the indicated salary movement figures are higher. Nevertheless, these figures do indicate the difference in costs to the survey organisation, should a decision have been made by management to adopt the Structural Comparison System in place of the Midpoint System, for future survey purposes, assuming that all employees would be paid at the respective midpoint rates, which is unlikely.

Finally, then, taking these factors into consideration, it may be assumed on the basis of the comparisons, that the Structural Comparison System is in fact providing consistent results in the light of results obtained by the Midpoint System, as emphasised by the overall comparisons calculated subsequent to each survey. Although results obtained and analysed through techniques of the Structural Comparison System have proved consistent in the light of similar results obtained from the Midpoint System, the 1980 comparisons do indicate the necessity for an improvement in the standardisation of pay structures at the executive levels. However, as mentioned, this problem may in fact be effectively neutralised by increasing the reliability of results at such levels through the establishment of a wider base of anchor points.

CONCLUDING REMARKS : AN OVERALL COMPARISON

In order to provide a logic for an overall comparison basis, note must be made of the fact that subsequent to each survey conducted, the

results obtained by both systems were measured initially against a common yardstick, namely, the existing survey organisation pay structure, prior to the actual comparison of one system's results against the other. However, of importance is that the survey organisation pay structure values in each subsequent survey had been based on the previous survey recommendations according to the existing survey procedure in use, namely, the Midpoint System. Thus, although this common yardstick was necessary as a measuring device against which each system's results could be compared, due to the fact that it was the accepted pay structure in use at the times in question, such a yardstick does not supply a successive equitable and consistent basis against which the Structural Comparison System as such may be effectively tested for reliability.

With this factor in mind, an overall comparison of results obtained by the two systems may be provided on the basis of the movement in total compensation figures as reflected by each system at various levels of the pay structure, but measured against those total compensation figures supplied by the same system during the previous survey, as illustrated by TABLE 77. In other words, TABLE 77 supplies the percentage increase in actual competitive average total compensation figures for each system separately, as based on results obtained for each previous survey. The results obtained from each survey are thus used as bases for the calculations of percentage movements, the 1974 survey figures being the base upon which totals are calculated. A graphical representation of these compensation movements reflected by each system is illustrated in FIGURE 15.

TABLE 77

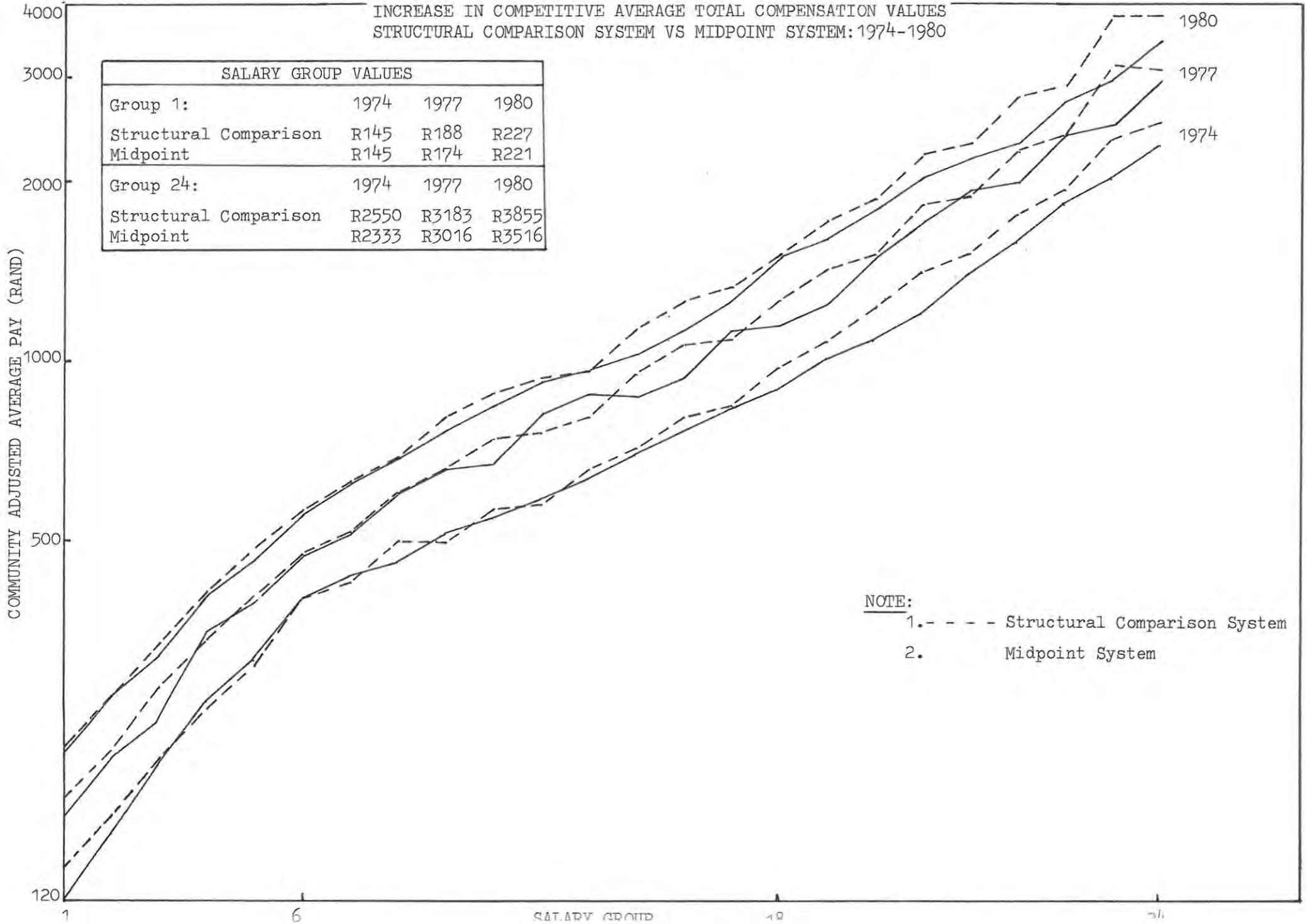
INCREASE IN COMPETITIVE AVERAGE TOTAL COMPENSATION VALUES :
STRUCTURAL COMPARISON SYSTEM VS MIDPOINT SYSTEM : 1974-1980

SALARY GROUPS	STRUCTURAL COMPARISON PERCENTAGE INCREASE			MIDPOINT PERCENTAGE INCREASE		
	1974-1977	1977-1980	1974-1980	1974-1977	1977-1980	1974-1980
1 - 6	22,6	19,5	52,5	25,5	21,5	52,6
6 - 16	30,2	19,5	55,9	26,5	18,3	50,4
16 - 24	29,4	20,0	55,3	31,9	18,0	55,6
1 - 24	28,0	19,7	54,9	24,8	19,0	53,0

FIGURE 15

INCREASE IN COMPETITIVE AVERAGE TOTAL COMPENSATION VALUES
STRUCTURAL COMPARISON SYSTEM VS MIDPOINT SYSTEM: 1974-1980

SALARY GROUP VALUES			
Group 1:	1974	1977	1980
Structural Comparison	R145	R188	R227
Midpoint	R145	R174	R221
Group 24:	1974	1977	1980
Structural Comparison	R2550	R3183	R3855
Midpoint	R2333	R3016	R3516



NOTE:

1. - - - Structural Comparison System
2. Midpoint System

TABLE 77 reveals that the movements in competitive average total compensation values, or community averages, as reflected by each system for the period 1974 to 1980 do not differ significantly at all, the total averages being 54,9% for the Structural Comparison System as opposed to 53,0% for the Midpoint System. However, basing the comparison on movements in actual pay structure midpoints, utilising the survey organisation pay structure subsequent to the 1974 survey as the base for percentage calculations, the average movement in midpoints is reflected as 58,3% by the Structural Comparison System, as opposed to 50,5% by the Midpoint System, figures which indicate a far greater discrepancy between the two systems. These figures thus effectively illustrate the cumulative effect on the margin of discrepancy between the systems when using the existing pay structure as a standard yardstick. Nevertheless, as stressed earlier, the existing structure was essential as a base against which respective results could be measured for each survey, as it was the accepted pay structure for the survey organisation.

On the basis of the comparison provided in TABLE 77 it may be concluded that the Structural Comparison System has provided results which are consistent in relation to those provided by the Midpoint System, in terms of the movement of the respective compensation figures collected and analysed by the systems for the period 1974 to 1980. A close scrutiny of the table reveals that no significant differences between values are evident, such values being more or less similar for each level of the pay structure and for each period of movement. Further, utilising the same basis of comparison, and correlating the results obtained from the two systems for the years 1974, 1977 and 1980, results in a coefficient of 0,96 overall, a figure which is acceptably high by all standards.

Thus, on the basis of these calculations it may be stated that, in the light of results obtained from the Midpoint System, the Structural Comparison System indicates a relatively high degree of consistency in the reporting of similar results, which in turn indicates a relatively high degree of reliability.

A further indication of the acceptability of the Structural Comparison System may be analysed in terms of potential costs to the organisation when considering the adoption of a recommended structure.

As stressed, the potential cost analysis provided for each system subsequent to each survey was absolutely necessary as an indication of the potential costs of adopting the recommended pay structures applicable to the results obtained by the respective systems, at that point in time, but these cost analysis do not provide an effective or adequate basis for cost comparisons between the two systems, as once again the existing survey organisation pay structure was utilised as a basis for calculations, and this fact determined the higher potential costs applicable to the Structural Comparison System.

Utilising a basis of comparison whereby potential cost calculations are based on changes in midpoint values from survey to survey for each system separately, rather than utilising the existing survey organisation pay structure as a basis for both systems, reveals that potential costs applicable to the Structural Comparison System data are drastically reduced, and compare more favourably with the corresponding potential costs applicable to the Midpoint System, as revealed in TABLE 78.

TABLE 78

COMPARISON OF POTENTIAL COSTS BASED ON CHANGE IN MIDPOINT VALUES : STRUCTURAL COMPARISON SYSTEM VS MIDPOINT SYSTEM : 1974-1980

SYSTEM	POTENTIAL COST (RAND)		
	1974	1977	1980
STRUCTURAL COMPARISON	70 426	64 812	69 707
MIDPOINT	58 968	50 772	55 608
% DISCREPANCY	19,4	27,6	25,4

Thus, although the potential cost to the survey organisation would have been higher in each case, should the survey organisation have adopted the Structural Comparison recommended structure, mainly due to the higher midpoint values reflected, the above table does in fact provide a more realistic comparison of such costs than the comparison based on changes in midpoint values of the existing pay structure. However, these potential

costs are not by any means a reflection of the actual costs which are applicable to the survey system procedure in terms of manhours, travelling expenses, etc. It is in fact in this long term successive survey procedure base which has proved to be extremely costly to the survey organisation, and at which the Structural Comparison System aims its cost reduction rationale. Unfortunately a cost analysis of the abovementioned type is beyond the scope of this research program, and thus a comparison on this basis cannot be supplied. Nevertheless, an estimate of the number of manhours necessary to conduct the 1980 salary survey according to the Midpoint System, as opposed to the number of manhours necessary to conduct the survey according to the Structural Comparison System, reveals that the total applicable to the latter system was in effect 85% less than that required by the former. Although it must be emphasised that this percentage is based on estimates, clearly the cost reduction in terms of manhours alone is substantial, while the results obtained from the Structural Comparison System are consistent and acceptable.

A further factor which tends to support the consistency of results obtained from the Structural Comparison System in the light of those results obtained from the Midpoint System is the similar reflection of trends which had developed throughout the number of years which had developed throughout the number of years which were surveyed. For example, the reaction and overreaction on the part of participating organisations to the Non-White labour situation and unrest was reflected in both actual salaries and pay structures, and was therefore reflected by both systems in the analysis of such data, as indicated by recommended pay structure movements specifically at the salary group one level, and generally at the salary groups one to six level.

However, a further trend developed over the survey years, namely, that the midpoint values recommended by the Structural Comparison System, tended to be, on the average, higher than those of the Midpoint System, and this was more noticeable at the upper management and executive levels of the pay structure, while the discrepancies at the lower levels, or salary groups one to six, were not significant. On the basis of the discrepancies at the upper levels of the pay structure, a closer scrutiny of the Structural Comparison System analysis of the relevant salary groups was undertaken during the 1977 survey, and although the specific potential problems were recognised, it may be assumed that the logic of

the standardisation process of the Structural Comparison System effectively reduces the possibility of a reduction of reliability at these levels. Most important is the fact that this system reflects the closely matched midpoint values of participating organisation formal salary ranges, regarded as representative "going rates" for groups of positions, and on this basis the values reflected in the structural standardisation are applicable irrespective of the actual rate in terms of monetary value. In this way such a system reflects midpoints rather than actual salaries.

In conclusion, although various problems relating to the Structural Comparison System have been identified and discussed subsequent to each completed survey, and results obtained from this system have proved to be acceptable in terms of similar results obtained from the Midpoint System, which has been extensively applied in practice by an international organisation, it is nevertheless impractical to assume that such a system is a totally acceptable and effective yardstick against which the Structural Comparison System may be measured. This is by virtue of the fact that the rationale and logic of the Structural Comparison System is aimed at effectively reducing to a minimum, or eradicating, the disadvantages of those systems such as the Midpoint System.

With this point in mind, then, the base of comparison against which results of the Structural Comparison System could be measured for effectiveness, acceptability and consistency has been broadened by the provision of an analysis of the respective survey results in the light of results provided by national survey organisations such as Peromnes Salary Surveys (Pty) Limited, and Urwick International (Pty) Limited. The following section is thus devoted to providing this comparison of Structural Comparison System results against those provided by the abovementioned organisations.

P A R T VI

EVALUATING THE STRUCTURAL COMPARISON SYSTEM

CHAPTER XII

ESTABLISHING THE BASIS FOR COMPARISON

INTRODUCTION

Although number and methods of salary survey undertaking vary from organisation to organisation, there is available to all organisations in South Africa comprehensive compensation survey data which has been compiled and analysed on a national basis by certain organisations which conduct such surveys on a bi-annual basis, utilising nationally accepted survey systems and techniques. These survey organisations offer their services to any organisation interested in participating in such surveys, and the resulting data provided may either be utilised to supplement the client organisation's own survey data, or as a basis to competitively adjust pay structures.

Typical of such survey organisations are Peromnes Salary Surveys (Pty) Limited, and Urwick International (Pty) Limited, who have developed their own comprehensive survey systems on the basis of national and international research. These organisations devote their time to gathering and analysing compensation data from their client organisations on a bi-annual basis. Although the particular systems in use by these organisations are obviously not available to client organisations, extremely thorough and comprehensive reports, containing both raw data as well as analysis and interpretation thereof, are submitted to participants for their consideration and/or further analysis.

A large number of organisations rely solely on these reports for annual adjustments to pay structures, as the data and analysis of data is regarded as being highly reliable on both regional and national bases as a result of the comprehensive range of organisations, communities, industries, labour markets and positions utilised for data collation.

Although the oil company used as the survey organisation for the purposes of this research program, utilises its own survey system and techniques in order to obtain data upon which pay structure adjustments may be based, management still finds it necessary to participate in the surveys conducted by Peromnes and Urwick in order to obtain comparative

data and analyses. The data obtained from these bi-annual surveys thus provides, in conjunction with data received from other oil companies, the basis and justification for annual adjustments to the survey organisation pay structure. These adjustments are absolutely necessary in order to maintain competitive pay structure midpoints for those years during which the survey organisation does not conduct its own comprehensive surveys.

Thus, on the basis of the extensive labour market covered by the Peromnes and Urwick salary surveys, the salary data provided is regarded as being acceptable for competitive adjustment purposes, as well as for a basis for comparison against which the survey organisation's own survey statistics may be measured. In short, then, the Peromnes and Urwick surveys provide the most reliable basis as standards against which the reliability and validity of the Structural Comparison System may be gauged, due to the following logic:

1. Peromnes and Urwick provide internationally and nationally accepted compensation survey systems.
2. The analysis and interpretation of data is comprehensive and reliable in terms of industries, communities, labour markets, and positions surveyed by the survey organisation.
3. Survey results are provided regionally as well as nationally.
4. These bi-annual surveys provide raw salary data, as well as completed analyses, such that this data may be analysed in terms of techniques provided by other survey systems for comparison purposes.
5. Both Peromnes and Urwick have formulated their own job evaluation systems, and salary group/labour grade structures based on such systems, which provides a rationale for the survey techniques utilised by each organisation.
6. The survey organisation utilises one of the abovementioned systems for all internal position evaluations, as well as a method for establishing job comparability during surveys. In other words, the survey organisation job hierarchy is based upon the application of the same job

factors applicable to the overall system utilised by one of the abovementioned organisations, which provides a rationale and an extremely reliable basis for comparison purposes in that both organisations utilise the same system for position comparison and weighting purposes.

On the basis of the above logic, then, the data provided by Peromnes and Urwick salary surveys has been analysed and adapted as standards against which the results of the Structural Comparison System have been measured. However, in order to provide as wide a base as possible, different approaches of data analysis and adaptation have been utilised for each of the two organisations. To facilitate this requirement, the actual structure of salary groups of one of the organisations has been standardised, according to the Structural Standardisation procedures, in order to provide a standardised range of salary groups which are exactly comparable with those of the survey organisation. The data provided for these salary groups by the organisation concerned was then adjusted accordingly and utilised as a standard of comparison.

On the other hand, the data provided by the second organisation was utilised in its raw form, as analysed according to such organisation's techniques to provide position averages, which were then used as the bases for calculation of community averages and trend line values. The positions used were those used as survey positions by the Structural Comparison System, comparability having been established through the analysis of job descriptions provided by the organisation in question.

THE PEROMNES COMPARISON BASIS

Utilising its own methods and techniques Peromnes has established its own salary group/labour grade structure, according to points allocation provided by the Peromnes job evaluation system. Basically, this structure consists of eighteen grades catering for job levels ranging from unskilled workers to top management, plus two top executive level grades which are dealt with on a separate analysis basis. The top executive levels are represented by grades 1+ and 1++, while the unskilled to top management levels are represented by grades one to eighteen.

In order to provide a basis for comparison between the community

trend line values applicable to the survey organisation and those of Peromnes for each survey year, it was necessary to standardise the Peromnes grade structure according to the survey organisation salary group/labour grade structure. In other words, the Peromnes basic twenty grade structure had to be adjusted to form exact grade-to-grade comparisons with the survey organisation twenty-four grade structure, thus ensuring that each grade had a comparable partner grade in the grade hierarchy of the other organisation.

The Structural Standardisation System logic and procedures were utilised in this standardisation process, comparisons being made on the basis of job comparability and not on salary levels, completed subsequent to the 1974 salary survey. In this way, the Peromnes structure or hierarchy of positions, and the corresponding grade structure were standardised according to the survey organisation structure, and thus the points ranges applicable to the various Peromnes grades, based on the job factor points score evaluations according to the Peromnes job evaluation system, were also standardised according to the survey organisation structure.

In short, utilising job descriptions provided by both organisations, and the Peromnes method of job evaluation, position-to-position comparability was established, on the basis of points score evaluations, to establish exact matches which in turn provided the means for structural standardisation based on job comparability.

The survey organisation salary group structure and the standardised Peromnes equivalent is illustrated in TABLE 79.

TABLE 79

STANDARDISED PEROMNES GRADE STRUCTURE

SURVEY ORGANISATION SALARY GROUP	PEROMNES SALARY GROUP
1	18
2	17
3	16
4	15/16
5	14
6	13
7	12
8	11
9	11/10
10	10
11	9
12	9/8
13	8
14	8/7
15	7/6
16	6
17	6/5
18	5/4
19	4
20	3
21	3/2
22	2/1
23	1
24	1+

By utilising this table as a basis, Peromnes survey statistics were extracted from bi-annual reports, and compared with the survey organisation statistics, for each survey conducted by the survey organisation. Care was taken to ensure that the data extracted from the Peromnes reports was effective at the same date as that applicable to the conducting of the respective survey organisation comprehensive surveys. All basic salary data extracted was adjusted according to the same bonus factor utilised in the Structural Comparison surveys.

THE URWICK COMPARISON BASIS

Although this particular organisation has established a formal job evaluation system, as well as a structure of grades based on this system, in order to provide a different base against which the Structural Comparison System results could be compared, and thus provide variation in the form of a wider overall comparison basis, rather than standardising the grade structure according to that of the survey organisation, the actual raw data provided in the form of position averages by Urwick, was utilised to establish a community trend line.

Basically, those survey positions which had been utilised by the survey organisation in conducting surveys were matched with comparable positions surveyed by Urwick, and these positions provided the basis for the extraction of position averages supplied by such organisation.

Due to the fact that the survey organisation participates in the surveys conducted by Urwick on an annual basis, position-to-position comparability and subsequent exact matches were established through an analysis of job descriptions supplied by Urwick. Thus, the survey organisation's survey positions could be matched with those supplied in each survey report submitted by Urwick, such that relevant position averages could be extracted for comparison purposes. These position averages were then utilised to calculate community averages for each survey organisation salary group, and these were subsequently plotted in order to provide the community trend line values.

Thus, although no standardised structure is formed, data has still been provided such that an analysis in terms of the survey organisation salary group structure may be made for each relevant survey. As a result, trend line values may be established for each relevant salary group and these values provide measures against which the corresponding values of the Structural Comparison System may be compared.

Care was once again taken to ensure that the data extracted from the Urwick reports was effective at the same date as that applicable to the conducting of the respective survey organisation comprehensive surveys. All basic salary data extracted was adjusted according to the same bonus factor utilised in the Structural Comparison surveys.

THE OVERALL COMPARISON BASIS

In both the cases of the Peromnes and the Urwick comparison bases, the actual trend line values were computed for each of the survey years under consideration, and these values were then used as measures against which corresponding Structural Comparison System values were compared. This analysis provided a measure of discrepancy between various salary group values, job level averages, and overall structural averages.

The overall comparison basis, namely, the individual comparisons combined to reveal discrepancies in total compensation movements represented by changes in the computed pay structure values as reflected by each individual survey organisation, provide an indication of the reliability of results obtained through application of Structural Comparison System techniques.

CHAPTER XIII

COMPARISONS WITH PEROMNES SALARY SURVEYS

THE 1974 SURVEY

I. Method and Results

On the basis of the standardised Peromnes structure, statistics were extracted from the applicable Peromnes survey report and adjusted accordingly¹. In other words, those salary data values supplied by Peromnes in the form of the normal pay structure were adjusted to accommodate the standardisation of the grade structure according to the survey organisation structure. This adjustment of community average midpoints as supplied by the Peromnes April 1974 survey report is illustrated in TABLE 80. Of importance is the fact that the data extracted and utilised to calculate the adjusted Peromnes midpoints consisted of base salary adjusted by an annual bonus factor, an adjustment which was necessary, as the Structural Comparison System includes annual bonus factors in the analysis of the competitive average total compensation midpoints.

The adjusted Peromnes community average midpoints were plotted on semi-log graph paper, and the community trend line, or line of best fit was established from the scattergram. Trend line values were calculated and compared with those of the Structural Comparison System, these discrepancies being revealed by TABLE 81. The graphical comparison of the respective trend lines and the group-to-group progression rates are illustrated by FIGURE 16.

II. Discussion

The comparison of trend line values reveals that the national labour market "going rates" as reflected by the Structural Comparison System survey are, on the average, 2,8% higher than those reflected by the Peromnes survey. However, this overall average does not provide an

¹As adapted from "Peromnes Salary Survey - April 1974" (Johannesburg : Peromnes Salary Surveys (Pty) Ltd., April, 1974).

TABLE 80

ADJUSTMENT OF PEROMNES COMMUNITY AVERAGE MIDPOINTS : MONTHLY
BASE : 1974 SURVEY

PEROMNES SALARY GROUP	PEROMNES COMMUNITY AVERAGE MIDPOINT (RAND)	SURVEY ORGANISATION SALARY GROUP	ADJUSTED PEROMNES COMMUNITY AVERAGE MIDPOINT (RAND)
18	188	1	188
17	212	2	212
16	242	3	242
15	282	4	262
14	318	5	318
13	362	6	362
12	412	7	412
11	469	8	469
10	534	9	501
9	606	10	534
8	692	11	606
7	786	12	650
6	919	13	692
5	1 075	14	739
4	1 255	15	853
3	1 462	16	919
2	1 712	17	997
1	2 006	18	1 164
1+	2 266	19	1 255
		20	1 462
		21	1 587
		22	1 854
		23	2 006
		24	2 266

NOTE:

1. Figures represent base salaries adjusted by bonus factor of 1,0833.
2. Figures have been adjusted according to TABLE 79 standardisation.

TABLE 81

COMPARISON OF STRUCTURAL COMPARISON SYSTEM TREND LINE VALUES AND
ADJUSTED PEROMNES SYSTEM TREND LINE VALUES : MONTHLY BASE : 1974

SALARY GROUP (SURVEY ORGANISATION AND STANDARDISED PEROMNES)	STRUCTURAL COMPARISON TREND LINE VALUES (RAND)	PEROMNES TREND LINE VALUES (RAND)	STRUCTURAL COMPARISON VALUES COMPARED TO PEROMNES VALUES (% DEVIATION)
1	145	188	- 22,8
2	178	214	- 16,8
3	218	244	- 10,7
4	267	278	- 4,0
5	327	317	+ 3,2
6	401	361	+ 11,1
7	436	412	+ 5,8
8	474	469	+ 1,1
9	516	510	+ 1,2
10	561	555	+ 1,1
11	610	603	+ 1,2
12	664	656	+ 1,2
13	722	713	+ 1,3
14	785	776	+ 1,2
15	854	844	+ 1,2
16	964	917	+ 5,1
17	1 089	997	+ 9,2
18	1 230	1 122	+ 9,6
19	1 389	1 261	+ 10,2
20	1 568	1 418	+ 10,6
21	1 771	1 594	+ 11,1
22	2 000	1 793	+ 11,5
23	2 258	2 016	+ 12,0
24	2 550	2 266	+ 12,5
AVERAGE VARIANCE			= + 2,8

NOTE:

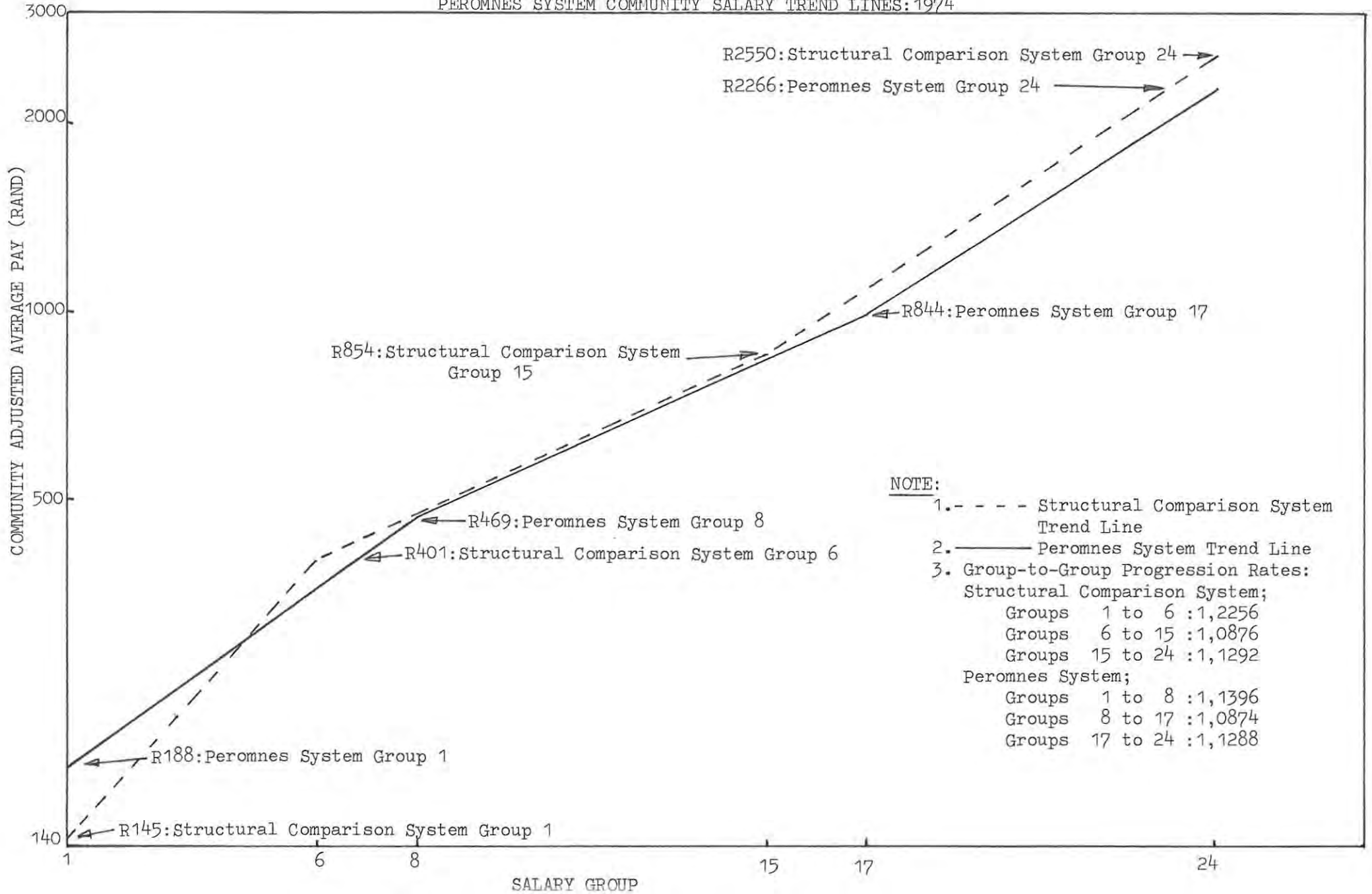
1. Structural Comparison group-to-group

Progression rates = Groups 1 to 6 : 1,2256
 Groups 6 to 15 : 1,0876
 Groups 15 to 24 : 1,1292

2. Peromnes group-to-group

Progression rates = Groups 1 to 8 : 1,1396
 Groups 8 to 17 : 1,0874
 Groups 17 to 24 : 1,1288

FIGURE 16
 COMPARISON OF STRUCTURAL COMPARISON SYSTEM AND
 PEROMNES SYSTEM COMMUNITY SALARY TREND LINES: 1974



adequate reflection of the actual salary level differences that exist between the two structures, and which are more clearly illustrated by FIGURE 16.

A closer look at the lower levels of the salary group hierarchy (the survey organisation salary groups one to eight, and the Peromnes salary groups eleven to eighteen) reveals that this is an area of greatest individual salary group discrepancies, as illustrated by the Structural Comparison trend line value being 22,8% lower than that of the Peromnes figure, for the survey organisation salary group one level; 16,8% lower for the salary group two level; and 10,7% lower for the salary group three level. The average discrepancy between the Structural Comparison trend line values and the corresponding Peromnes trend line values for survey organisation salary groups one to eight is -4,1%. These significantly large differences at salary groups one, two, and three levels, and the lowering of the average figure from -16,8% for these three groups to a figure of -4,1% for salary groups one to eight, are undoubtedly due to the vastly different group-to-group progression rates applicable to each system at these levels. The Peromnes progression rates for the salary groups is 13,96% as opposed to 22,56% applicable to the Structural Comparison System, which accounts for an intergroup differential of 8,6%.

The causal factors behind such a discrepancy may be due to the fact that the Peromnes survey covers a far wider community in terms of numbers of organisations and positions surveyed than does the Structural Comparison System, and as a result, the reaction of the national community to the necessity to improve Non-White labour rates has been more readily reflected by a much higher lower structure level average rate, and thus a less steep progression rate.

The middle section of the structure reveals a much lower level of discrepancy between the results obtained by the two systems. Although the Structural Comparison System trend line values are generally higher than the Peromnes trend line values for this middle section of the structure (survey organisation salary groups eight to seventeen, and Peromnes salary groups eleven to five), the actual average discrepancy is minimal, such average figure being 2,4%. This figure is even lower for survey organisation salary groups eight to fifteen, such average being

1,2%. The group-to-group progression rates for this section of the structure are almost identical for the two systems, namely 8,76% for the Structural Comparison System, as opposed to the Peromnes figure of 8,74%.

Finally, the discrepancies between trend line values for the two systems at the upper management levels of the structure are once again fairly significant, the Structural Comparison values on the average higher than those of the Peromnes survey by 10,8% (survey organisation salary groups seventeen to twenty-four, and Peromnes salary groups six to one plus). The group-to-group progression rates for salary groups at this level of the structure differ by 0,4%, the Structural Comparison System providing the steeper trend line incline. The reasons behind these discrepancies at the top management levels of the structure may only be hinted at, but once again this area of analysis indicates a potential problem area for inter-survey comparison purposes.

THE 1977 SURVEY

I. Method and Results

The same method of comparison as that utilised for the 1974 survey results was once again applied to the data supplied by the Peromnes and Structural Comparison Surveys. Utilising the structural standardisation revealed in TABLE 79, the figures extracted from the April 1977 Peromnes survey report² were adjusted accordingly for comparison against the Structural Comparison System figures. This adjustment of Peromnes data is revealed in TABLE 82.

These adjusted midpoints were plotted on semi-log graph paper and the line of best fit, or community trend line group-to-group progression rates thus established allowed calculation of trend line values, which were then compared with corresponding trend line values of the Structural Comparison System 1977 survey, as revealed in TABLE 83. Graphical representation of the respective trend line values is provided by FIGURE 17.

²As adapted from "Peromnes Salary Survey - April 1977" (Johannesburg : Peromnes Salary Surveys (Pty) Ltd., April, 1977).

TABLE 82

ADJUSTMENT OF PEROMNES COMMUNITY AVERAGE MIDPOINTS : MONTHLY
BASE : 1977 SURVEY

PEROMNES SALARY GROUP	PEROMNES COMMUNITY AVERAGE MIDPOINT (RAND)	SURVEY ORGANISATION SALARY GROUP	ADJUSTED PEROMNES COMMUNITY AVERAGE MIDPOINT (RAND)
18	174	1	174
17	208	2	208
16	250	3	250
15	340	4	295
14	370	5	370
13	440	6	440
12	495	7	495
11	610	8	610
10	695	9	653
9	775	10	695
8	885	11	775
7	1 011	12	830
6	1 230	13	885
5	1 450	14	948
4	1 650	15	1 121
3	1 926	16	1 230
2	2 364	17	1 340
1	2 610	18	1 550
1+	2 898	19	1 650
		20	1 926
		21	2 145
		22	2 487
		23	2 610
		24	2 898

NOTE:

1. Figures represent base salaries adjusted by bonus factor of 1,0833.
2. Figures have been adjusted according to TABLE 79 standardisation.

TABLE 83

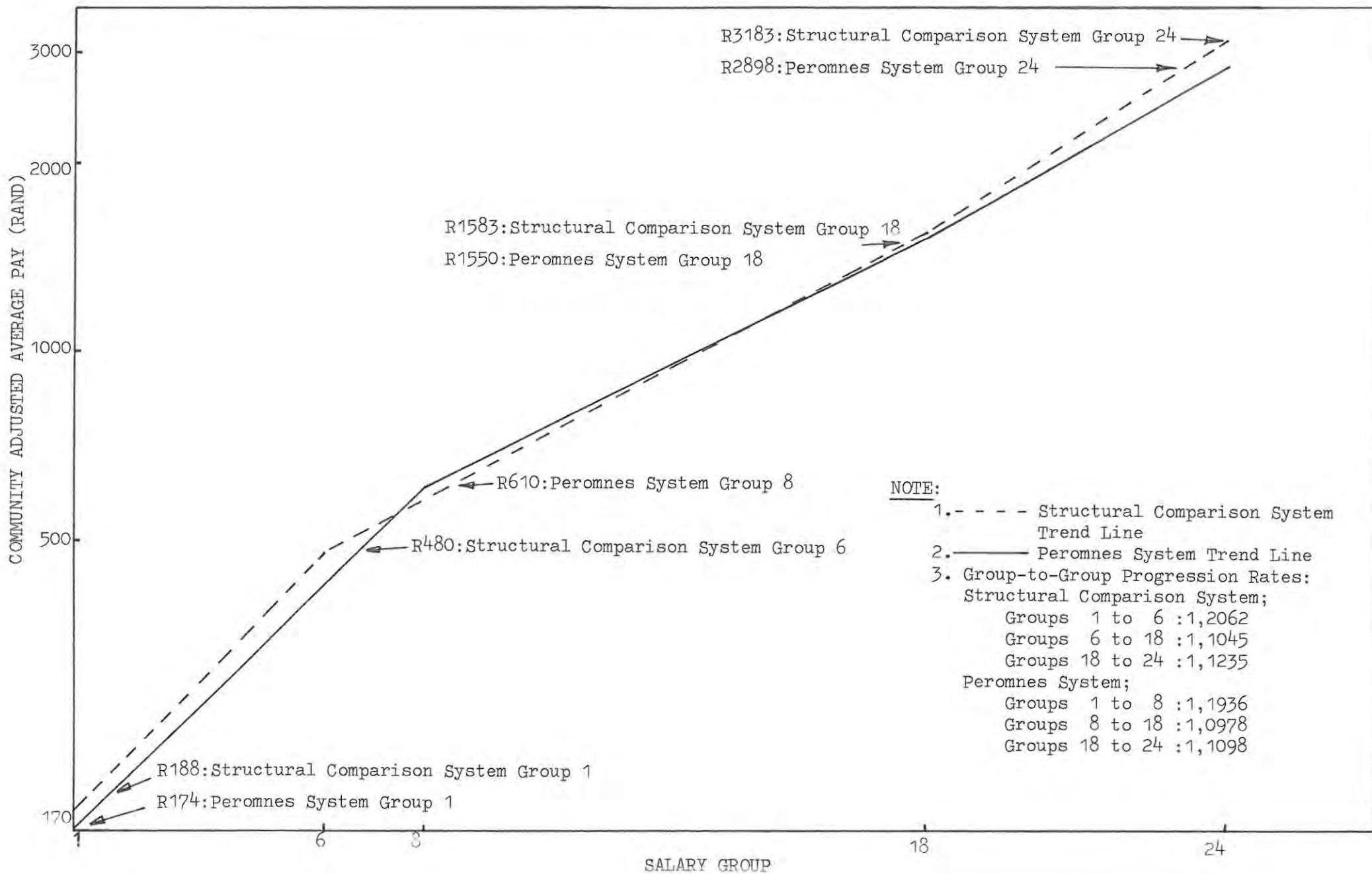
COMPARISON OF STRUCTURAL COMPARISON SYSTEM TREND LINE VALUES AND
ADJUSTED PEROMNES SYSTEM TREND LINE VALUES : MONTHLY BASE : 1977

SALARY GROUP (SURVEY ORGANISATION AND STANDARDISED PEROMNES)	STRUCTURAL COMPARISON TREND LINE VALUES (RAND)	PEROMNES TREND LINE VALUES (RAND)	STRUCTURAL COMPARISON VALUES COMPARED TO PEROMNES VALUES (% DEVIATION)
1	188	174	+ 8,0
2	227	208	+ 9,1
3	274	249	+ 10,0
4	330	298	+ 10,7
5	398	356	+ 11,8
6	480	426	+ 12,7
7	530	510	+ 3,9
8	586	610	- 3,9
9	647	670	- 3,4
10	714	735	- 2,9
11	789	807	- 2,2
12	872	886	- 1,6
13	963	973	- 1,0
14	1 063	1 068	- 0,5
15	1 174	1 172	+ 0,2
16	1 297	1 287	+ 0,8
17	1 432	1 413	+ 1,3
18	1 583	1 550	+ 2,1
19	1 778	1 721	+ 3,3
20	1 997	1 911	+ 4,5
21	2 244	2 120	+ 5,8
22	2 520	2 353	+ 7,1
23	2 832	2 611	+ 8,5
24	3 183	2 898	+ 9,8

NOTE:

1. Structural Comparison group-to-group
progression rates = Groups 1 to 6 : 1,2062
Groups 6 to 18 : 1,1045
Groups 18 to 24 : 1,1235
2. Peromnes group-to-group
progression rates = Groups 1 to 8 : 1,1963
Groups 8 to 18 : 1,0978
Groups 18 to 24 : 1,1098

FIGURE 17
 COMPARISON OF STRUCTURAL COMPARISON SYSTEM AND
 PEROMNES SYSTEM COMMUNITY SALARY TREND LINES: 1977



II. Discussion

Although the overall average discrepancy between trend line values is greater for the 1977 survey comparison than that applicable to the 1974 survey comparison, a breakdown of the pay structure into the three levels, or categories of jobs, namely lower, middle and upper, reveals that the discrepancies at upper management levels has narrowed, while at lower levels the discrepancies have become more evenly dispersed.

At the lower levels of the hierarchy, individual salary group differences are still significantly large, the average difference between Structural Comparison System trend line values and those of the Peromnes survey being 7,8% (survey organisation salary groups one to eight, and Peromnes salary groups eleven to eighteen). However, whereas during the 1974 survey the greatest difference between individual salary groups was indicated at the salary groups one and two levels, the 1977 survey discrepancies reveal the greatest discrepancies at the salary groups three to six levels, as indicated by an average difference of 11,3% for the Structural Comparison over the Peromnes systems for these four groups. This trend may reflect the upward movement, and the absorption of the reaction, in monetary terms, of the national community to the Non-White labour situation, as reflected in salary groups one, two and three discrepancies for the 1974 surveys. Certainly this assumption is supported by the fact that the Peromnes group-to-group progression rate increased over the 1974 survey rate by 5,67% for the same range of salary groups, a fact which resulted in a considerable flattening of the pay structure curve at these levels.

Once again, the middle section of the pay structure indicates the lowest levels of differences between the two system trend line values. The average discrepancy for these levels (survey organisation salary groups eight to eighteen, and Peromnes salary groups eleven to four) reveals that the Structural Comparison values were 1,0% lower than the corresponding Peromnes values, the progression rates differing by 0,67%.

Significantly, discrepancies at the upper management levels (survey organisation salary groups eighteen to twenty-four, Peromnes salary groups four to one plus) for individual salary groups have dropped sufficiently to reveal a more acceptable average figure of 5,9%, the Structural

Comparison trend line values being greater than the corresponding Peromnes values. However, the group-to-group progression rates at this level indicated that the Structural Comparison rate was greater by 1,37% than the Peromnes rate.

THE 1980 SURVEY

I. Method and Results

The original standardisation of the Peromnes structure according to the survey organisation pay structure illustrated in TABLE 79 was once again utilised to adjust data extracted from the September 1979 Peromnes survey report³. Although this report did not provide remuneration figures applicable at the exact date of the survey organisation comprehensive survey, such figures were nevertheless accepted as a basis for comparison due to the fact that the majority of those organisations which participated in the 1980 Structural Comparison survey provided formal salary ranges that were effective at approximately the same date, namely, September, and it is these salary range midpoints which are utilised by the Structural Comparison System for analysis purposes. The adjustment of Peromnes survey salary data is revealed in TABLE 84.

Graphical representation of the community trend line established for these adjusted Peromnes community averages is illustrated in FIGURE 18, which provides a comparison of this trend line with that applicable to the Structural Comparison 1980 survey. The comparison of actual trend line values in the form of individual salary group percentage difference between corresponding salary groups, as well as an average discrepancy percentage calculation is provided in TABLE 85.

II. Discussion

The differences between the Structural Comparison and Peromnes trend line values for the 1980 survey once again indicate basic pay structure levels of discrepancy which have emerged as trends over the three survey years in question. For example, as established during both the 1974 and

³As adapted from "Peromnes Salary Survey - September, 1979" (Johannesburg : Peromnes Salary Surveys (Pty) Ltd., September, 1979).

TABLE 84

ADJUSTMENT OF PEROMNES COMMUNITY AVERAGE MIDPOINTS : MONTHLY
BASE : 1980 SURVEY

PEROMNES SALARY GROUP	PEROMNES COMMUNITY AVERAGE MIDPOINT (RAND)	SURVEY ORGANISATION SALARY GROUP	ADJUSTED PEROMNES COMMUNITY AVERAGE MIDPOINT (RAND)
18		1	221
17		2	260
16	290	3	290
15	380	4	335
14	423	5	424
13	489	6	489
12	579	7	579
11	682	8	682
10	813	9	748
9	921	10	813
8	1 050	11	921
7	1 236	12	986
6	1 479	13	1 059
5	1 746	14	1 148
4	2 080	15	1 358
3	2 368	16	1 479
2	2 863	17	1 612
1	3 480	18	1 913
1+	3 955	19	2 080
		20	2 368
		21	2 616
		22	3 172
		23	3 480
		24	3 955

NOTE :

1. Figures represent base salaries adjusted by bonus factor of 1,0833.
2. Figures have been adjusted according to TABLE 79 standardisation.

TABLE 85

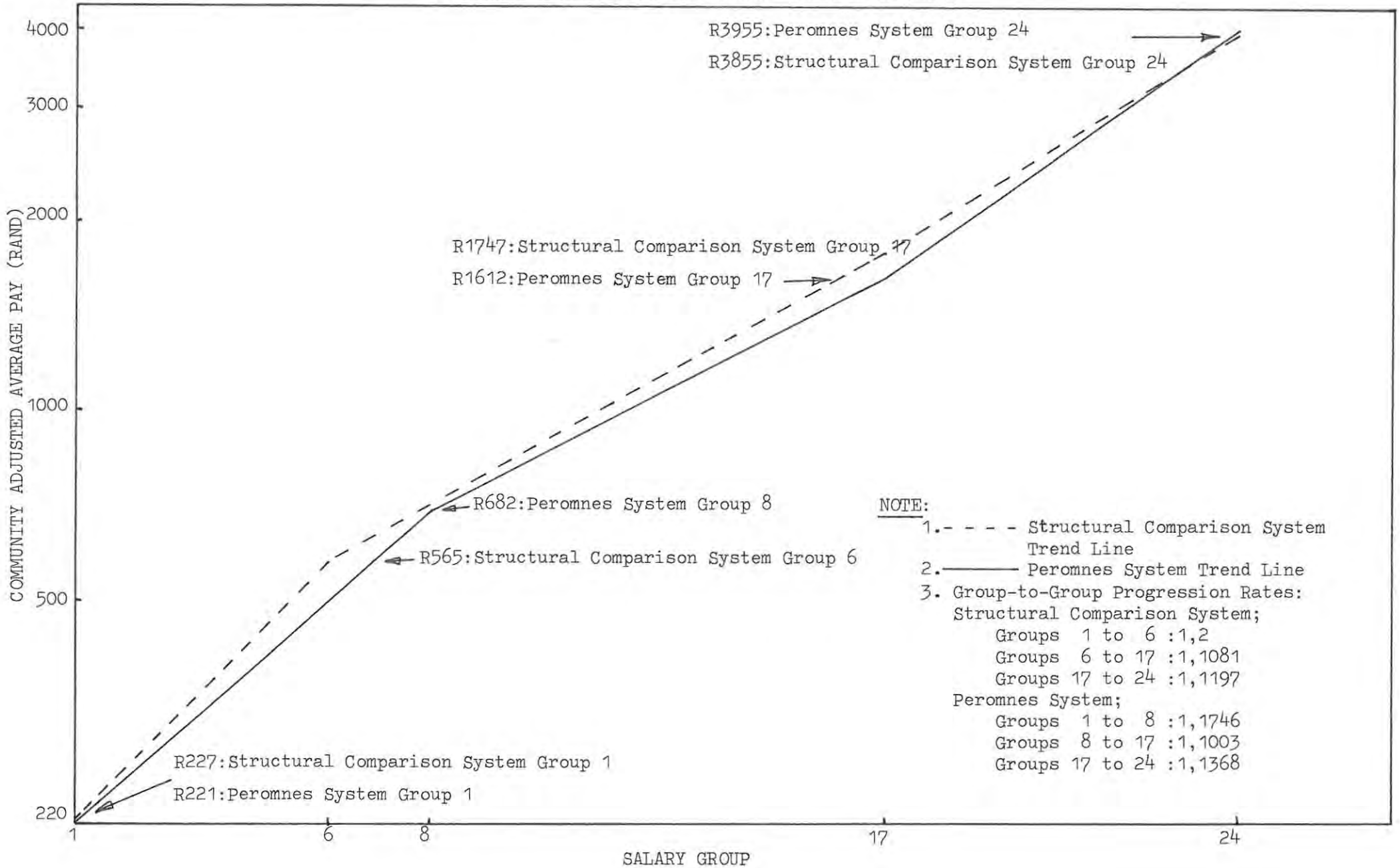
COMPARISON OF STRUCTURAL COMPARISON SYSTEM TREND LINE VALUES AND
ADJUSTED PEROMNES SYSTEM TREND LINE VALUES : MONTHLY BASE : 1980

SALARY GROUP (SURVEY ORGANISATION AND STANDARDISED PEROMNES)	STRUCTURAL COMPARISON TREND LINE VALUES (RAND)	PEROMNES TREND LINE VALUES (RAND)	STRUCTURAL COMPARISON VALUES COMPARED TO PEROMNES VALUES (% DEVIATION)
1	227	221	+ 2,7
2	272	260	+ 4,6
3	327	305	+ 7,2
4	392	358	+ 9,5
5	471	421	+ 11,9
6	565	494	+ 14,4
7	626	580	+ 7,9
8	694	682	+ 1,8
9	769	750	+ 2,5
10	852	826	+ 3,1
11	944	908	+ 4,0
12	1 046	999	+ 4,7
13	1 159	1 100	+ 5,4
14	1 284	1 210	+ 6,1
15	1 423	1 331	+ 6,9
16	1 577	1 465	+ 7,6
17	1 747	1 612	+ 8,4
18	1 956	1 832	+ 6,8
19	2 190	2 083	+ 5,1
20	2 452	2 368	+ 3,5
21	2 756	2 692	+ 2,4
22	3 075	3 060	+ 0,5
23	3 443	3 480	- 1,1
24	3 855	3 955	- 2,5

NOTE:

1. Structural Comparison group-to-group
progression rate = Groups 1 to 6 : 1,2
Groups 6 to 17 : 1,1081
Groups 17 to 24 : 1,1197
2. Peromnes group-to-group
progression rate = Groups 1 to 8 : 1,1746
Groups 8 to 17 : 1,1003
Groups 17 to 24 : 1,1368

FIGURE 18
 COMPARISON OF STRUCTURAL COMPARISON SYSTEM AND
 PEROMNES SYSTEM COMMUNITY SALARY TREND LINES: 1980



1977 survey data comparisons, the area of the structure revealing the greatest discrepancies for individual salary groups, is at the lower levels of the hierarchy (survey organisation salary groups one to eight, and Peromnes salary groups eleven to eighteen), the average percentage discrepancy for the 1980 survey data comparison at this level being 8,3%. However, note may be made of the fact that a further narrowing of the discrepancy gap has taken place at the salary group one to four levels, while there has been a corresponding widening at the salary groups five to seven levels, once again indicating the possible "climbing the ladder" effect of the national survey community reaction to the Non-White labour market necessity recorded by Peromnes survey during the early months of 1974.

A further area of discrepancy which has indicated a trend over the years is at the middle section of the pay structure. The salary groups applicable to this level (survey organisation salary groups eight to seventeen, and Peromnes salary groups eleven to five) have generally revealed insignificant differences in trend line values applicable to the respective systems. TABLE 85 discrepancies for these salary groups result in a Structural Comparison System figure which is greater, on the average, than the Peromnes figure by 5,1%, which does indicate a slight widening in the discrepancy gap when this figure is compared with corresponding figures of the 1974 and 1977 surveys.

A very significant fact to note is that the differences at the upper management levels of the structure (survey organisation salary groups seventeen to twenty-four, and Peromnes salary groups five to one plus) have narrowed significantly. The average percentage figure, indicating the greater Structural Comparison values over the Peromnes values, for these salary groups has dropped from 10,8% for the 1974 survey comparisons, to 5,9% for the 1977 survey comparisons and finally to 2,9% for the 1980 survey comparisons. Most important, however, is that whereas the Peromnes senior executive level figures were significantly lower than those of the Structural Comparison System for the 1974 survey comparisons, these discrepancy figures being 12,0% for salary group twenty-three, and 12,5% for salary group twenty-four, such Peromnes figures were in fact greater than those of the Structural Comparison System for the 1980 survey comparisons, as indicated by TABLE 85

discrepancy figures of -1,1% for salary group twenty-three and -2,5% for salary group twenty-four.

However, irrespective of individual salary group figures, the relatively insignificant levels of discrepancy at the middle and upper levels of the pay structure are important in that this indicates an acceptable level of comparison. The development of the various trends and their identification has, thus, further indicated a level of consistency in the gathering and analysis of relevant compensation data.

AN OVERALL COMPARISON

In order to provide a comparison of the actual movement in total compensation figures at various levels of the pay structure, as reflected by each system, percentage increases over the period 1974 to 1980 have been provided in TABLE 86, indicating movements in actual competitive average total compensation figures rather than trend line values. A graphical representation is supplied in FIGURE 19.

TABLE 86

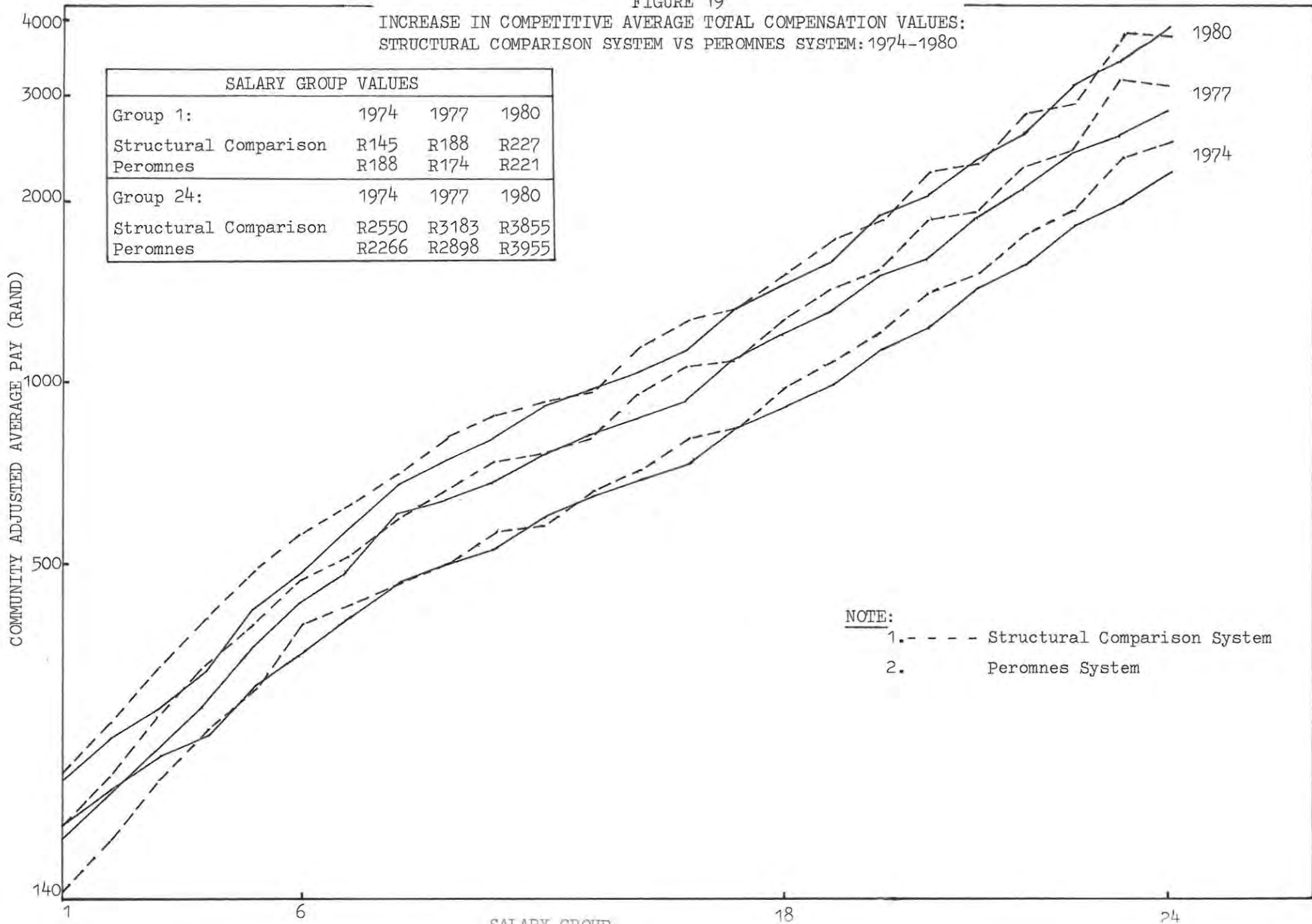
INCREASE IN COMPETITIVE AVERAGE TOTAL COMPENSATION VALUES :
STRUCTURAL COMPARISON SYSTEM VS PEROMNES SYSTEM : 1974 - 1980

SALARY GROUPS (STANDARDISED)	STRUCTURAL COMPARISON PERCENTAGE INCREASE			PEROMNES PERCENTAGE INCREASE		
	1974- 1977	1977- 1980	1974- 1980	1974- 1977	1977- 1980	1974- 1980
1 - 6	22,6	19,5	52,5	7,4	17,9	26,0
6 - 16	30,2	19,5	55,9	28,8	18,2	52,0
16 - 24	29,4	20,0	55,3	32,3	26,5	67,2
1 - 24	28,0	19,7	54,9	24,6	20,9	50,6

The Structural Comparison System surveys provide an overall average movement in total compensation figure which is 4,3% higher than that of the Peromnes system. A breakdown of this overall analysis into upper, middle and lower levels of the pay structure reveals that significant differences do in fact exist at such levels. Although the

FIGURE 19

INCREASE IN COMPETITIVE AVERAGE TOTAL COMPENSATION VALUES:
STRUCTURAL COMPARISON SYSTEM VS PEROMNES SYSTEM: 1974-1980



SALARY GROUP VALUES			
Group 1:	1974	1977	1980
Structural Comparison	R145	R188	R227
Peromnes	R188	R174	R221
Group 24:	1974	1977	1980
Structural Comparison	R2550	R3183	R3855
Peromnes	R2266	R2898	R3955

NOTE:
1. - - - - Structural Comparison System
2. Peromnes System

Structural Comparison System surveys have revealed a more or less constant movement in total compensation figures for all levels of the pay structure, for the period 1974 to 1980, the Peromnes surveys have revealed an entirely different situation. Although the average overall figures for the middle section of the pay structure, i.e. salary groups six to sixteen indicated above, are similar for both systems, the Peromnes surveys indicate a much lower average movement at the salary groups one to six level, while at the same time indicating a much higher average movement at the salary groups sixteen to twenty-four, or upper management levels.

This significant difference at the lower levels may be attributed to the fact that a negative adjustment to the pay structure was necessary according to data supplied by the 1977 Peromnes survey. This negative adjustment has thus been reflected in the relatively low percentage figure representing the Peromnes survey average movement in total compensation figures for salary groups one to six. The significantly higher average percentage total compensation movement figure for the upper levels of the pay structure revealed by the Peromnes surveys accounts for the narrowing of the discrepancy gap between trend line values applicable to the two systems for salary groups twenty-three and twenty-four, for the period 1974 - 1977.

However, apart from the significant difference in average total compensation movements at the lower levels of the structure for the 1974 to 1977 period, and although there are discrepancies at various levels, it may be stated that the data comparisons reveal a fairly consistent level of data gathering and analysis on the part of the Structural Comparison System when measured against the Peromnes system as a yardstick. Generally, there has been a tendency for the Structural Comparison System to reflect significantly higher rates at the lower levels of the structure, and initially higher rates at the upper management and executive levels, although this discrepancy gap reduced considerably over successive surveys. Further, at the middle section of the pay structure, which basically spans the majority of the salary groups in the hierarchy, the Structural Comparison rates and the Peromnes rates showed no significant differences, and were consistently similar over successive surveys.

CHAPTER XIV

COMPARISONS WITH URWICK SALARY SURVEYS

THE 1974 SURVEY

I. Method and Results

Due to the fact that the survey organisation participated in the Urwick surveys, it was possible to utilise the information and data supplied by such organisation to calculate competitive average total compensation figures from the individual position averages supplied in the various Urwick survey reports.

Job descriptions are regularly supplied to client organisations by Urwick in order to allow position-to-position matching such that relevant and reliable compensation data will be supplied by such participating organisations. Thus, utilising these job descriptions, matches were very carefully established with the survey organisation survey positions, and the corresponding Urwick survey report salary data extracted on the basis of these matches. This position average data, adjusted by the relevant bonus factor, was then utilised to calculate salary group averages, or competitive average total compensation values which were then plotted on semi-log graph paper in order to establish a community trend line. The position averages as extracted from the Urwick May 1974 survey report¹, and the calculated competitive average total compensation values are revealed in TABLE 87, while the graphical representation of the corresponding trend line values is illustrated by FIGURE 20. A comparison of these trend line values calculated from the group-to-group progression rates established from the line of best fit, with the corresponding values of the Structural Comparison System 1974 trend line is provided in TABLE 88.

II. Discussion

Both the graphical comparison and the trend line value comparisons reveal that overall very little discrepancy exists between the results

¹As adapted from "Urwick Salary Survey - May, 1974" (Johannesburg : Urwick International (Pty) Ltd., May, 1974).

TABLE 87

TABULATION OF COMPETITIVE AVERAGE TOTAL COMPENSATION FIGURES
FROM URWICK POSITIONAL AVERAGES : MONTHLY BASE : 1974

Salary Group	Position Title	Position Average (Rand)	Competitive Av. Total Compensation (Rand)
1	Gen.Labourer	136	141
	Office Mess.	145	
	Cleaner/Tea Server	142	
2	Fork Lift Truck Op.	164	171
	Artisan's Helper	158	
	Rep.Mach.Op.	191	
3	Chauffeur	196	213
	Clerical Asst.	193	
	Junior Clerk	219	
	Key Punch Op.	243	
4	Telex Operator	279	272
	Lab.Technician	267	
	Copy Typist	268	
	Telephonist	274	
5	Senior Steno.	316	314
	Clerk	306	
	Nursing Sister	320	
6	Senior Comp.Op.	391	399
	Assigned Steno.	406	
	Lab. Tech. II	399	
7	Senior Clerk	414	435
	Chairman's Sec.	456	

Salary Group	Position Title	Position Average (Rand)	Competitive Av. Total Compensation (Rand)
8	Computer Prog.	461	461
9	Draughtsman	489	512
	Purch.Asst.	513	
	Asst.Ledgers	495	
	Chemist	550	
10	Emp.Rel.Asst.	557	557
11	Eng.Asst.	594	599
	Sec.Head Ledgers	611	
	Sen.Comp.Prog.	598	
	Warehouse Sup.	593	
12	Emp.Rel.Asst.	656	656
13	Depot Superint.	732	734
	Offic.Serv.Mgr.	686	
	Credit Mgr.	783	
14	Purchasing Mgr.	810	821
	Chief Chemist	831	
15	Emp.Rel.Mgr.	899	899

Salary Group	Position Title	Position Average (Rand)	Competitive Av. Total Compensation (Rand)
16	Asst.Controller	1 006	984
	Pub.Rel.Mgr.	980	
	Chief Proj.Eng.	953	
	Refinery Supt.	996	
17	Gen.Sales Mgr.	1 118	1 085
	Treasurer	1 046	
	Chief Maint.Eng.	1 092	
18	Chief Ops.Eng.	1 298	1 261
	Secretary	1 199	
	Tech.Serv.Mgr.	1 285	
19	Resale Sales Mgr.	1 354	1 405
	Mech.Mgr.	1 455	
20	Asst.Acc.Mgr.	1 500	1 586
	Resale Sales Mgr.	1 612	
21	Operations Mgr.	1 855	1 780
	Reg.Mgr.	1 710	
22	Acc. & Fin.Mgr.	1 878	1 878
23	Manuf.Mgr.	2 177	2 177
24	Marketing Mgr.	2 373	2 373

TABLE 88

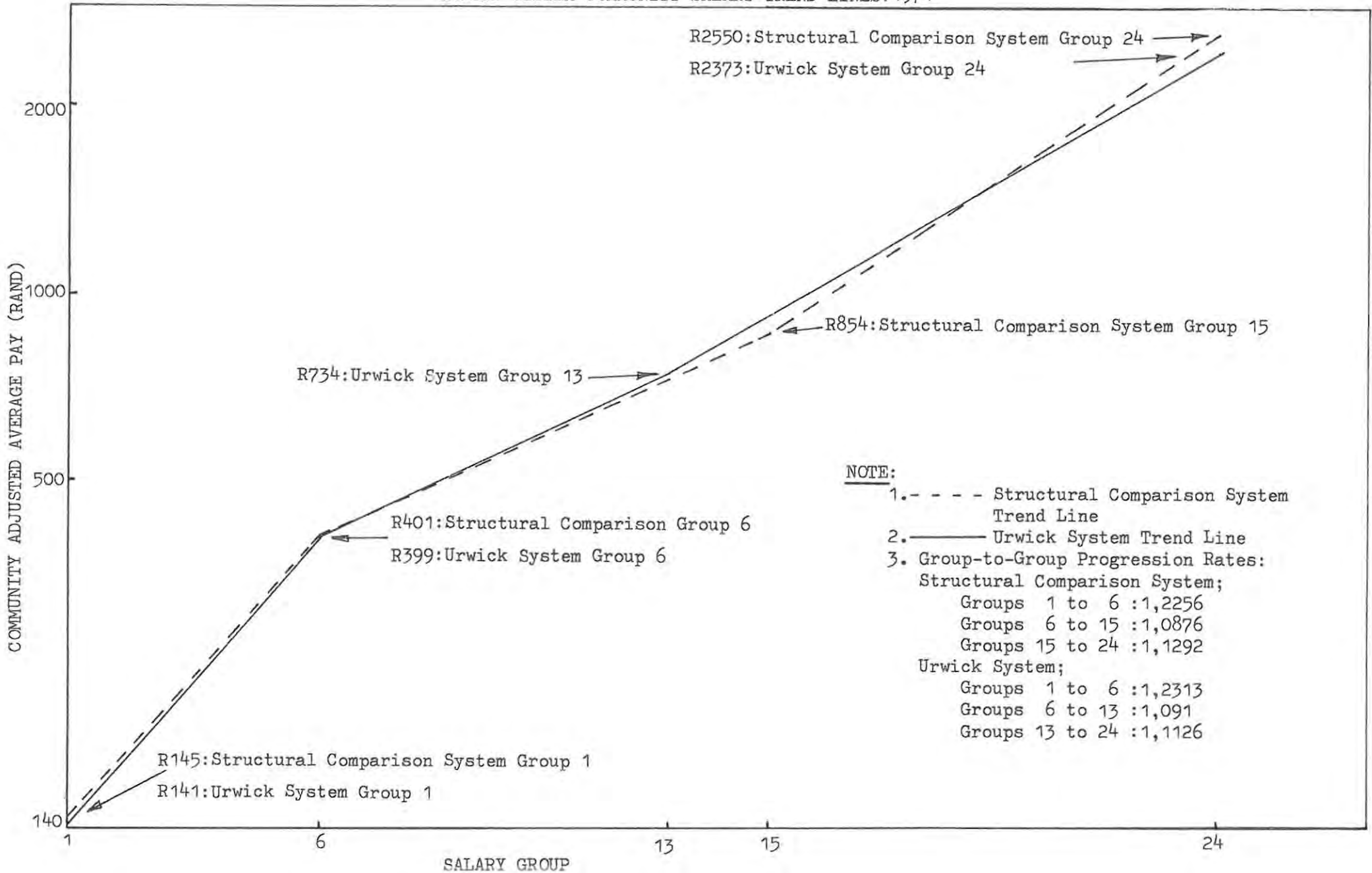
COMPARISON OF STRUCTURAL COMPARISON SYSTEM TREND LINE VALUES AND
URWICK SYSTEM TREND LINE VALUES : MONTHLY BASE 1974

SALARY GROUP	STRUCTURAL COMPARISON TREND LINE VALUES (RAND)	URWICK TREND LINE VALUES (RAND)	STRUCTURAL COMPARISON VALUES COMPARED TO URWICK VALUES (% DEVIATION)
1	145	141	+ 2,8
2	178	174	+ 2,3
3	218	214	+ 1,9
4	267	263	+ 1,5
5	327	324	+ 0,9
6	401	399	+ 0,5
7	436	435	+ 0,2
8	474	475	- 0,2
9	516	518	- 0,4
10	561	565	- 0,7
11	610	617	- 0,5
12	664	673	- 1,3
13	722	734	- 1,5
14	785	817	- 3,9
15	854	909	- 6,1
16	964	1 011	- 4,6
17	1 089	1 125	- 3,2
18	1 230	1 252	- 1,8
19	1 389	1 392	- 0,2
20	1 568	1 549	+ 1,2
21	1 771	1 724	+ 2,7
22	2 000	1 918	+ 4,3
23	2 258	2 134	+ 5,8
24	2 550	2 373	+ 7,5
AVERAGE VARIANCE =			+ 0,3

NOTE:

1. Structural Comparison group-to-group
progression rates = Groups 1 to 6 : 1,2256
Groups 6 to 15 : 1,0876
Groups 15 to 24 : 1,1292
2. Urwick group-to-group progression
rates = Groups 1 to 5 : 1,2313
Groups 6 to 13 : 1,091
Groups 13 to 24 : 1,1126

FIGURE 20
 COMPARISON OF STRUCTURAL COMPARISON SYSTEM AND
 URWICK SYSTEM COMMUNITY SALARY TREND LINES: 1974



obtained from these two systems. The average discrepancy between trend line values is calculated as +0,3%, although at various levels of the pay structure the Structural Comparison values are greater than Urwick values, while at other levels Urwick values are greater than Structural Comparison values.

The average discrepancy between the two systems at the salary groups one to six level stands at 1,7%, the Structural Comparison trend line values being greater than those of the Urwick survey. However, this situation alters over the salary groups seven to nineteen section of the pay structure, where the Urwick trend line values are greater, on the average, than those of the Structural Comparison survey by 1,9%.

The greatest discrepancies between trend line values occur at the upper management levels of the pay structure, although these are not very significant, the Structural Comparison values being greater by an average of 3,6%.

Although the cut-off point value of the Urwick trend line for the middle section of the pay structure is at salary group thirteen, which is much lower down the hierarchy than is generally the case, the group-to-group progression rates are not significantly affected insofar as comparisons with those of the Structural Comparison System are concerned. This may be attributed to the fact that the Structural Comparison corresponding cut-off point value for this section of the pay structure is at salary group fifteen, which is similarly lower down the group hierarchy than is usually the case, such cut-off points, as illustrated by pay structures resulting from analysis of data supplied by the surveys conducted over the years 1974 to 1980, generally falling at the salary group eighteen level.

As a result of the corresponding cut-off points, then, there are only minor differences in group-to-group progression rates, such differences being 0,57% for salary groups one to six, 0,34% for salary groups six to fifteen, and 0,66% for salary groups fifteen to twenty-four. The Urwick progression rates proved greater for the lower and middle sections of the pay structure, while the Structural Comparison progression rate was higher for the upper management section, thus accounting for the

greater discrepancies in trend line values, and therefore salary group midpoints, at these levels.

Apart from the minor discrepancies between the data supplied by the two survey systems, the results obtained have proved to be similar over the entire pay structure. In short, the 1974 Structural Comparison System survey has resulted in a pay structure reflecting competitive pay rates which are generally in agreement with corresponding rates reflected by the Urwick survey.

THE 1977 SURVEY

I. Method and Results

Those positions utilised in the 1977 Midpoint System and Structural Comparison systems salary survey as survey positions were matched with Urwick survey positions through position-to-position comparisons established according to respective job descriptions and specifications. Subsequent to this careful matching to establish levels of exact comparability, relevant position average salary data was extracted from the Urwick May 1977 survey report², adjusted by the applicable bonus factor, and utilised to calculate the competitive average total compensation values applicable to each salary group, as illustrated in TABLE 89. The corresponding trend line values and group-to-group progression rates, as compared with the Structural Comparison trend line values obtained from the 1977 survey, are illustrated graphically in FIGURE 21, and numerically in TABLE 90.

II. Discussion

Once again, the comparison of the corresponding trend line values of the two systems under consideration indicates very similar results, the average overall discrepancy between these values being +1,9%, the Structural Comparison System values generally being slightly higher than the Urwick values.

²As adapted from "Urwick Salary Survey - May, 1977" (Johannesburg : Urwick International (Pty) Ltd., May, 1977).

TABLE 89

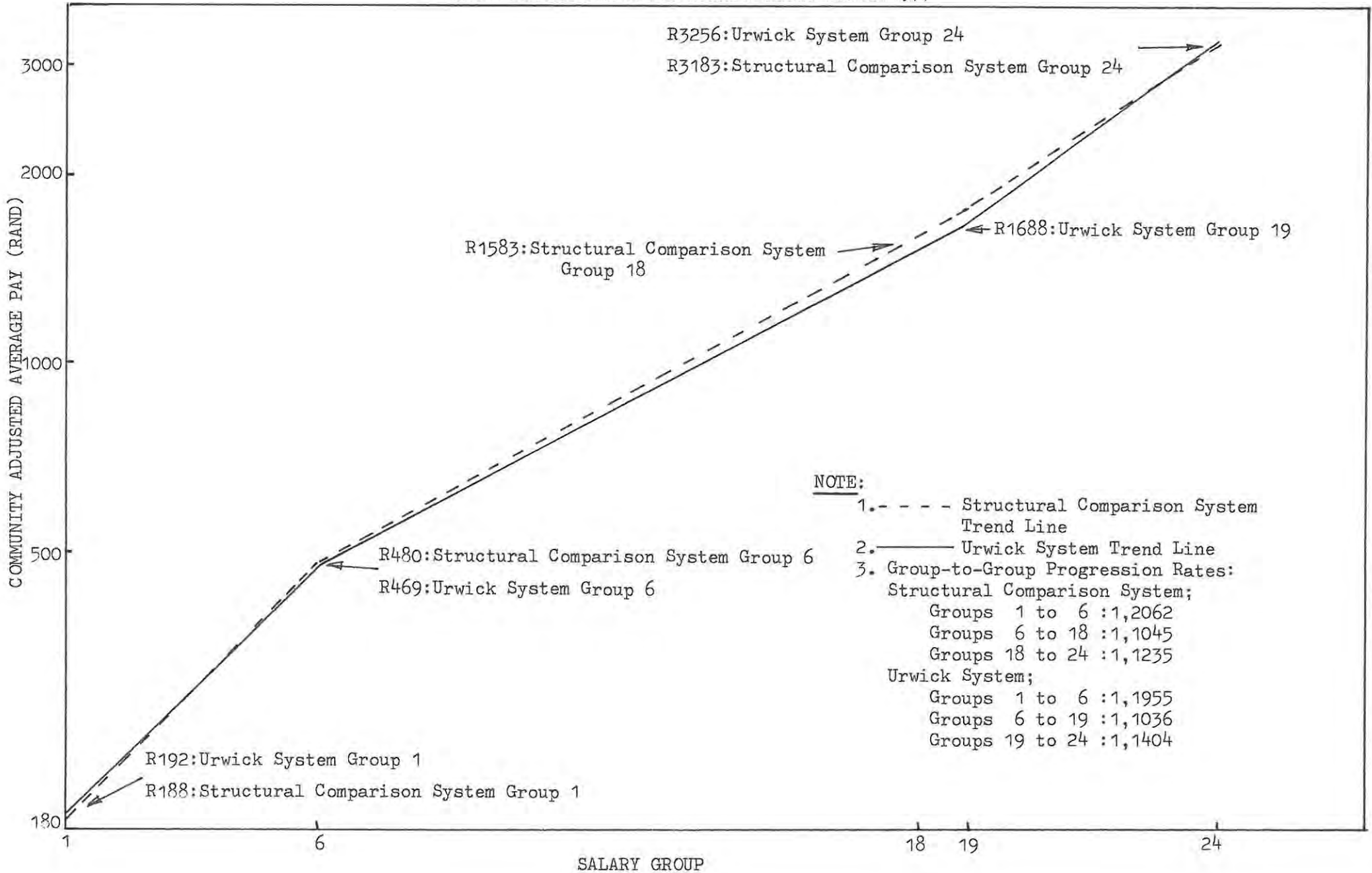
TABULATION OF COMPETITIVE AVERAGE TOTAL COMPENSATION FIGURES
FROM URWICK POSITIONAL AVERAGES : MONTHLY BASE : 1977

Salary Group	Position Title	Position Average (Rand)	Competitive Av. Total Compensation (Rand)
1	Labourer	192	192
2	Fork Lift Truck Op.	246	232
	Artisan's Helper	218	
3	Chauffeur	295	284
	Junior Clerk	284	
	Rep.Mach.Op.	283	
4	Key Punch Op.	350	340
	Copy Typist	329	
5	Clerk	422	402
	Telephonist	388	
	Lab.Technician	395	
6	Warehouseman	485	469
	Assigned Steno.	453	
7	Senior Clerk	528	530
	Comp.Op.I	508	
	Chairman's Sec.	554	
8	Programmer II	602	590
	Sen.Lab.Tech.	577	
9	Asst.Purchasing	685	669
	Asst.Ledgers	643	
	Programmer I	679	

Salary Group	Position Title	Position Average (Rand)	Competitive Av. Total Compensation (Rand)
10	Sales Rep.	717	717
	Emp.Rel.Asst.	732	
	Payroll Sup.	703	
11	Eng.Asst.	799	759
	Prog./Anal.I	773	
	Warehouse Sup.	704	
12	Section Head	798	814
	Emp.Rel.Asst.	814	
	Chief Draughtsman	830	
13	District Mgr.	943	939
	Maint.Zone Sup.	935	
14	Transp.Co-ord.	1 039	997
	Financial Anal.	927	
	Legal Advisor	1 026	
15	Emp.Rel.Mgr.	1 093	1 118
	Chief Chemist	1 062	
	Instr./Elect.Supt.	1 217	
	Island View "A" Supt.	1 100	
16	Asst.Controller	1 286	1 230
	Data Proc.Mgr.	1 235	
	Chief Maint.Supt.	1 169	

Salary Group	Position Title	Position Average (Rand)	Competitive Av. Total Compensation (Rand)
17	Real Estate Mgr.	1 241	1 340
	Transport Mgr.	1 410	
	Chief Proj.Eng.	1 369	
18	Treasurer	1 418	1 538
	Sec. & Legal Couns.	1 679	
	Controller	1 518	
	Emp.Rel.Mgr.	1 537	
19	Resale Sales Mgr.	1 542	1 688
	System & Com.Mgr.	1 724	
	Tech.Mgr.Ref.	1 799	
20	Resale Sales Mgr.	1 861	1 907
	Asst.Acc.Mgr.	1 954	
21	Regional Mgr.	2 283	2 292
	Ops.Mgr.	2 300	
	Relations Mgr.	2 293	
22	Acc. & Fin.Mgr.	2 351	2 351
23	Manuf.Mgr.	2 846	2 846
24	Marketing Mgr.	3 256	3 256

FIGURE 21
 COMPARISON OF STRUCTURAL COMPARISON SYSTEM AND
 URWICK SYSTEM COMMUNITY SALARY TREND LINES: 1977



Of significance, however, is the fact that whereas the upper management levels of the pay structure indicated the greatest discrepancies when comparing trend line values of the respective systems for the 1974 surveys, this discrepancy gap has been considerably reduced when comparing the same upper management level trend line values for the 1977 survey. Further, whereas the Urwick values were significantly less than the corresponding Structural Comparison values at these levels for the 1974 surveys, such values were in fact greater in the case of the Urwick results for the 1977 survey. As an example of this observation, whereas the trend line value of the Structural Comparison System was greater than the corresponding Urwick trend line value by 7,5% for salary group twenty-four as a result of 1974 calculations, the results of the 1977 calculations indicate that in fact, for the same salary group, the Urwick value is greater than the Structural Comparison System by 2,2%. A similar situation exists for the salary group twenty-three values.

However, although this greater movement in compensation data is indicated at these upper management levels by the Urwick survey, the important point is that there has been a narrowing of the discrepancy gap between individual salary group values reflected by data obtained from the two systems, such that the overall average community rates are generally similar over the entire pay structure. To emphasise this point, the average discrepancy between trend line values at the lower levels of the pay structure, or salary groups one to six, is 0,1%, while the average discrepancy for the middle levels, or salary groups six to eighteen is 2,9%, and the average discrepancy for the upper levels, or salary groups eighteen to twenty-four is 1,7%.

On the basis of these results, and the similar results obtained during the 1974 surveys, it may be stated that in the light of the Urwick survey results, the Structural Comparison System results are both acceptable and reliable to the extent that the same degree of movement in total compensation data has been reflected.

THE 1980 SURVEY

I. Method and Results

Initially a problem was encountered with obtaining the necessary survey data applicable at the time of the conducting of the Structural Comparison System survey, namely, January 1980, due to the fact that the Urwick organisation does not supply survey data to client organisations at this time of the year. However, this problem was overcome by obtaining average estimates of percentage movements in both base salary and total compensation data for each relevant survey position, applicable to the time period lapsed between the latest Urwick survey report and January 1980. The necessary positional compensation data was therefore extracted from this latest report and adjusted according to the relevant percentage movement figures³.

This adjusted data applicable to the matched survey positions, which were the same positions which had been utilised as the survey basis during the 1977 survey conducted by the survey organisation, was then used to calculate the competitive average total compensation values, subsequent to bonus factor adjustments, as illustrated in TABLE 91. These values were plotted on semi-log graph paper, and trend line values established, which were subsequently compared with those corresponding trend line values of the 1980 Structural Comparison System survey, as graphically illustrated by FIGURE 22, and statistically compared in TABLE 92.

II. Discussion

Results obtained from analysis of data extracted from the Urwick survey and adjusted as mentioned previously, proved to be very similar to results obtained from the Structural Comparison System data analysis and as a result only minor discrepancies between salary group trend line values exist. As a result, the overall average percentage discrepancy between trend line values applicable to the respective survey systems is only 0,05%, the Structural Comparison values proving greater on the average.

³As adapted from "Urwick Salary Survey - August, 1979" (Johannesburg : Urwick International (Pty) Ltd., August 1979).

TABLE 91

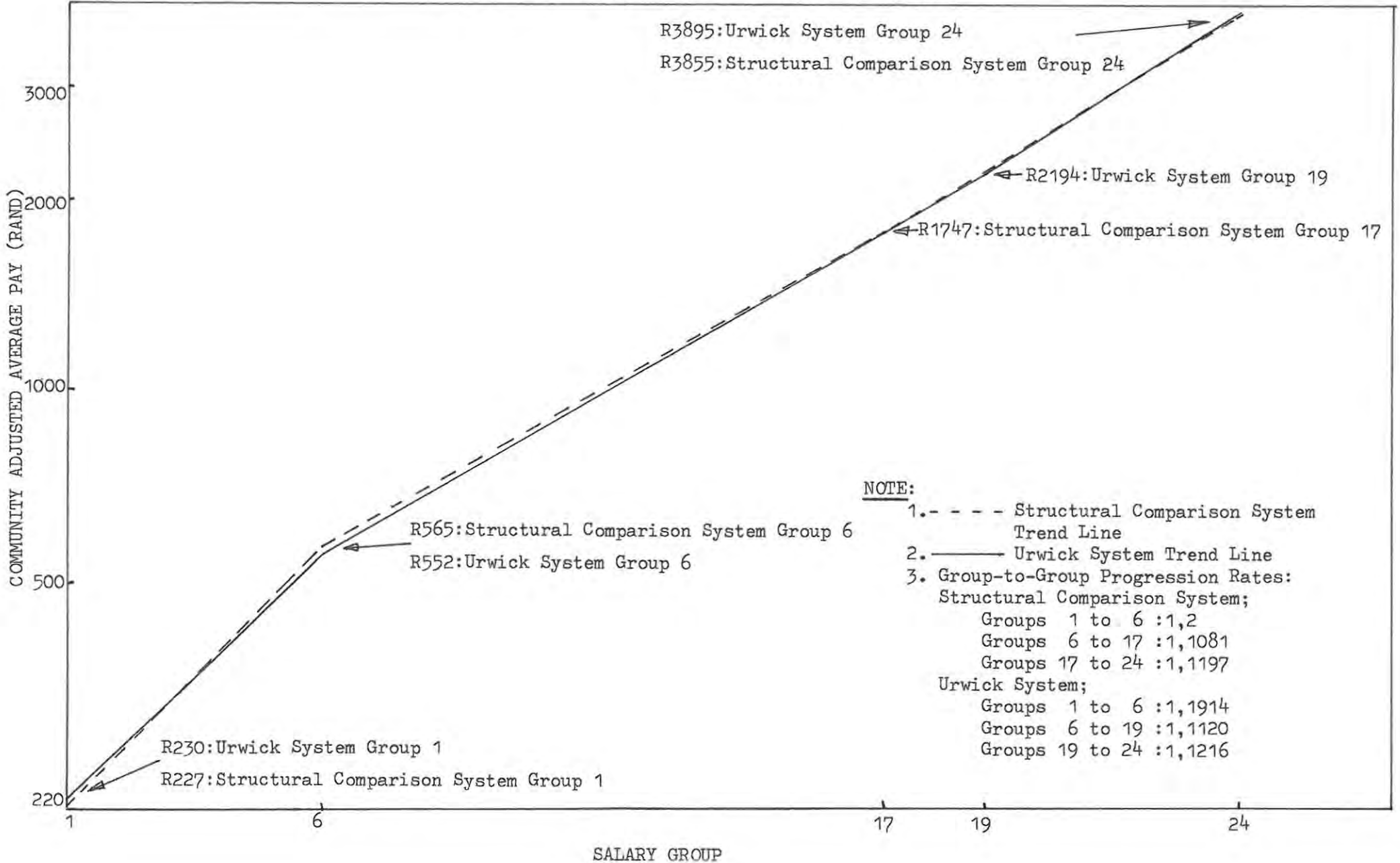
TABULATION OF COMPETITIVE AVERAGE TOTAL COMPENSATION FIGURES
FROM URWICK POSITIONAL AVERAGES : MONTHLY BASE : 1980

Salary Group	Position Title	Position Average (Rand)	Competitive Av. Total Compensation (Rand)
1	Labourer	230	230
2	Fork Lift Truck Op.	294	265
	Artisan's Helper	236	
3	Chauffeur	342	327
	Junior Clerk	322	
	Rep.Mach.Op.	317	
4	Key Punch Op.	408	378
	Copy Typist	348	
5	Clerk	464	466
	Telephonist	428	
	Lab.Tech.	505	
6	Warehouseman	555	552
	Assigned Steno.	549	
7	Senior Clerk	639	632
	Comp.Op. I	600	
	Chairman's Sec.	658	
8	Programmer II	709	724
	Sen.Lab.Tech.	738	
9	Asst.Purchasing	802	803
	Asst.Ledgers	799	
	Programmer I	807	

Salary Group	Position Title	Position Average (Rand)	Competitive Av. Total Compensation (Rand)
10	Sales Rep.	868	892
	Empl.Rel.Asst.	932	
	Payroll Sup.	877	
11	Eng.Asst.	959	922
	Prog./Anal.I	938	
	Warehouse Sup.	870	
12	Section Head	941	977
	Empl.Rel.Asst.	1 001	
	Chief Draughtsman	989	
13	District Mgr.	1 120	1 126
	Maint.Zone Sup.	1 131	
14	Trans.Co-ord.	1 256	1 227
	Financial Anal.	1 197	
	Legal Advisor	1 228	
15	Empl.Rel.Mgr.	1 301	1 359
	Chief Chemist	1 360	
	Instr./Elect.Sup.	1 445	
	Island View "A" Sup.	1 331	
16	Asst.Controller	1 555	1 601
	Data Proc.Mgr.	1 638	
	Chief Maint.Supt.	1 611	

Salary Group	Position Title	Position Average (Rand)	Competitive Av. Total Compensation (Rand)
17	Real Est. Mgr.	1 628	1 688
	Transport Mgr.	1 705	
	Chief Proj.Mgr.	1 731	
18	Treasurer	1 842	1 935
	Secretary	2 068	
	Controller	1 938	
	Empl.Rel.Mgr.	1 891	
19	Resale Sales Mgr.	2 034	2 194
	Systems & Com.Mgr.	2 273	
	Technical Mgr.	2 275	
20	Resale Sales Mgr.	2 337	2 416
	Asst.Acc.& Fin.Mgr.	2 494	
21	Regional Mgr.	2 861	2 865
	Operations Mgr.	2 834	
	Relations Mgr.	2 901	
22	Acc. & Fin.Mgr.	2 974	2 974
23	Manuf.Mgr.	3 727	3 727
24	Marketing Mgr.	3 895	3 895

FIGURE 22
 COMPARISON OF STRUCTURAL COMPARISON SYSTEM AND
 URWICK SYSTEM COMMUNITY SALARY TREND LINES: 1980



This extremely low overall average discrepancy figure is supported by similar discrepancy figures when the pay structure is divided into the three basic sections, or levels of positions. The lower section levels, consisting of salary groups one to six, indicate an average percentage discrepancy of 0,6%, while the middle section levels, consisting of salary groups six to nineteen, indicate an average percentage discrepancy of 0,2%, and the upper section levels, consisting of salary groups nineteen to twenty-four, indicate an average percentage discrepancy of 0,6%.

Although on the average the Structural Comparison System trend line values tend to be greater, in fact, these values are greater only for the lower half of the pay structure, while the Urwick values are in fact greater for the upper half, which obviously includes upper management levels. Thus, from salary group thirteen upwards, Urwick trend line values tend to be slightly greater than the corresponding Structural Comparison salary group values, this average percentage discrepancy for salary groups thirteen to twenty-four being 0,7%. However, the greatest individual salary group percentage discrepancy for this upper half of the pay structure is only 1,6%, which illustrates the degree of similarity between salary group trend line values overall.

Thus, on the basis of these statistics it may once again be stated that the Structural Comparison System provides a survey procedure which allows collection and analysis of competitive compensation data on both an acceptable and reliable basis, in the light of Urwick survey data.

AN OVERALL COMPARISON

Comparisons of Structural Comparison and Urwick trend line values for individual survey years have revealed very favourable results, indicating a very similar interpretation of the national labour market competitive wage and salary rates.

In order to gain insight into comparisons of average percentage movement in total compensation values as reflected by the respective systems, TABLE 93 provides figures relevant to these movements at three different levels of the pay structure, basically reflecting lower, middle and upper organisational levels, these figures representing movements in

competitive average total compensation values rather than trend line values. A graphical representation of these compensation movements is provided by FIGURE 23.

TABLE 93

INCREASE IN COMPETITIVE AVERAGE TOTAL COMPENSATION VALUES :
STRUCTURAL COMPARISON SYSTEM VS URWICK SYSTEM : 1974 - 1980

SALARY GROUP	STRUCTURAL COMPARISON PERCENTAGE INCREASE			URWICK PERCENTAGE INCREASE		
	1974- 1977	1977- 1980	1974- 1980	1974- 1977	1977- 1980	1974- 1980
1 - 6	22,6	19,5	52,5	26,5	18,8	50,3
6 - 16	30,2	19,5	55,9	23,7	22,8	52,0
16 - 24	29,4	20,0	55,3	27,5	25,7	60,1
1 - 24	28,0	19,7	54,9	25,7	22,8	54,3

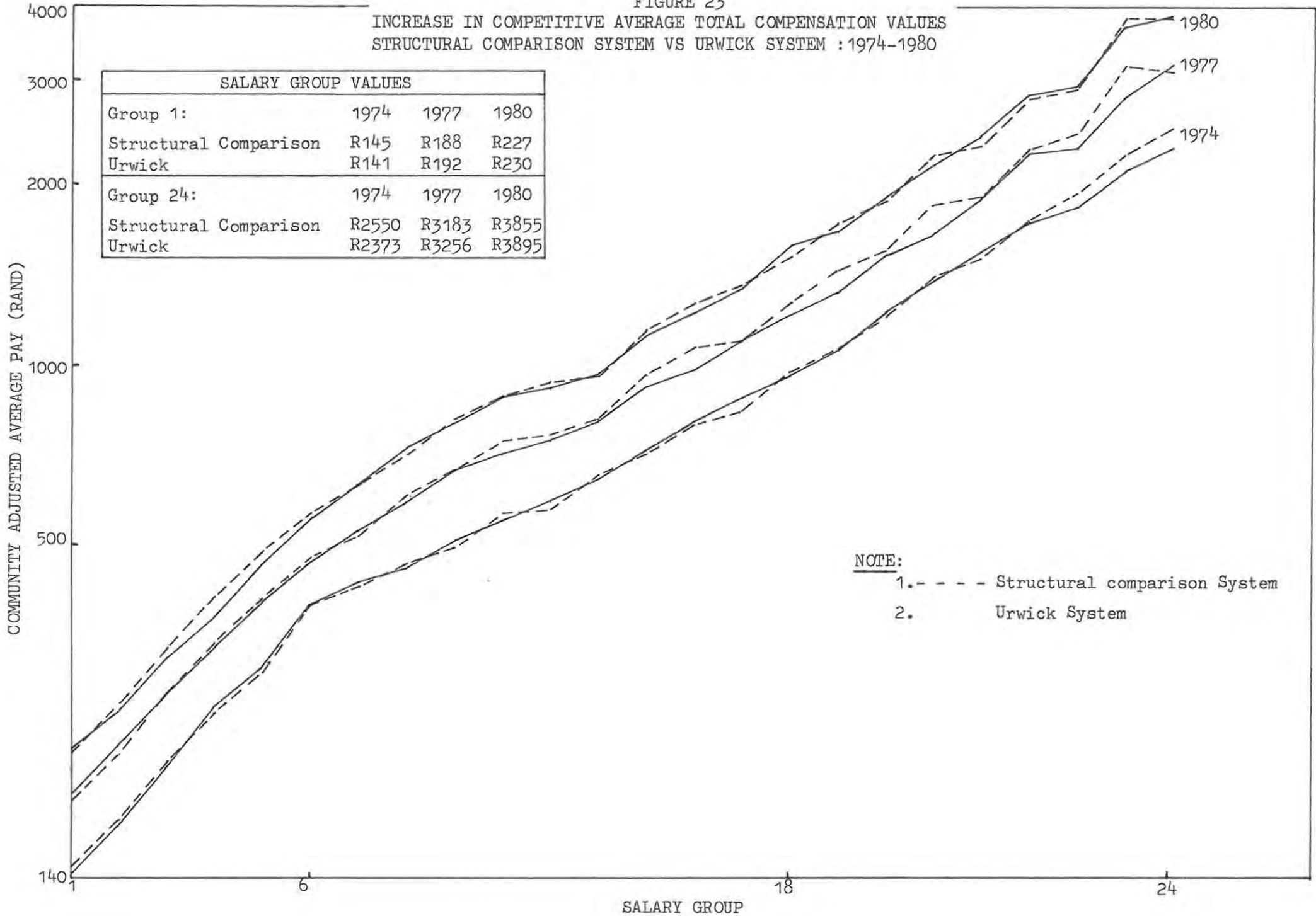
The average percentage movements in compensation values reflected by the two systems for the total pay structure, or salary groups one to twenty-four, are almost identical, the difference between these values being 0,6% for the period 1974 to 1980.

However, analysis of the three sections, or levels, of the pay structure reveal that the Urwick surveys indicate a greater movement in compensation values at the upper management levels; or salary groups sixteen to twenty-four section of the structure, for the same time period, the discrepancy being 4,8%. On the other hand, the Structural Comparison surveys indicate a greater movement in compensation values at both the salary groups six to sixteen levels, and the salary groups one to six levels, over this time period, these discrepancies being 3,9% and 2,2% respectively. These overall discrepancy figures are not significant, given the time period under consideration, namely six years. The largest discrepancy, at the upper management levels, may be attributed to the greater movement in compensation values reflected by the Urwick surveys for the period 1974 to 1977 at these levels, whereas for remaining periods, and considering all levels of the pay structure, percentage discrepancy figures are not very significant.

FIGURE 23

INCREASE IN COMPETITIVE AVERAGE TOTAL COMPENSATION VALUES
 STRUCTURAL COMPARISON SYSTEM VS URWICK SYSTEM : 1974-1980

SALARY GROUP VALUES			
Group 1:	1974	1977	1980
Structural Comparison	R145	R188	R227
Urwick	R141	R192	R230
Group 24:	1974	1977	1980
Structural Comparison	R2550	R3183	R3855
Urwick	R2373	R3256	R3895



Although the greater movement in compensation values reflected by the Urwick surveys for the upper management levels for the period 1974 to 1977 are not illustrated by TABLE 93, due to the lowering in averages over salary groups sixteen to twenty-four, scrutiny of individual salary group values supports the above statement. For example, for salary group twenty-four the Urwick surveys indicate a movement in competitive average total compensation values in the order of 37,2% as opposed to the corresponding Structural Comparison survey indication of only 24,8%, for the period 1974 to 1977. Similarly, for the same period, the average figure reflected by Urwick surveys for salary groups twenty-one to twenty-four is 33,9%, as opposed to the Structural Comparison figure of 25,4%. However, subsequent surveys reflect similar movements in compensation values for both systems at these levels as well as other levels of the pay structure.

In short then, it may be stated that the only significant discrepancies in compensation values reflected by the two systems were at the upper management levels of the structure as revealed by the 1977 surveys. However, the comparisons of trend line values derived from actual national community averages revealed significant similarity at all levels of the pay structure to warrant acceptance of the Structural Comparison System methods and techniques of data gathering and analysis. Both reliability and validity of the system tend to be reflected in its practical applicability and consistency in supplying accurate and acceptable results in the light of the Urwick analysis.

THE STRUCTURAL COMPARISON SYSTEM AS A VIABLE AND PRACTICALLY
ACCEPTABLE COMPENSATION SURVEY SYSTEM

In order to effectively evaluate the Structural Comparison System as a valid and reliable system which may be adopted by any organisation wishing to competitively adjust its pay structure according to changes in market compensation levels over successive surveys, assessments have to be made not only of the statistical results obtained through practical application, but also of the success of the system in effectively achieving its goal through utilisation of basic concepts upon which its logic is based. In other words, an assessment must be made of how successful the system has been in the objective gathering and analysis of competitive compensation data through the comparison of total pay structures rather than individual positions over successive surveys. Thus, concluding remarks may be made in terms of :

1. Results of successive comprehensive surveys.
2. The effectiveness of the system in terms of the utilisation of (a) job evaluation elements, (b) the midpoint concept, (c) the key position concept, and (d) structural standardisations.

RESULTS OF SUCCESSIVE SURVEYS

In order to gauge the effectiveness of the Structural Comparison System in the provision of consistently reliable results, it was necessary to conduct comprehensive surveys over a number of years, and subsequently to compare results obtained through application of this system's various methods and techniques of data gathering and analysis, with results obtained from similar surveys conducted according to methods and techniques applicable to various other systems. In the light of these comprehensive comparisons completed in previous chapters, which have provided both an internal comparison basis (the Midpoint System) as well as an external comparison basis (Peromnes and Urwick Systems), an effective measure of both viability and acceptability may be gained. In terms of individual survey system analysis, then, it may be stated that,

on the average, the Structural Comparison System results compared favourably with those results obtained by other comparable systems in that overall, there exists no significant degree of variance between final pay structures derived from analysis of data collected by the various systems over successive periods. Thus, in terms of the comprehensive comparisons provided, based on analysis of national labour community compensation rates, it may be assumed that the Structural Comparison System provides techniques which may adequately survey such a market, such that competitive adjustments may be made to an organisation's pay structure.

However, in spite of the fact that this is an evaluative statement made in the light of empirical evidence, such a statement is made bearing in mind that those systems chosen as yardsticks against which results of the Structural Comparison System were to be compared, were chosen as those systems most likely to reflect the survey goals of the particular survey organisation under consideration. Although the Structural Comparison System has been developed as a guide for use by any organisation within any labour market or industry, to evaluate such system in terms of every such market or industry would prove to be a monumental task. Thus, these abovementioned systems were chosen on the basis of analysis of national survey communities which provide adequate yardsticks for comparison, against which the Structural Comparison System has been favourably assessed.

Nevertheless, to further emphasise this problem with respect to the choice of these systems as adequate yardsticks of comparability, it is important to stress the fact that it is difficult to assume the reliability and validity of any one system in terms of another, since each system has its own weaknesses in terms of obtaining objective information. Thus, there is no system which may be regarded as a perfect method in the gathering and analysis of information on an objective bases, and against which other systems may be effectively evaluated. Further, due to the fact that the Structural Comparison System is aimed at improving or effectively eliminating the subjective disadvantages of these same systems by reanalysing the very logic upon which they are based, it is further difficult, if not unrealistic, to assume that these systems provide adequate yardsticks against which the success of the Structural

Comparison System may be measured. As a result, these systems simply provide the most acceptable basis for comparison purposes against which the effectiveness, validity and reliability of the Structural Comparison System may be estimated, and do not provide perfect measures against which meaningful statistical calculations of reliability may be applied.

As stated, then, an estimate of reliability is established through the consistency of results obtained over successive years of surveying, and compared against those results obtained by various other survey systems. Comparisons of results against these systems has in fact revealed that the Structural Comparison has provided results which do not differ significantly over the entire pay structure, when reflecting movements in total compensation levels over the period 1974 to 1980, from similar results obtained by those survey systems utilised as comparison yardsticks. With regard to the average movement in the entire pay structure over the period 1974 to 1980, the systems under consideration have reflected similar statistics. Consideration of average total compensation movements at different levels and subsections of the pay structure, however, do reveal that certain discrepancies are highlighted over certain periods under survey, as discussed previously.

Whereas the middle section of the pay structure (approximately salary groups six to sixteen) tended to indicate the most reliable levels of comparison between Structural Comparison System results and corresponding results obtained from the Midpoint System, Peromnes and Urwick surveys, there tended to be greater discrepancies in results obtained from these comparisons at the lower section (approximately salary groups one to six), as well as the upper section (approximately salary group sixteen to twenty-four).

However, discrepancies at the lower sections were attributed to the unrest in the Non-White labour section of the market, reflected in salary movements as a result of the overreaction of organisations to the need to improve rates of pay to Non-White employees, and highlighted by the fact that whereas the Structural Comparison System was aimed at surveying salary range midpoints, the other abovementioned systems tend to survey actual salaries.

This tendency to survey actual salaries, emphasised as one of the

major disadvantages of the present survey systems, is further highlighted by discrepancies at the upper management levels. As suggested prior to the undertaking of Structural Comparison Surveys, the surveying of executive level compensation rates has always been recognised as a problem area due to various difficulties involved in the analysis, weightings and adjustment of such data, and as such was therefore recognised as a potential problem area with regard to obtaining adequate comparison bases for the results obtained by the Structural Comparison System. Thus, due to these difficulties, it is once again difficult to assume levels of reliability in the light of available results obtained from those systems utilised as comparison bases. However, the logic of the Structural Comparison System tends to allow for adequate and acceptable gauges of competitive movements at these levels, as reflected by an indication of consistent movement in total compensation levels through successive surveys.

As suggested, irrespective of these discrepancies reflected at the lower and upper levels of the pay structure, the overall individual survey results provided by the Structural Comparison System may be regarded as being acceptable in terms of results obtained from those systems utilised as yardsticks; however, it is extremely difficult to provide an objective evaluation on the basis of these analyses alone, without an adequate comparison of the actual techniques utilised by these various systems. Although this is impossible, as these various methods and techniques are unknown in detail, evaluation of the Structural Comparison System techniques may be made, to a certain degree, in terms of success of objective information gathering and analysis.

The validity of the Structural Comparison System might be judged by its practical applicability and usefulness, as well as by the extent to which it contributes to the attainment of the goals of the organisation. This contribution is very difficult to measure, however, since a large number of variables would need to be held constant in order to measure the effect of any one variable, such as the wage and salary survey system. This problem is further complicated by the fact that organisational goals are usually multiple, and devising an adequate measure of organisational success, is in itself, a difficult problem. As a result of these problems, it is understandable that there has been

practically no research done directly on the validity of different systems of wage and salary surveys. However, if we assume that a goal of the Structural Comparison System is to provide an index of what wage levels are necessary to recruit and retain needed talent, and thus allow competitive adjustments to the pay structure, such that necessary wage levels are applied and unnecessary costs avoided, then a degree of validity has been indicated by the practical applicability and usefulness of the system, in that these competitive wage levels have been adequately gauged over successive surveys.

Apart from the validity indicated by the abovementioned empirical factors, a further indication of validity may be obtained by examining the logic of some of the underlying assumptions and by assessing the contribution of the various techniques to the maintenance of these assumptions and logic of the Structural Comparison System. In the examination of this logic underlying these assumptions, several revealing questions may be asked, namely: Is the job description an accurate reflection of the actual job being performed? Are the specifications those really required by the job? Are the factors used in the overall job evaluation plan related to value produced? Are the selected key jobs representative of the range of jobs falling within the salary group in question? Is the midpoint of a salary range an adequate reflection of the competitive rate for the key job under consideration? Is the structural standardisation representative enough of an organisation's entire pay structure?

In short, thinking through the probable contribution of a particular device or technique to the success of the overall system will give useful insight into the validity of such a system.

EFFECTIVENESS OF STRUCTURAL COMPARISON SYSTEM COMPONENTS

Emphasis throughout the discussion of the compensation survey in general, and the wage and salary survey techniques in particular, has been placed on the importance and value of a reliable job evaluation system as a most useful means of obtaining objective information necessary to establish the one-time basis necessary for participating organisation pay structure standardisation.

Although, as mentioned in earlier chapters, there has been very little research on the reliability of salary surveys as such, one study provided useful insight into the question of reliability by finding that generalised, ambiguous job descriptions led participating organisations to report widely diverse salary ranges for these jobs in contrast to the "spread" of salaries reported for jobs more clearly and specifically described.¹ As the job description forms a vital source of information for the process of establishing position comparability through providing the basis of information for actual evaluation in terms of compensable job factors, meticulous care had to be taken in the formulation of a job analysis process in order to allow for reliable compilation of such job descriptions and specifications.

Once again, great difficulty would be encountered in an attempt to establish an accurate measure of reliability and validity of such a system while holding constant the many other variables involved. However, a degree of validity is provided by the success of such a system in obtaining exact matches on an intra-organisational basis, without utilisation of job evaluation as a weighting technique, as exemplified by the number of anchor positions identified during the 1974 salary survey standardisation procedure. The reliability of such a system was further highlighted by the re-evaluation of this range of positions identified as anchor positions during the 1977 survey standardisation procedure, the average correlation obtained for ratings of these positions during the 1974 and 1977 surveys being 0,89. These re-evaluations included all positions from labourer to top executive, a factor which stresses the degree of reliability in that positions at the executive levels are extremely difficult to adequately analyse and describe in terms of usual job content factors.

A further factor which indicates a degree of validity of this job analysis process, as well as the job descriptions used, was the identification during the structural standardisation procedure of those survey positions which in fact required re-evaluation in terms of job content due to the fact that such positions were incorrectly placed in the position hierarchy. Of these positions identified during the 1974 survey, all receiving re-evaluation were in fact re-positioned within

¹Harker, Personnel Journal, XXXI, 131-134.

higher or lower salary groups, thus indicating correct identification of "out-of-line" positions. The usefulness of this job analysis process in the provision of reliable information for job evaluation purposes was further emphasised by the results obtained in the selection and testing of an overall job evaluation plan in that such a system was utilised to analyse those positions utilised for these purposes (Chapter VI).

When position comparability could not be obtained on the basis of the job descriptions, i.e. when exact matches in the form of anchor positions could not be identified on the basis of job description material, the selected overall job evaluation plan (Chapter VI) was utilised to obtain a degree of comparability through evaluation and weighting according to job content criteria. In this way supportive positions were identified. The success of such a job evaluation plan in the identification of such positions is indicated by the extent to which the adjusted total compensation data matches, or "supports", the total compensation data supplied by the anchor positions within each salary group, i.e. the anchor points indicating the key range midpoints. Once again, although it is difficult to evaluate the success of such a method in terms of absolute objectivity, a degree of success may be indicated by the necessity to delete inconsistent data supplied in the form of supportive anchor points which are in fact inconsistent with the anchor point values, or key range midpoints. As an example, during the 1974 structural standardisation procedure, it was necessary to delete the supportive point data of four supportive points (TABLE 28). Thus, out of a total of a possible five-hundred-and-eighty position-to-position comparisons completed according to the Structural Comparison System, the data of only four such comparisons was deleted due to inconsistency with other comparisons, an effective 0,7%. Furthermore, such inconsistencies occurred only at the salary groups three, four and twenty-two levels of the pay structure, or the lower and upper sections. As already discussed; positions at the upper management levels are extremely difficult to analyse and describe, and this may well have been the cause for such an inconsistency, whereas reasons for inconsistencies at the lower levels are difficult to pinpoint.

The reliability of the job evaluation plan which was used as a technique in the initial structural standardisation procedure, was

thoroughly tested as an independent variable prior to its application as a survey comparability technique. This testing emphasised the high degree of reliability of such a plan, as indicated by the coefficients obtained by correlating various ratings (see Chapter VI). This degree of independent reliability, plus the degree of reliability indicated by the successful application as a survey technique, underline the contribution to the system's overall validity.

Evaluation of the key position concept and the midpoint concept cannot be made in terms of reliability or validity. Rather, as discussed, these concepts are valid in terms of their logic. Specifically, the utilisation of the midpoint concept is essential to the basic logic upon which the Structural Comparison System is based. Taking this a step further, the logic of the midpoint concept combined with the logic of the key position concept provide the skeleton to the basis for structural standardisation and the streamlining of data gathering and analysis. The obvious reasoning behind such a statement is that participating organisations with established salary group ranges were able to provide exact position matches, which in turn provided the necessary compensation data in the form of salary range midpoint rates being representative of the competitive rate of pay for positions in that particular salary group, and requiring no adjustment through application of weighting criteria.

The essentiality of the midpoint concept to the structural standardisation basis is emphasised by the necessity to survey overall pay structures rather than individual positions in the form of actual salaries. As suggested in previous chapters, levels of discrepancy between the Structural Comparison System survey results and those of the Midpoint System, Peromnes and Urwick surveys may well be due, to a large extent, to the tendency of these latter systems to survey actual salaries. A study conducted in 1977 revealed that, for the same positions surveyed, utilising the same job descriptions, but analysing actual salaries on the one hand as opposed to corresponding salary range midpoints and calculated hypothetical midpoints on the other, an average discrepancy of 4,8% resulted between the final trend line values applicable to the respective analyses².

²Snelgar, "A Guide To Conducting Compensation Surveys," 143.

Thus, because of the tendency for actual salaries to fluctuate within salary ranges, the midpoint of the range should in fact be utilised as the representative rate, and the key position concept, through identification of various essential criteria, provides the means to select the necessary midpoints for analysis purposes.

Finally, it is also through the logic of the key position concept and the midpoint concept that the validity of the structural standardisation is defined. Accurate interpretation and utilisation of these concepts should ensure the validity as well as the reliability of the analysis of data through structural standardisation techniques over both short and long terms. Once again, it is only the empirical testing and practical application of such techniques which allow an insight into reliability over successive surveys. As mentioned, the analysis of results subsequent to each survey has provided insight into the practical application of the Structural Standardisation procedure and subsequent consistency of results obtained through continued application. Although certain questions were raised regarding discrepancies at the upper management levels of the pay structure, which in fact cannot be attributed to any particular system, the general reliability and consistency of results obtained through utilisation of the Structural Comparison System guide are acceptable in the light of similar survey results obtained by various other systems.

As suggested in earlier chapters, the importance of analysis of accurate compensation data at the upper management and executive levels is vital to the success of the salary survey in general. Thus, the identification of problem areas, and potential problem areas at these levels due to discrepancies in results obtained through Structural Standardisation techniques as opposed to results obtained from other surveys, is of significance. Certain possible causes for such discrepancies on the part of the Structural Standardisation System procedure have been suggested, such as the lack of sufficient matching anchor positions throughout the survey community participating organisations to ensure an adequately representative key range midpoint for any particular salary group. However, it has also been suggested that the underlying logic of the structural standardisation procedure namely, that the anchor point is the representative competitive "going rate" midpoint of the complete range of jobs falling within one particular labour grade, and therefore the key range midpoint is representative of

that complete range, irrespective of the number of exact positional matches, ensures that the abovementioned "adequacy" factor is not applicable.

Thus, it must once again be stressed that such discrepancies cannot be attributable to any one system in particular, as it is difficult to assume that the reliability and validity of any system is superior to another as each has its own weaknesses and disadvantages, and as a result there is no perfect system to be utilised as a yardstick.

In terms of the concepts discussed here, we may state that the Structural Comparison System has proved to be adequate in the attainment of organisational goals stipulated in the purpose of such a system. Actual empirical results compare favourably with those of various other comprehensive survey systems, and thus provide an acceptable basis for the adjustment to base salary ranges, and total pay structures on a competitive average market rate basis. Further, the application of practical concepts suggested in the formulation of the structural standardisation procedure have proved acceptable in that the reliability and validity of each has contributed to the overall reliability and validity of the total system in compensation data gathering and analysis, as emphasised by results obtained.

CONCLUDING REMARKS

Although the research completed in order to formulate, establish and develop the Structural Comparison System Guide has been aimed at testing the adequacy and practicality of such a system within the industrial setting, the course of such research has revealed that a great deal of further research into the application and development of survey techniques is necessary in order to pave the way to ultimate objectivity. As mentioned, although research has been conducted on the reliability of job evaluation, job descriptions and job specifications, there has been practically no research on the reliability of salary surveys as such, or on these consistent techniques in terms of their contribution to the salary survey procedure. Further, although validity of such methods and techniques may be judged by the extent to which they contribute to the attainment of the goals of the organisation through the survey system as such, an exact measurement of this contribution is very

difficult to obtain since all other variables would need to be held constant in order to measure the effect of any one variable, such as job evaluation. However, research into this contribution of particular variables is important, if not essential, if the degrees of objectivity and accuracy of the overall system are to be continually improved.

In short then, although a great deal of research must still be conducted in the development of the wage and salary survey as such, much work remains to be done with regard to the reliability and validity of the various constituent techniques and concepts, as it is only through an assessment of the degree of success obtained through application of these numerous techniques and concepts that an assessment of the degree of reliability of the system as a whole may be gauged. This degree of success will in turn indicate the extent of validity of the system in the attainment of organisational goals and objectives.

The degree to which a particular method, technique or concept contributes to organisational objectives will also depend on the successful application of many other variables in the complex survey environment. Thus, systematic and thorough attention must be given to the process of wage and salary surveying and the many variables which influence it if serious mistakes are to be avoided and the organisation is to prosper within the labour market setting.

This research project has thus been completed in the light of the basic abovementioned necessities in the striving for as objective a compensation data gathering system as possible, due to the fact that the wage and salary survey is one of the most significant aspects of the wage determination process, which in turn is one of the most significant aspects of personnel management. The success of this system in achievement of its primary goal, namely, effective reduction, and even elimination of disadvantages of existing systems with regard to objective compensation data gathering and analysis, can only be gauged in the light of available yardsticks, which are of necessity the existing systems. Nevertheless, due to the significance of the wage and salary survey system in the overall wage and salary administration program, emphasis is placed on the necessity to continue the research into the development of a completely objective system.

As the existing wage and salary survey methods, techniques and devices provide the organisation with tools to aid in establishing wage and salary levels, as well as having other equally important uses in wage and salary administration, and until better tools are forged, constant effort must be made to improve these survey procedures, as the total wage and salary survey system must continue to carry a heavy load as a wage and salary determination technique.

A P P E N D I X I

EXHIBIT A

GENERAL INFORMATION QUESTIONNAIRE

Two copies of this questionnaire are provided (one in each booklet). The blank copy should be completed prior to the survey interview and handed to our representatives. The completed one, i.e. survey organisation information, should be retained. Should more space be required to provide complete answers, please use the reverse side of the applicable page.

A. GENERAL:

1. Participating organisation(s)
2. Organisation Representative(s)
3. Type of Operations (e.g. Marketing, Manufacturing, Services, etc.).
4. Size of Company (Approximate 1977 Sales Value, Manufacturing Capacity, etc.).
5. Number of Employees
6. Organisation Charts

It would assist discussions and final analysis if a set of organisation charts could be made available, indicating those positions related to the survey positions.

B. SALARY PRACTICES:

1. Salary Ranges
 - (a) Do you have established ranges?
If so, please attach a copy.
 - (b) What is the date and amount of last increase to salary ranges?
 - (c) When do you anticipate the next change in your salary ranges?
2. Salary Administration
 - (a) Merit increases
 - (i) Do you have a policy covering size and frequency of merit increase? Are increases based on an appraisal rating or any form of time or age progression?
 - (ii) Do you grant annual increases on a fixed review date or do you spread them throughout the year?

- (iii) Are merit increases combined with any other type of increase, e.g. economic or cost-of-living increases?
- (iv) Indicate the changes to your salary ranges and the increases your Company has granted over the past 3 years.

	<u>% Range Changes</u>	<u>Economic Increases and Date</u>	<u>Merit (as % of Salary Bill)</u>
1974			
1975			
1976			
1977			

- (v) Do you anticipate an economic adjustment to salaries in 1978?

(b) Promotional Increases

Do you have a policy covering promotional increases? If so, indicate the size (percentage) of the promotional increase and whether this varies by category of employees.

(c) Other Increases

Indicate and describe briefly any other types of increases based on economic indicators, cost-of-living, etc.

3. Bonus

- (a) Do you operate a bonus plan?
- (b) Indicate the type of bonus plan (e.g. Leave, Christmas, etc.).
- (c) Is the bonus payable to all employees or does it differ by category of employees?
- (d) Indicate the formula for bonus (e.g. one month's salary).
- (e) Is the bonus pensionable?

C. MAJOR FRINGE BENEFIT PLANS: (excluding Pension and Medical Aid Plans).

1. Housing Assistance

Do you provide any form of assistance to employees with regard to housing? (e.g. company house or flat, subsidised rent, guaranteed deposit, low-interest bond, etc.).

2. Vehicles

It is accepted that vehicles are provided where essential for the job. If, over and above this, you have any plan for assisted purchase, car lease, etc., please give details.

EXHIBIT B

SURVEY POSITION DESCRIPTION

POSITION TITLE:

RELATIONS DIRECTOR

POSITION DESCRIPTION NO.: 7

PURPOSE OF THE POSITION:

Guides, initiates and administers, in a supportive staff function to Line Management, effective employee relations, aimed at optimising skills and calibre, in Recruitment, Career Development, Manpower Planning and Productivity; in advancement of a sound and dynamic organisational health and climate. In the Public Affairs sector to provide optimum support to Management in ensuring that the Company is seen to be a wholly responsible and constructive community leader. In all of the foregoing take careful account of the extensive ethnic and cultural diversity applicable. Also responsible for the Office Services function.

No. of employees : 3 354

SUPERVISION:

- (a) Received: Keeps the Chairman and Managing Director informed of significant progress, trends and development within the field of Employee Relations; Employee Development; Productivity and Public Affairs.
- (b) Exercised: Directs the activities of the overall Employee Relations and Public Affairs function through an Employee Relations Manager; Employee Benefits Manager; Public Relations Manager and a Productivity Manager. Has 82 employees reporting to him.

EDUCATION REQUIRED:

University degree and an MBA.

PREVIOUS EXPERIENCE:

Many years of experience in Petroleum Marketing.

SPECIALISED KNOWLEDGE:

Substantial 'Line' experience in dealing with people and detailed knowledge of the Company's business, policies and procedures.

SALARY INFORMATION: (per month)

	<u>Minimum</u>	<u>Midpoint</u>	<u>Maximum</u>
Salary Range:
Salary Range:

PARTICIPATING ORGANISATION	NUMBER OF INCUMBENTS	ACTUAL/AVERAGE SALARY	BONUS	INCENTIVE BONUS	CAR BENEFIT	OTHER COMPEN-SATION

TITLE OF COMPARABLE POSITION:

EXHIBIT C

SALARY INFORMATION

SALARY INFORMATION: (per month)

PARTICIPATING ORGANISATION	NO. OF YEARS SERVICE IN PRESENT POSITION	ACTUAL SALARY	BONUS	INCENTIVE BONUS	CAR BENEFIT	OTHER COMPEN-SATION

TITLE OF COMPARABLE POSITION:

NOTE:

It must be noted that EXHIBIT C should, in practice, form the reverse side of EXHIBIT B.

EXHIBIT D

SUMMARY WORKSHEET

SURVEY POSITION TITLE: GENERAL MANAGER, MARKETING

SURVEY POSITION NO.: 10

SALARY GROUP: 20

Company and Position Title	Reporting Relationship	+ - =	Functional Responsibilities	+ - =	Scope and Magnitude of Responsibility					+ - =	Other Non-Qualifiable Factors influencing Position Evaluation	+ - =	Overall Evaluation of Compared Position to Mobil	Unadjusted Monthly Compensation				Comments:
					No. of Retail Outlets	% Total Market Share	% Market Annual (Gasoline)	Rand H Total Annual Realization	Geog. Areas of Resp.					No. of Employees Supervised	Base Salary	Bonus	Add. Comp.	
Survey Organisation	Reports to Chief Executive Officer (1 of 7)		Resale Commercial Sales (including Chemical Sales) Operations Purchasing		2 694	15	13	499	Country-wide	2 003		Member of Board of Directors		3 150	263	240	3 653	
Organisation A Marketing Manager	Reports to Chief Executive Officer (1 of 6)		Resale Sales Commercial Sales (including Chemical) Operations No Purchasing	= = = -	1 748	12	13	330	Country-wide	915		Member of Board of Directors Marketing: Metropolitan	-1 Salary Group	2 869	239	100	3 208	
	Overall =		Overall =							Overall =		Overall =						
Organisation B Vice-President Marketing	Reports to Chief Executive Officer (1 of 5)		Resale Sales Commercial Sales Operations No Chemical Sales No Purchasing	= = = - -	3 820	24	22	526	Country-wide	2 800		Member of Board of Directors	+½ Salary Group	3 260	272	230	3 512	
	Overall =		Overall =							Overall +		Overall =						

EXHIBIT E

SUMMARY OF ADJUSTED (UNADJUSTED) SALARY DATA WORKSHEET : MONTHLY BASE

PARTICIPATING ORGANISATION	TITLE OF POSITION COMPARED	EVALUATION COMPARED TO SURVEY ORGANISATION'S POSITION	JOB WEIGHTING FACTOR	ADJUSTED (UNADJUSTED) BASE SALARY (RAND)
Organisation "A"	Engineer I	- 1/2	1,0538	1 040 (987)
Organisation "B"	Engineer A	Equal	-	936 (936)
Organisation "C"	Engineer II	+1 1/2	1,1672	1 019 (1 189)
Organisation "D"	Engineer I	Equal	-	988 (988)
Organisation "E"	Jr. Engineer	Equal	-	1 060 (1 060)
Competitive Adjusted Average				1 009
Survey Organisation	Engineer I	Survey Position		953

- NOTE:
1. This worksheet format is designed for use where only base salary data is involved.
 2. Each organisation "Adjusted Average Actual Salary" given weight of one.
 3. Survey organisation group-to-group progression rate of 1,1076 was used as the basis for adjusting data.

EXHIBIT F

SUMMARY OF ADJUSTED (UNADJUSTED) SALARY

DATA WORKSHEET : MONTHLY BASE

SURVEY POSITION TITLE: General Manager, Marketing

SURVEY POSITION NO.: 10

SALARY GROUP: 20

Organisation	Position Title	Evaluation compared to Survey Organisation Position	Base Midpoint (Rand)	Average Base Salary (Rand)	No. of Incumbents	Average Years in Grade	Hypothetical Midpoint Adjustment Factor	Base Midpoint or Hypothetical Midpoint (Rand)	Job Weighting Factor	Adjusted Base Salary Midpoint (Rand)	Adjusted Bonus and/or other Elements of Compensation (Rand)	Adjusted Total Compensation Midpoint (Rand)
"A"	Marketing Director	- 1	-	2 917	1	6	0,9831	2 873	1,1067	3 180	125	3 305
"B"	Vice-Pres., Mrktg.	+ ½	3 313	-	1	2	-	3 313	1,0538	3 144	-	3 144
"C"	Oil Sales Manager	Equal	-	3 042	3	3	-	3 042	-	3 042	167	3 209
"D"	Product Sales Mgr.	- ½	3 167	-	1	6	-	3 167	1,0538	3 337	-	3 337
"E"	Marketing Director	+1½	-	3 250	1	1	1,1033	3 586	1,1072	3 072	167	3 239
COMPETITIVE ADJUSTED AVERAGE										3 155		3 247
SURVEY ORGANISATION	General Manager, Marketing		3 208	2 708	1	1	-	3 208				

NOTE:

1. This worksheet format is designed for use when the total compensation of one or more participating organisations include base salary and other elements of compensation, or when participating organisations do not have existing salary ranges and hypothetical midpoints must be calculated.
2. Each organisation "Adjusted Base Salary Midpoint" and "Adjusted Total Compensation Midpoint" given weight of one.
3. Average salary and years in grade are used to calculate a hypothetical midpoint where a participating organisation does not have an established salary range.
4. The adjusted bonus and/or other elements of compensation should be the amount that the participating organisation would normally pay to an employee whose salary is at the organisation's adjusted base salary midpoint and whose performance level is comparable to the survey organisation's "meets requirements" performance appraisal rating.
5. Survey organisation group-to-group progression rate of 1,1076 was used as the basis for adjusting data.

EXHIBIT G

TABULATION OF TOTAL COMPENSATION MIDPOINT DATA

SALARY GROUP	POSITION TITLE	COMPETITIVE TOTAL COMPENSATION MIDPOINT : MONTHLY BASE (RAND)					COMPETITIVE AVERAGE TOTAL COMPENSATION MIDPOINT (SALARY GROUP)
		ORGANISATION "A"	ORGANISATION "B"	ORGANISATION "C"	ORGANISATION "D"	ORGANISATION "E"	
10	POSITION "A"	1 034 *	986 *	1 019 *	988 *	1 060	1 008
	POSITION "B"	1 034 *	986 *	1 019 *	957	1 012 *	
	POSITION "C" ^a	4 244	4 494	4 230	4 246		
	KEY RANGE MIDPOINT	1 034	986	1 019	988	1 012	
11	POSITION "D"	1 093 *	1 093 *	1 149 *	1 095 *	1 109	1 113
	POSITION "E"	1 093 *	-	4 400 ^b	1 095 *	1 175	
	POSITION "F"	1 093 *	1 093 *	1 149 *	-	1 133 *	
	KEY RANGE MIDPOINT	1 093	1 093	1 149	1 095	1 133	
12	POSITION "G"	1 258 *	1 150 *	1 208	1 156	-	1 211
	POSITION "H"	1 258 *	1 150 *	-	-	1 246	
	POSITION "I"	1 258 *	-	1 206 *	1 204 *	1 238 *	
	POSITION "J"	1 233	1 148	1 206 *	-	1 238 *	
	KEY RANGE MIDPOINT	1 258	1 150	1 206	1 204	1 238	
13	ETC.						

^aDeletion of inconsistent Supportive Position Data.

^bDeletion of inconsistent Supportive Position Data.

NOTE: Asterisks (*) indicate midpoints of Anchor Positions, i.e. Anchor Points. All other midpoints represent adjusted midpoints of Supportive Positions, i.e. Supportive Points.

EXHIBIT H

Competitive Average Total Compensation Trend Line

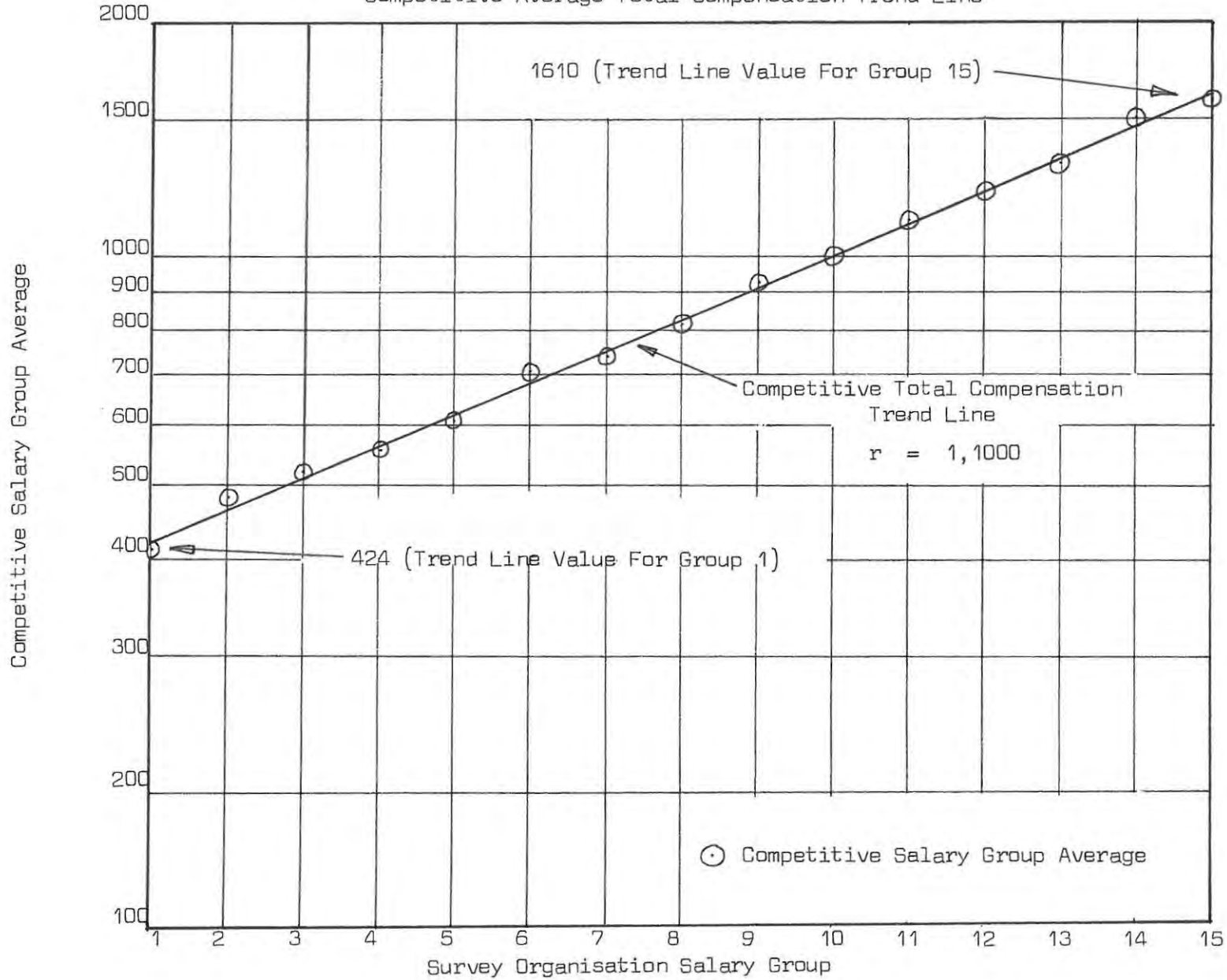


EXHIBIT I

Competitive Total Compensation Trend Line

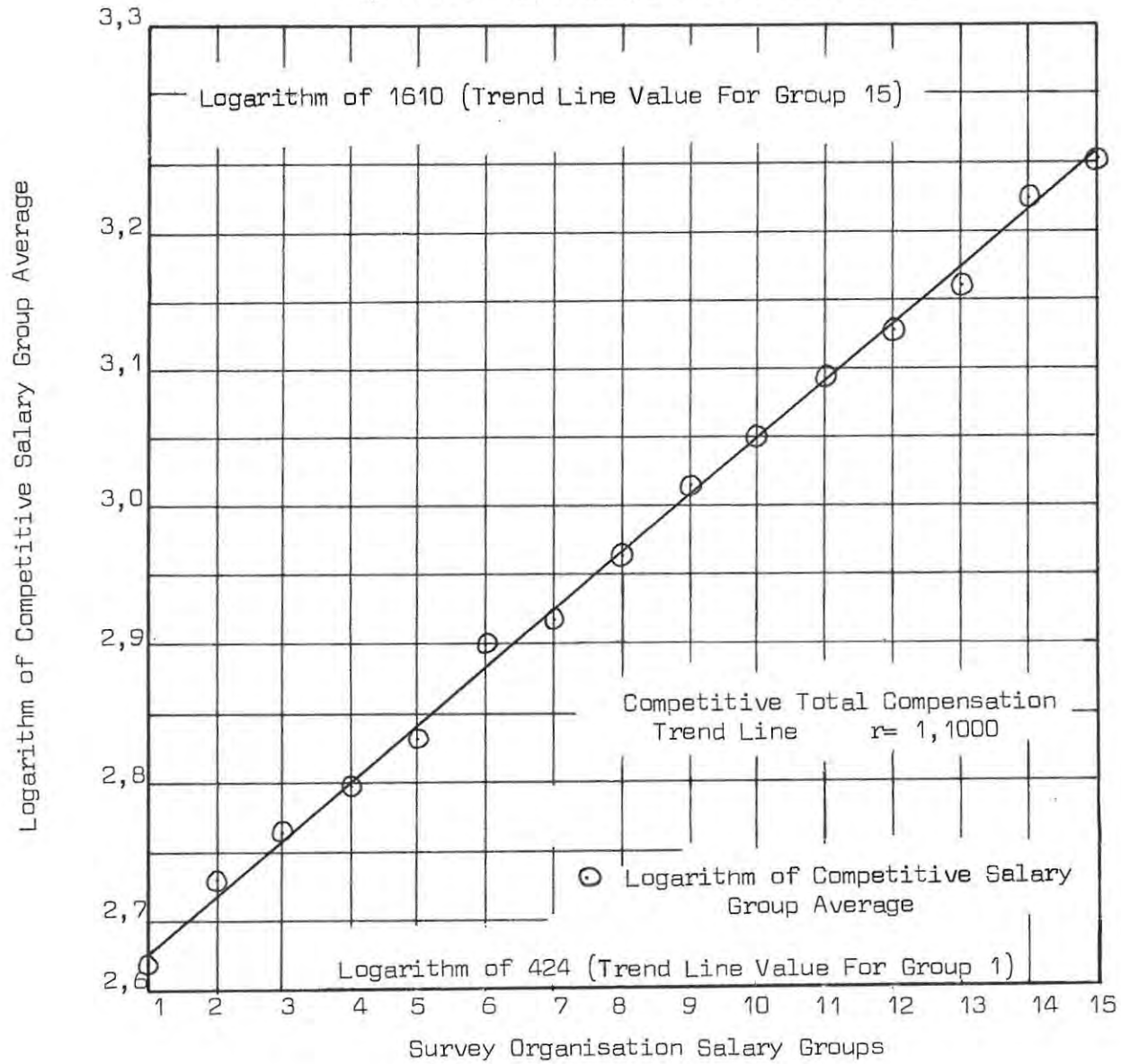


EXHIBIT J

Competitive Total Compensation Trend Line

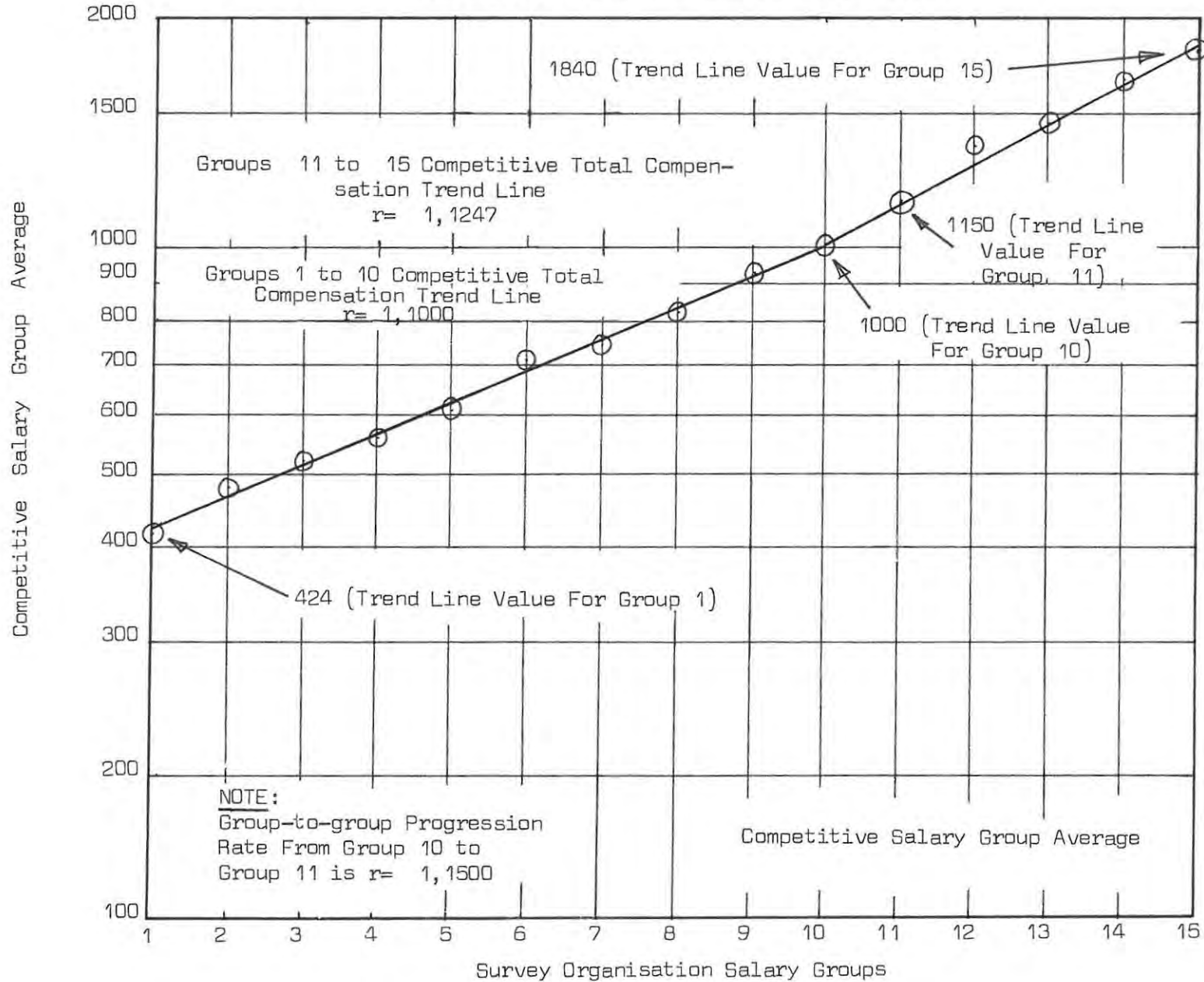


EXHIBIT K

TABLE OF GROUP-TO-GROUP PROGRESSION RATES FOR
SELECTED RATIO VALUES

Number of Salary Groups in Structure	Ratio of Highest Salary Group Midpoint to Lowest Salary Group Midpoint								
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
2	1.1000	1.2000	-	-	-	-	-	-	-
3	-	1.0955	1.1402	1.1832	1.2248	1.2649	-	-	-
4	-	1.0627	1.0914	1.1187	1.1447	1.1696	1.1935	1.2164	1.2386
5	-	-	1.0678	1.0878	1.1067	1.1247	1.1418	1.1583	1.1741
6	-	-	-	1.0696	1.0845	1.0986	1.1120	1.1247	1.1370
7	-	-	-	-	1.0699	1.0815	1.0925	1.1029	1.1129
8	-	-	-	-	-	1.0695	1.0788	1.0876	1.0960
9	-	-	-	-	-	-	1.0686	1.0762	1.0835
10	-	-	-	-	-	-	-	1.0675	1.0739
11	-	-	-	-	-	-	-	-	1.0663

Number of Salary Groups in Structure	Ratio of Highest Salary Group Midpoint to Lowest Salary Group Midpoint									
	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
5	1.1892	1.2038	1.2179	1.2315	1.2445	-	-	-	-	-
6	1.1487	1.1599	1.1708	1.1813	1.1914	1.2011	1.2106	1.2198	1.2287	1.2373
7	1.1225	1.1316	1.1404	1.1489	1.1571	1.1650	1.1726	1.1800	1.1872	1.1942
8	1.1041	1.1118	1.1192	1.1284	1.1335	1.1399	1.1463	1.1524	1.1585	1.1643
9	1.0905	1.0972	1.1036	1.1097	1.1157	1.1213	1.1269	1.1322	1.1374	1.1423
10	1.0801	1.0859	1.0916	1.0970	1.1022	1.1072	1.1120	1.1167	1.1212	1.1256
11	1.0718	1.0770	1.0820	1.0869	1.0915	1.0960	1.1003	1.1044	1.1085	1.1124
12	1.0650	1.0698	1.0743	1.0787	1.0828	1.0869	1.0907	1.0945	1.0981	1.1016
13	-	-	1.0679	1.0719	1.0757	1.0794	1.0829	1.0863	1.0896	1.0928
14	-	-	-	1.0662	1.0697	1.0730	1.0763	1.0794	1.0824	1.0854
15	-	-	-	-	-	1.0676	1.0706	1.0730	1.0763	1.0790
16	-	-	-	-	-	-	1.0658	1.0685	1.0711	1.0736
17	-	-	-	-	-	-	-	-	1.0665	1.0688

EXHIBIT K (Continued)
 TABLE OF GROUP-TO-GROUP PROGRESSION RATES FOR
 SELECTED RATIO VALUE

Number of Salary Groups in Structure	Ratio of Highest Salary Group Midpoint to Lowest Salary Group Midpoint									
	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9
7	1.2009	1.2075	1.2139	1.2202	1.2263	1.2322	-	-	-	-
8	1.1699	1.1754	1.1808	1.1860	1.1911	1.1960	1.2008	1.2055	1.2101	1.2146
9	1.1472	1.1519	1.1565	1.1609	1.1653	1.1695	1.1736	1.1777	1.1816	1.1854
10	1.1298	1.1340	1.1380	1.1418	1.1456	1.1493	1.1529	1.1565	1.1599	1.1632
11	1.1161	1.1198	1.1234	1.1268	1.1302	1.1335	1.1367	1.1398	1.1428	1.1458
12	1.1050	1.1083	1.1115	1.1147	1.1177	1.1206	1.1235	1.1263	1.1291	1.1317
13	1.0959	1.0989	1.1018	1.1046	1.1074	1.1101	1.1127	1.1152	1.1177	1.1201
14	1.0882	1.0909	1.0936	1.0962	1.0987	1.1012	1.1035	1.1059	1.1082	1.1104
15	1.0816	1.0842	1.0866	1.0890	1.0914	1.0936	1.0958	1.0980	1.1001	1.1021
16	1.0760	1.0784	1.0806	1.0829	1.0850	1.0871	1.0892	1.0912	1.0931	1.0950
17	1.0711	1.0733	1.0754	1.0775	1.0795	1.0814	1.0834	1.0852	1.0870	1.0888
18	1.0668	1.0688	1.0708	1.0728	1.0746	1.0765	1.0783	1.0800	1.0817	1.0834
19	-	-	1.0668	1.0686	1.0704	1.0721	1.0738	1.0754	1.0770	1.0786
20	-	-	-	-	1.0665	1.0682	1.0698	1.0713	1.0728	1.0743

Number of Salary Groups in Structure	Ratio of Highest Salary Group Midpoint to Lowest Salary Group Midpoint									
	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9
8	1.2190	1.2233	1.2276	-	-	-	-	-	-	-
9	1.1892	1.1929	1.1965	1.2000	1.2034	1.2068	1.2102	1.2134	1.2166	1.2254
10	1.1665	1.1697	1.1729	1.1759	1.1789	1.1819	1.1848	1.1876	1.1904	1.1931
11	1.1487	1.1515	1.1541	1.1571	1.1597	1.1623	1.1649	1.1674	1.1698	1.1722
12	1.1343	1.1369	1.1394	1.1418	1.1442	1.1465	1.1488	1.1511	1.1533	1.1554
13	1.1225	1.1248	1.1271	1.1293	1.1314	1.1335	1.1356	1.1377	1.1397	1.1416
14	1.1125	1.1147	1.1167	1.1187	1.1207	1.1227	1.1246	1.1264	1.1282	1.1300
15	1.1041	1.1060	1.1079	1.1098	1.1116	1.1134	1.1152	1.1169	1.1186	1.1202
16	1.0968	1.0986	1.1004	1.1021	1.1038	1.1055	1.1071	1.1087	1.1103	1.1118
17	1.0905	1.0922	1.0938	1.0955	1.0970	1.0986	1.1001	1.1016	1.1030	1.1044
18	1.0850	1.0866	1.0881	1.0896	1.0911	1.0925	1.0939	1.0953	1.0967	1.0980
19	1.0801	1.0815	1.0830	1.0844	1.0857	1.0872	1.0885	1.0895	1.0911	1.0923
20	1.0757	1.0771	1.0785	1.0798	1.0811	1.0824	1.0836	1.0849	1.0861	1.0873

EXHIBIT K (Continued)
 TABLE OF GROUP-TO-GROUP PROGRESSION RATES FOR
 SELECTED RATIO VALUE

Number of Salary Groups in Structure	Ratio of Highest Salary Group Midpoint to Lowest Salary Group Midpoint									
	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9
9	1.2228	1.2259	-	-	-	-	-	-	-	-
10	1.1958	1.1984	1.2011	1.2036	1.2061	1.2085	1.2110	1.2134	1.2157	1.2180
11	1.1746	1.1769	1.1792	1.1815	1.1837	1.1859	1.1880	1.1901	1.1922	1.1942
12	1.1576	1.1596	1.1617	1.1637	1.1657	1.1676	1.1696	1.1714	1.1733	1.1751
13	1.1435	1.1454	1.1473	1.1491	1.1509	1.1527	1.1544	1.1561	1.1578	1.1594
14	1.1318	1.1335	1.1352	1.1369	1.1385	1.1401	1.1417	1.1432	1.1448	1.1463
15	1.1218	1.1234	1.1250	1.1265	1.1280	1.1295	1.1309	1.1324	1.1338	1.1352
16	1.1133	1.1147	1.1162	1.1176	1.1190	1.1204	1.1217	1.1230	1.1243	1.1256
17	1.1058	1.1072	1.1085	1.1099	1.1112	1.1124	1.1137	1.1149	1.1161	1.1173
18	1.0993	1.1006	1.1018	1.1031	1.1043	1.1055	1.1066	1.1078	1.1089	1.1101
19	1.0935	1.0947	1.0959	1.0971	1.0982	1.0993	1.1005	1.1015	1.1026	1.1037
20	1.0884	1.0895	1.0906	1.0918	1.0928	1.0939	1.0949	1.0959	1.0969	1.0979

Number of Salary Groups in Structure	Ratio of Highest Salary Group Midpoint to Lowest Salary Group Midpoint									
	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9
10	1.2203	1.2225	-	-	-	-	-	-	-	-
11	1.1962	1.1982	1.2002	1.2021	1.2040	1.2058	1.2077	1.2095	1.2113	1.2131
12	1.1769	1.1787	1.1804	1.1821	1.1838	1.1855	1.1871	1.1888	1.1904	1.1919
13	1.1611	1.1626	1.1642	1.1658	1.1673	1.1688	1.1703	1.1718	1.1732	1.1746
14	1.1478	1.1492	1.1507	1.1521	1.1535	1.1549	1.1562	1.1576	1.1589	1.1602
15	1.1365	1.1379	1.1392	1.1403	1.1418	1.1431	1.1443	1.1455	1.1468	1.1479
16	1.1269	1.1281	1.1294	1.1306	1.1317	1.1329	1.1341	1.1352	1.1363	1.1374
17	1.1185	1.1196	1.1208	1.1219	1.1230	1.1241	1.1252	1.1262	1.1273	1.1283
18	1.1112	1.1123	1.1133	1.1143	1.1154	1.1164	1.1174	1.1184	1.1194	1.1203
19	1.1047	1.1057	1.1067	1.1077	1.1086	1.1096	1.1105	1.1115	1.1124	1.1133
20	1.0989	1.0998	1.1008	1.1017	1.1026	1.1035	1.1044	1.1053	1.1062	1.1070

EXHIBIT L

RECOMMENDED SALARY STRUCTURE : MONTHLY BASE

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	340	425	510
2	372	465	558
3	412	515	618
4	452	565	678
5	496	620	744
6	548	685	822
7	600	750	900
8	660	825	990
9	728	910	1 092
10	800	1 000	1 200
11	880	1 100	1 320
12	968	1 210	1 452
13	1 064	1 330	1 596
14	1 172	1 465	1 758
15	1 288	1 610	1 932

NOTE :

1. Group-to-group progression rate = 1,1000 (before adjustments).
2. Salary range spread = 50%.

EXHIBIT M

COMPARISON OF RECOMMENDED SALARY STRUCTURE TO
COMPETITIVE AVERAGE TOTAL COMPENSATION MIDPOINTS : MONTHLY BASE

SALARY GROUP	RECOMMENDED SALARY STRUCTURE (MIDPOINT) (RAND)	COMPETITIVE AVERAGE TOTAL COMPENSATION MIDPOINT (RAND)	PERCENTAGE RECOMMENDED MIDPOINT VARIES FROM COMPETITIVE AVERAGE TOTAL COMPENSATION MIDPOINT
1	425	414	+ 2,7
2	465	480	- 3,1
3	515	520	- 1,0
4	565	558	+ 1,3
5	620	606	+ 2,3
6	685	704	- 2,7
7	750	740	+ 1,4
8	825	820	+ 0,6
9	910	924	- 1,5
10	1 000	999	-
11	1 100	1 114	- 1,3
12	1 210	1 204	+ 0,5
13	1 330	1 304	+ 2,0
14	1 465	1 500	- 2,3
15	1 610	1 592	+ 1,1
AVERAGE VARIANCE =			0,0

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- NOTE:
1. Group-to-group progression rate = 1,100 (before adjustments).
 2. Group-to-group progression rate for Group 15 (recommended) to Group 16 (present) = 1,1280.

EXHIBIT N

COMPARISON OF RECOMMENDED SALARY STRUCTURE TO
PRESENT SALARY STRUCTURE : MONTHLY BASE

SALARY GROUP	RECOMMENDED STRUCTURE MIDPOINTS (RAND)	PRESENT STRUCTURE MIDPOINTS (RAND)	PERCENTAGE RECOMMENDED VARIES FROM PRESENT
1	425	380	+ 11,8
2	465	421	+ 10,5
3	515	466	+ 10,5
4	565	516	+ 9,5
5	620	572	+ 8,4
6	685	633	+ 8,2
7	750	702	+ 6,8
8	825	777	+ 6,2
9	910	861	+ 5,7
10	1 000	953	+ 4,9
11	1 100	1 056	+ 4,2
12	1 210	1 169	+ 3,5
13	1 330	1 295	+ 2,7
14	1 465	1 435	+ 2,1
15	1 610	1 589	+ 1,3
AVERAGE VARIANCE =			+ 6,4

NOTE:

- Recommended Structure :
1. Group-to group progression rate = 1,100 (before adjustments).
- Present Structure :
2. Group-to-group progression rate = 1,1076.
 3. Group-to-group progression rate for Groups 16 and above = 1,1399.
 4. Group-to-group progression rate for Group 15 (recommended) to Group 16 (present) = 1,1280.

EXHIBIT 0

SALARY DATA WORKSHEET : AS INCORPORATED IN
 REPORT TO PARTICIPATING ORGANISATION : MONTHLY BASE

POSITION TITLE MARKETING DIRECTOR - HEAD OFFICE				POSITION DESCRIPTION NO. 1		
COMPANY CODE	NUMBER OF EMPLOYEES	BASE SALARY PLUS BONUS (RAND)	COMPARABILITY	COMMENTS		
				PLUS CAR BENEFITS (RAND)	PLUS ENTERTAINMENT ALLOWANCE (RAND)	PLUS OTHER BENEFITS (RAND)
A	1	3033	Equal	275	67	67
B	-	-	-	-	-	-
C	-	-	-	-	-	-
D	1	1823	15% Light	175	75	-
E	1	2480	15% Light	175	-	-
F	-	-	-	-	-	-
G	-	-	-	-	-	-
H	1	3250	15% Heavy	275	200	-
I	1	3760	Equal	225	-	-
J	2	2771	15% Light	275	200	-
K	-	-	-	-	-	-
L	1	2763	Equal	175	80	-
M	-	-	-	-	-	-
N	1	3038	Equal	275	125	-
O	1	2347	30% Light	275	125	-
P	-	-	-	-	-	-
Mobil	1	2772	Survey Position	275	-	-

Number of Companies : 9
 Community Average : 2807 (Arithmetic Mean)
 Weighted Average : 2804
 Median : 2771

A P P E N D I X I I

EXHIBIT A

JOB ANALYSIS QUESTIONNAIRE

CODE NO.: _____ DATE: _____

INCUMBENT: _____ POSITION: _____

IMMEDIATE SUPERVISOR: _____ POSITION: _____

NAME OF EMPLOYER - COMPANY,
DEPARTMENT, SECTION, LOCATION: _____

INSTRUCTIONS: Please read the entire form before making any entries. Answer each question as accurately and carefully as possible. When completed, return this form to your supervisor. If you have any questions, refer to your supervisor.

A. THE JOB:

1. What is the general purpose of your work?
2. What duties and tasks exactly do you personally perform in the course of your daily work? (Explain from where you receive your work, what you do with it and where you send it. Discuss your daily routine). Indicate average length of time required for each duty.
3. What duties do you perform only at stated intervals, such as semi-weekly, weekly, or monthly? Indicate which period applies to each duty.
4. What duties do you only perform at irregular intervals?
5. What reports do you make out or assist in making out? Designate whether daily, weekly, monthly, quarterly, or annually.
6. State the prime function of the job, the section, the department, the branch.

B. RESPONSIBILITY:

1. Responsibility for people.
 - (a) Are you responsible for the welfare of others? Indicate nature and extent.

- (b) Are you responsible for the safety of others?
Indicate nature and extent.
- (c) Do your duties involve the discipline of others?
Indicate nature and extent.

2. Responsibility for events.

- (a) To what extent do your duties involve the responsibility for seeing that it is done properly?
- (b) To what extent does the work involve the responsibility for seeing that others work properly?
- (c) What is the title of your immediate superior?
- (d) What is the title of your immediate subordinate?
- (e) To what extent are you involved in contacts with others on an internal basis? Indicate whether these contacts are man to man, to other sections, to other departments, to other branches, to subordinates, to superiors, or to management. Give details of how often such contacts are made, on what basis, and to what degree they involve the actual performance of your duties.
- (f) To what extent are you involved in contacts with others on an external basis? Indicate whether these contacts are with customers or clients, with suppliers, with competitors, with government officials. Give details of how often such contacts are made, on what basis, and to what degree they involve the actual performance of your duties. Indicate the extent of effect, both internally and externally, should the contact fail.

3. Responsibility for machinery and equipment.

- (a) Does your work involve responsibility for machinery? Describe the nature of such responsibility, indicating kind and worth of machinery involved, and what could go wrong with such machinery. What would be the cost involved in correcting such faults?
- (b) What would be the effect on production and other work should such machinery break down? When was the last such incident? How many incidents in the last twelve months? How many such incidents take place before corrective action?
- (c) Does your work involve responsibility for equipment other than machinery? Describe the nature of such responsibility, indicating kind and worth of equipment involved, and what could go wrong with such equipment. What would be the cost involved in correcting such faults.

- (d) What would be the effect on production and other work should such machinery break down? When was the last such incident? How many incidents in the last twelve months? How many such incidents take place before corrective action?

4. Responsibility for materials.

- (a) Does your work involve responsibility for materials? Indicate kinds of materials, value of materials, how such materials might be damaged, and what the cost would be to repair such damage.
- (b) What would be the nature of loss of such material, e.g. mislaid, damaged, pilfered, other? When did the last loss take place? How many such incidents in the last twelve months? What action is taken against the employee? (if any). When was the last such action? What was the result? What sort of check is kept against such a loss?

5. Responsibility for cash and negotiables.

- (a) Does the work involve responsibility for handling money? Indicate amounts involved, and over what periods such amounts are involved. How often are these amounts checked?
- (b) What form of security is provided?
- (c) When did the last incident take place? How much was involved? How much was recovered? How many such incidents in the last twelve months?
- (d) What other forms of negotiables are involved? Indicate worth of such negotiables, and over what periods such amounts were involved.
- (e) What form of security is provided?
- (f) When did the last incident take place? How much was involved? How much was recovered? How many such incidents in the last twelve months?

C. SUPERVISION:

1. Supervision received.

- (a) Indicate the extent to which questionable duties are referred to your supervisor. What is the nature of such duties?
- (b) Do you have to use your own judgement in meeting new situations? To what extent? Indicate the nature of such judgements.

- (c) How often are you faced with questionable duties and new situations requiring your own judgement? When was the last such incident? How many such incidents in the last twelve months? To what extent was your supervisor and/or other superiors involved?
- (d) What decisions do you have to make without consulting your supervisor? Indicate the nature of such decisions.
- (e) To what extent do such decisions affect internal matters such as production? Indicate whether these decisions affect other employees, other sections, other departments, other branches.
- (f) To what extent do such decisions affect external matters? Indicate nature and extent of such decisions on customers or clients, suppliers, competitors, government officials. What would be the effect of a bad decision?
- (g) Is your work checked, inspected or verified? Indicate by whom, how often, and to what extent.
- (h) What is the source of your instructions, e.g. oral, written, specification?

2. Supervision of others.

- (a) Do you supervise others? Indicate number of employees, job titles, extent and nature of supervision.
- (b) To what extent do you have full discretionary authority to assign work, correct and discipline, recommend pay increases, transfer, promote and discharge, and answer grievances?
- (c) To what extent do you assign work, instruct, and coordinate the activities of your subordinates?

D. SKILL:

1. Training.

- (a) Does the job involve craft or vocational training?
- (b) Indicate type and length of training required.

2. Learning.

- (a) Whether the job involves craft or vocational training or not, indicate how long it takes to learn to achieve the lowest acceptable level required by the job, and to achieve the standard level required by the job.

3. Coordination.

- (a) Does the work involve special coordination between senses and muscles? Indicate nature and extent of such coordination, and senses and muscles involved, e.g. sight, hearing, smell, taste, touch and fingers, hands, wrists, arms, feet, legs.

4. Memory.

- (a) Does the work involve memorising details? Indicate nature and extent of such requirements, specifying whether short term, long term or persistent memory, how much detail, and what sort of detail.

5. Intricacy.

- (a) Is the work intricate? Indicate nature and extent.
- (b) Does the work require alertness to detail? Indicate nature and extent.

6. Monotony.

- (a) Is the work repetitive? Indicate to what extent.
- (b) Is the work protracted? Indicate to what extent.
- (c) Although neither repetitive nor protracted, does the work involve the continuous performance of the same activity? Indicate whether 25%, 50%, 75%, 100% of the time.
- (d) Does the work involve visual concentration? Indicate nature and extent.
- (e) Does the work involve close attention? Indicate nature and extent.
- (f) Does the work involve good communication in the reception and transmission of information? Indicate nature and extent.

7. Reasoning and Planning.

- (a) How much of the work proceeds according to set instructions? Indicate nature and whether 25%, 50%, 75%, 100%.
- (b) Are further instructions immediately available?
- (c) Does the work involve making decisions as it proceeds? Indicate nature and extent of such decisions.

E. WORKING CONDITIONS:

- (a) Are there any conditions attached to the work beyond the normal expectations? Indicate extent, and nature, e.g. height, depth, heat, cold, damp, dust, fumes, etc.
- (b) Indicate degree of exposure to weather.
- (c) Is your workplace dirty, dark, noisy? Indicate degree.
- (d) Is the workplace isolated either because of time or place? Give details.
- (e) Is the work dangerous in any way? Indicate nature and extent. List any disagreeable or hazardous conditions.
- (f) What type of injury has taken place? When was the last such incident? How many such incidents in the last five years? Has there ever been a fatality? How many employees have been injured in this job? Indicate nature of injuries.
- (g) Indicate to what extent there is any risk of contracting an occupational disease. What is the nature of such disease? When was the last such incident? How many such incidents in the last five years?
- (h) Does the work involve the use of protective material/clothing? Indicate nature and extent.
- (i) Does the work involve the use of potentially dangerous tools and items, e.g. power tools, naked flames, poisonous or harmful fluids or materials? Indicate nature and extent.
- (j) Does the work involve exceptional hours? Indicate nature and extent, e.g. irregular hours occasionally, frequently, always.
- | | | | |
|-------------------|---|---|---|
| shift work | " | " | " |
| week-ends | " | " | " |
| continuous nights | " | " | " |
| occasional nights | " | " | " |
| alternate nights | " | " | " |
| overtime | " | " | " |
| holidays | " | " | " |
- (k) Is overtime paid for? What are usual working hours per day?
- (l) Does the work involve absence from home for periods of time? Indicate extent in terms of days per month.
- (m) Are there any special privileges attached to the work which are not enjoyed by other workers in the organisation? Give details.
- (n) What are the disagreeable features of your work?

F. PHYSICAL REQUIREMENTS:

- (a) Does the work involve extraordinary physical effort? Indicate nature and extent, e.g. lifting weights without mechanical aid, carrying loads, pushing, pulling, straining, and to what extent in terms of how heavy and how often.
- (b) Is there any other aspect of the work causing undue fatigue? Give details.
- (c) In what posture is the work done, and what proportion of the working day, in terms of percentage, is standing, sitting, walking, running, carrying, kneeling, crouching, stooping, overhead reaching, cramped?
- (d) Does the work involve frequent change of posture?
- (e) Please list any other requirements not covered above, plus any personal qualifications and characteristics which you believe a candidate for your position should have.

G. EDUCATION:

- (a) What is the lowest grade of schooling, technical or university education required of a person starting in this position?
- (b) What additional education would be helpful, if any?
- (c) What special courses are needed in order to perform your duties satisfactorily?

H. EXPERIENCE/TRAINING:

- (a) What kind of previous work experience is necessary for minimum satisfactory performance of duties for a new employee on this job? Indicate nature of work experience and length of time in terms of months and years to secure it, plus where and how it could be obtained.
- (b) Having the above experience and education, what would a new employee have yet to learn, and how long would it take the employee to reach the point at which he would perform duties (i) barely satisfactorily, and (ii) satisfactorily. Specify training needed and period of time to acquire it.
- (c) In what lower positions could an employee receive training for your position?
- (d) For what higher positions in the organisation does your present work train you?
- (e) What is the most difficult area in training for satisfactory performance of duties in your work, and why is it difficult?

Other Tasks:

Percentage of Time

Equipment, Machines:

EXPERIENCE (type and amount):

EDUCATION AND TRAINING (specific skills required):

RESPONSIBILITY FOR PRODUCT AND MATERIAL:

RESPONSIBILITY FOR MACHINERY AND EQUIPMENT:

RESPONSIBILITY FOR WORK OF OTHERS:

Supervision given (number, titles and type):

Other jobs directly affected:

Responsibility for safety of others:

RESPONSIBILITY FOR CASH AND NEGOTIABLES:

GENERAL SKILLS (Coordination, Memory, Intricacy, Monotony, Reasoning and Planning):

PHYSICAL REQUIREMENTS:

Physical effort:

Surroundings:

Hazards:

Other:

JOB IMPACT:

Internal:

External:

SUPERVISION:

Received:

Given:

RESOURCEFULNESS (use of own judgement in problem solving):

CONSEQUENCE OF ERRORS:

Internal:

External:

WORK PRESSURE (Exceptional hours):

COMMUNICATION:

EXHIBIT C

JOB DESCRIPTION - SPECIFICATION

INCUMBENT: _____ CODE NO.: _____ DATE: _____
POSITION: _____
IMMEDIATE SUPERVISOR: _____ POSITION: _____
NAME OF EMPLOYER - COMPANY,
DEPARTMENT, SECTION, LOCATION: _____

PART 1 - JOB DESCRIPTION

PURPOSE OF JOB (job summary):

REGULAR ASSIGNED DUTIES:

PERCENTAGE OF TIME

PART II - JOB SPECIFICATION

Education Requirements or Equivalent:

MENTAL

Specialised Knowledge:

Previous Experience Required:

SKILL

Working Knowledge to be Acquired
on the Job:

Supervision Received:

Supervision Exercised:

RESPONSI-
BILITY

Major Contribution of Job:

Delegated Authority for Expenditure, etc.:

Who Checks Work?

Unusual Physical Requirements:

CONDITIONS

Unusual Working Conditions:

Work Week:

Required Overtime:

ADDITIONAL INFORMATION:

(INCUMBENT'S SIGNATURE)

(DATE PREPARED)

(SUPERVISOR'S SIGNATURE)

APPROVED (MANAGER'S SIGNATURE)

A P P E N D I X I I I

PARTICIPATING ORGANISATION FORMAL SALARY RANGES

1974 SALARY SURVEY

PARTICIPATING ORGANISATION

FORMAL SALARY RANGES

O R G A N I S A T I O N "A"

SALARY RANGES : MONTHLY BASE 1974

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
15	1 736	2 170	2 713
14	1 390	1 737	2 171
13	1 110	1 387	1 734
12	889	1 111	1 389
11	738	923	1 108
10	609	761	913
9	509	636	763
8	422	527	632
7	350	438	526
6	311	389	467
5	230	290	350
4	190	240	290
3	160	200	240
2	OPEN (135)	170	205
1	OPEN (115)	145	175
1A	OPEN (100)	125	150

NOTE:

1. "Open" means due consideration should be given to current salaries for similar positions in the same location in determining actual hiring rate.
2. Figures represent basic monthly salaries excluding bonus.
3. Bonus factor = 1,0833.
4. Salary ranges effective 1st January 1974.

O R G A N I S A T I O N S "B" AND "C"

SALARY RANGES : MONTHLY BASE 1974

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
B	1 742	2 264	2 613
A	1 393	1 812	2 090
1	1 115	1 400	1 673
2	911	1 142	1 367
3	730	917	1 095
4	609	765	914
5A	558	700	837
5	507	636	760
6A	464	583	696
6	413	526	620
7	332	434	530
8	203	370	507
9	170	271	356
10	170	240	302
11	170	213	256
12	150	188	226
13	134	167	200
14	118	148	148
15	105	131	157

NOTE:

1. Midpoints of salary ranges are equivalent to $\pm 85\%$ of the maximum.
2. Figures represent basic monthly salaries excluding bonus.
3. Bonus factor = 1,0833.
4. Salary ranges effective 1st October 1973.

O R G A N I S A T I O N "D"

SALARY RANGES : MONTHLY BASE 1974

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
11	188	235	282
12	206	257	308
13	226	282	338
14	248	310	372
15	273	341	409
16	312	390	468
17	336	420	504
18	364	455	546
19	400	500	600
20	463	579	695
21	493	616	739
51	551	689	827
52	616	772	928
53	694	872	1 050
54	786	990	1 194
55	888	1 122	1 356
56	991	1 254	1 517
57	1 076	1 366	1 656
58	1 206	1 534	1 862
59	1 377	1 757	2 137
60	1 610	2 012	2 414
61	1 843	2 304	2 765
62	2 111	2 639	3 167

NOTE:

1. Figures represent basic monthly salaries including bonus factors.
2. Salary ranges effective 22nd April 1974.

O R G A N I S A T I O N "F"

SALARY RANGES : MONTHLY BASE 1974

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	No Range		
2	731	1 039	1 346
3	636	795	954
4	530	663	795
5	435	548	663
6	371	477	583
7	343	439	536
8	302	378	453
9	254	307	360
10	223	265	307
11	201	239	265
12	170	212	254
13	117	151	181
14	106	115	138
15	91	107	128
16	81	98	117

NOTE:

1. Figures represent basic monthly salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st May 1974.

O R G A N I S A T I O N "G"

SALARY RANGES : MONTHLY BASE 1974

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
21	-	120	138
22	119	138	161
23	138	161	186
24	159	195	239
25	186	228	279
26	217	266	326
27	302	370	453
28	317	388	475
29	348	426	522
30	406	497	609
38	320	392	480
39	367	450	551
40	422	517	633
41	483	592	725
42	555	680	833
43	636	779	954
44	731	895	1 096
45	839	1 027	1 258
46	961	1 177	1 442
47	1 103	1 351	1 655
48		1 552	
49		1 782	
50		2 046	
51		2 348	
53		2 696	

NOTE:

1. Figures represent basic monthly salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st April 1974.

O R G A N I S A T I O N "H"

SALARY RANGES : MONTHLY BASE 1974

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
18	100	120	140
17	118	143	167
16	141	170	195
15	168	202	235
14	196	238	280
13	236	288	330
12	281	335	390
11	331	398	465
10	391	471	550
9	466	558	650
8	551	661	770
7	651	781	910
6	771	928	1 085
5	911	1 093	1 275
4	1 086	1 303	1 520
3	1 276	1 528	1 780
2	1 521	1 810	2 100
1	1 781	2 140	2 500
20	2 101	2 551	3 000

NOTE:

1. Figures represent basic monthly salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st May 1974.

O R G A N I S A T I O N "I"

SALARY RANGES : MONTHLY BASE 1974

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	unavailable		
2	unavailable		
3	unavailable		
4	unavailable		
5A	180	204	274
6B	215	260	332
7C	291	364	437
8D	307	384	461
E	325	405	495
F	380	470	570
G	445	545	655
H	530	655	763
I	630	780	908
J	740	915	1 026
K	880	1 100	1 166
K + 3	1 042	1 250	1 458
K + 2	1 250	1 563	1 875
K + 1	1 667	2 084	2 500
X	2 083	2 604	3 333

NOTE :

1. Figures represent basic monthly salaries excluding bonus.
2. Bonus factor = 1,0417 for salary groups 1 to K.
3. Salary groups K + 3 and above participate in share purchase scheme.
4. Salary ranges effective 1st March 1974.

O R G A N I S A T I O N "J"

SALARY RANGES : MONTHLY BASE 1974

ALL STAFF

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
S1	120	187	225
S2	140	217	260
S3	160	250	300
S4	185	287	345
S5	215	329	395
S6	245	371	495
S7	320	402	485

TEMPORARY STAFF

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
W1	96	104	112
W2	104	116	128
W3	114	129	144
W4	126	145	164
W5	138	163	188
W6	150	181	212
W7	164	202	240
W8	180	226	272

NOTE:

1. Figures represent basic monthly salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st February 1974.

O R G A N I S A T I O N "J" (Continued)

SALARY RANGES : MONTHLY BASE 1974

MANAGEMENT			
SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
15	471	589	707
20	530	662	794
21	597	746	895
22	671	839	1 007
23	751	939	1 127
24	843	1 054	1 265
25	954	1 192	1 430
26	1 071	1 339	1 607
27	1 206	1 508	1 810
28	1 354	1 692	2 030
29	1 526	1 908	2 290
30	1 717	2 146	2 575
31	1 932	2 415	2 898
32	2 172	2 715	3 258

NOTE:

1. Figures represent basic monthly salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 14th May 1974.

1977 SALARY SURVEY

PARTICIPATING ORGANISATION

FORMAL SALARY RANGES

O R G A N I S A T I O N "A"

SALARY RANGES : MONTHLY BASE 1977

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
15	2 166	2 708	3 250
14	1 725	2 156	2 587
13	1 389	1 736	2 083
12	1 118	1 398	1 678
11	924	1 155	1 386
10	763	954	1 145
9	632	790	948
8	523	654	785
7	434	542	650
6	345	430	515
5	285	357	430
4	240	300	360
3	200	252	305
2	170	212	255
1	150	180	210

NOTE:

1. Figures represent basic monthly salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st October 1976.

O R G A N I S A T I O N "B"

SALARY RANGES : MONTHLY BASE 1977

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
C	2 700	3 375	4 050
B	2 162	2 702	3 242
A	1 729	2 161	2 593
1	1 383	1 729	2 075
2	1 108	1 385	1 662
3	903	1 129	1 355
4	753	941	1 129
5A	689	861	1 033
5	627	784	941
6A	572	715	858
6	520	650	780
7	427	534	641
8	335	425	515
9	275	350	425
10	235	295	355
11	210	258	305
12	184	230	276
13	164	205	246
14	149	186	223
15	135	169	203

NOTE:

1. Figures represent basic monthly salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective May 1977.

O R G A N I S A T I O N "C"

SALARY RANGES : MONTHLY BASE 1977

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
B	2 156	2 695	3 234
A	1 726	2 158	2 590
1	1 382	1 728	2 074
2	1 130	1 412	1 694
3	906	1 132	1 358
4	749	936	1 123
5A	682	852	1 022
5	622	777	932
6A	564	706	847
6	514	643	772
7	422	528	634
8	330	422	515
9	270	347	425
10	220	290	360
11	200	250	300
12	179	224	269
13	162	202	242
14	150	188	226
15	136	170	204

NOTE :

1. Figures represent basic salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st October 1976.

O R G A N I S A T I O N "D"

SALARY RANGES : MONTHLY BASE 1977

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
11	250	281	312
12	274	309	343
13	302	340	378
14	332	374	415
15	366	412	457
16	402	452	502
17	442	497	552
18	486	547	608
19	535	602	669
20	588	662	735
21	647	728	809
51	746	840	933
52	845	952	1 059
53	957	1 080	1 202
54	1 093	1 235	1 376
55	1 248	1 412	1 576
56	1 426	1 616	1 805
57	1 528	1 734	1 939
58	1 779	2 021	2 263
59	2 066	2 351	2 635
60	2 361	2 690	3 019
61	2 772	3 163	3 554
62	3 249	3 713	4 176
63	3 764	4 307	4 850
64	4 454	5 104	5 754

NOTE:

1. Figures represent basic monthly salaries including bonus factors.
2. Above midpoint and maximum figures represent 25th percentile and 50th percentile respectively of actual salary ranges.
3. Salary ranges effective 1st January 1977.

O R G A N I S A T I O N "E"

SALARY RANGES : MONTHLY BASE 1977

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	196	235	274
2	225	270	315
3	261	313	365
4	301	369	437
5	355	435	515
6	423	518	613
7	503	616	729
8	593	727	861
9	700	858	1 016
10	826	1 012	1 198
11	939	1 174	1 409
12	1 090	1 362	1 634
13	1 264	1 580	1 896
14	1 466	1 833	2 200
15	1 730	2 163	2 596
16	2 042	2 552	3 062

NOTE:

1. Figures represent basic monthly salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st December 1976.

O R G A N I S A T I O N "F"

SALARY RANGES : MONTHLY BASE 1977

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	no range		
2	860	1 105	1 350
3	770	905	1 040
4	680	805	930
5	560	680	800
6	500	605	710
7	430	520	610
8	380	455	530
9	330	390	450
10	300	355	410
11	270	320	370
12	240	282	325
13	210	250	290
14	160	197	235
15	130	160	190
16	120	140	160

NOTE:

1. Figures represent monthly base salary excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st August 1976.

O R G A N I S A T I O N "G"

SALARY RANGES : MONTHLY BASE 1977

ALL STAFF

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
S1	185	254	320
S2	215	293	370
S3	245	335	425
S4	280	383	485
S5	325	443	560
S6	375	510	645
S7	430	585	740

TEMPORARY STAFF

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
W1	156	165	174
W2	164	176	188
W3	174	192	210
W4	188	212	236
W5	204	236	268
W6	220	260	300
W7	236	287	338
W8	254	318	382
W9	274	355	436

NOTE:

1. Figures represent basic monthly salary excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st April 1977.

O R G A N I S A T I O N "G" (Continued)

SALARY RANGES : MONTHLY BASE 1977

MANAGEMENT			
SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
15	665	831	997
20	745	931	1 117
21	837	1 046	1 255
22	948	1 185	1 422
23	1 070	1 331	1 604
24	1 194	1 492	1 790
25	1 348	1 685	2 022
26	1 514	1 892	2 270
27	1 705	2 131	2 557
28	1 914	2 392	2 870
29	2 154	2 692	3 230
30	2 425	3 031	3 637
31	2 726	3 408	4 090
32	3 071	3 839	4 607
33	3 452	4 315	5 178
34	3 883	4 854	5 825
35	4 369	5 461	6 553

NOTE :

1. Figures represent basic monthly salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st April 1977.

O R G A N I S A T I O N "H"

SALARY RANGES : MONTHLY BASE 1977

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
18	137	165	192
17	162	196	229
16	193	231	269
15	230	277	323
14	271	328	385
13	324	389	453
12	386	462	537
11	455	548	640
10	538	648	757
9	641	768	895
8	758	909	1 060
7	896	1 074	1 252
6	1 062	1 278	1 494
5	1 253	1 504	1 754
4	1 495	1 794	2 092
3	1 756	2 103	2 449
2	2 093	2 491	2 889
1	2 450	2 945	3 440
20	2 892	3 510	4 127

NOTE:

1. Figures represent basic monthly salary excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st March 1977.

O R G A N I S A T I O N "I"

SALARY RANGE : MONTHLY BASE 1977

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	110	138	145
2	120	150	160
3	135	169	180
4	160	198	210
A	195	240	255
B	240	293	310
C	300	360	380
D	375	450	475
E	465	559	590
F	570	672	705
G	690	814	855
H	820	967	1 015
I	960	1 110	1 160
J	1 120	1 297	1 355
K	1 300	1 507	1 575
K + 3	1 519	1 762	1 850
K + 2	1 753	2 034	2 136
K + 1	2 646	3 069	3 222

NOTE:

1. Figures represent basic monthly salary excluding bonus.
2. Bonus factor = 1,0833.
3. $\pm 20\%$ spread in range; represented midpoints are $\pm 95\%$ of maximum.
4. Salary ranges effective 1st April 1977.

1980 SALARY SURVEY

PARTICIPATING ORGANISATION

FORMAL SALARY RANGES

O R G A N I S A T I O N "A"

SALARY RANGES : MONTHLY BASE 1980

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
15	2 450	3 060	3 675
14	1 970	2 465	2 960
13	1 585	1 985	2 385
12	1 300	1 630	1 960
11	1 075	1 345	1 615
10	885	1 112	1 340
9	730	920	1 110
8	605	760	915
7	500	630	760
6	415	525	635
5	345	435	525
4	290	367	445
3	245	312	380
2	215	270	325
1	195	232	270

NOTE:

1. Figures represent basic monthly salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st August 1979.

O R G A N I S A T I O N "B"

SALARY RANGES : MONTHLY BASE 1980

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
C	3 186	3 983	4 780
B	2 550	3 188	3 826
A	2 040	2 550	3 060
1	1 632	2 040	2 448
2	1 307	1 634	1 961
3	1 056	1 332	1 598
4	888	1 110	1 332
5A	813	1 016	1 219
5	740	925	1 110
6A	675	844	1 013
6	614	767	920
7	504	630	756
8	402	502	602
9	330	413	496
10	278	348	418
11	243	304	365
12	217	271	325
13	194	242	290
14	175	219	263
15	160	200	240

NOTE:

1. Figures represent basic monthly salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st August 1979.

O R G A N I S A T I O N "C"

SALARY RANGES : MONTHLY BASE 1980

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
B	2 555	3 194	3 833
A	2 046	2 557	3 068
1	1 638	2 048	2 458
2	1 338	1 673	2 008
3	1 073	1 341	1 609
4	887	1 109	1 331
5A	808	1 010	1 212
5	737	921	1 105
6A	670	837	1 004
6	610	753	916
7	501	626	751
8	400	500	600
9	329	411	493
10	275	344	413
11	237	296	355
12	212	265	318
13	191	239	287
14	178	223	268
15	162	202	242

NOTE :

1. Figures represent basic monthly salary excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st September 1979.

O R G A N I S A T I O N "D"

SALARY RANGES : MONTHLY BASE 1980

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
11	274	343	412
12	302	377	452
13	332	415	498
14	365	456	547
15	402	503	604
16	441	551	661
17	485	606	727
18	534	667	800
19	587	734	881
20	646	808	970
21	710	888	1 066
51	806	1 008	1 210
52	914	1 142	1 370
53	1 037	1 296	1 555
54	1 186	1 482	1 778
55	1 355	1 694	2 033
56	1 551	1 939	2 327
57	1 665	2 081	2 497
58	1 940	2 425	2 910
59	2 257	2 821	3 385
60	2 582	3 228	3 874
61	3 037	3 796	4 555
62	3 565	4 456	5 347
63	4 134	5 168	6 202
64	4 900	6 125	7 350

NOTE:

1. Figures represent basic monthly salaries including bonus.
2. Salary ranges effective 1s August 1979.

ORGANISATION "E"

SALARY RANGES : MONTHLY BASE 1980

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	254	305	356
2	293	352	410
3	343	412	480
4	393	481	569
5	464	568	672
6	543	665	787
7	635	778	921
8	749	918	1 087
9	884	1 083	1 282
10	1 022	1 277	1 532
11	1 206	1 507	1 808
12	1 422	1 778	2 134
13	1 679	2 099	2 519
14	1 981	2 476	2 971
15	2 338	2 922	3 506
16	2 759	3 448	4 138

NOTE:

1. Figures represent basic monthly salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st October 1979.

O R G A N I S A T I O N " F "

SALARY RANGES : MONTHLY BASE 1980

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	no range		
2	1 052	1 315	1 578
3	861	1 076	1 291
4	766	958	1 150
5	647	809	971
6	576	720	864
7	495	619	743
8	433	541	649
9	371	464	557
10	338	422	506
11	305	381	457
12	269	336	403
13	238	298	358
14	187	234	281
15	152	190	228
16	134	167	200

NOTE:

1. Figures represent basic salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st December 1979.

O R G A N I S A T I O N "G"

SALARY RANGES : MONTHLY BASE 1980

ALL STAFF

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
S1	378	302	566
S2	279	349	419
S3	319	399	479
S4	365	456	547
S5	422	527	632
S6	486	607	728
S7	557	696	835

TEMPORARY STAFF

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
W1	157	196	235
W2	167	209	251
W3	182	228	274
W4	202	252	302
W5	225	281	337
W6	247	309	371
W7	274	342	410
W8	302	378	454
W9	338	422	506

NOTE:

1. Figures represent base monthly salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st July 1979.

O R G A N I S A T I O N "G" (Continued)

SALARY RANGES : MONTHLY BASE 1980

MANAGEMENT			
SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
15	791	989	1 187
20	886	1 108	1 330
21	996	1 245	1 494
22	1 128	1 410	1 692
23	1 267	1 584	1 901
24	1 420	1 775	2 130
25	1 604	2 005	2 406
26	1 801	2 251	2 701
27	2 029	2 536	3 043
28	2 277	2 846	3 415
29	2 562	3 203	3 844
30	2 886	3 607	4 328
31	3 245	4 056	4 867
32	3 654	4 568	5 482
33	4 108	5 135	6 162
34	4 621	5 776	6 931
35	5 199	6 499	7 799

NOTE:

1. Figures represent base salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st January 1980.

O R G A N I S A T I O N "H"

SALARY RANGES : MONTHLY BASE 1980

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
18	155	194	233
17	184	230	276
16	217	271	325
15	260	325	390
14	308	385	462
13	366	457	548
12	434	543	652
11	515	644	773
10	609	761	913
9	722	902	1 082
8	854	1 068	1 282
7	1 010	1 262	1 514
6	1 202	1 502	1 802
5	1 414	1 767	2 120
4	1 686	2 108	2 530
3	1 934	2 471	2 900
2	2 342	2 927	3 512
1	2 768	3 460	4 152
20	3 299	4 124	4 949

NOTE:

1. Figures represent base salary excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st October 1979.

O R G A N I S A T I O N "I"

SALARY RANGES : MONTHLY BASE 1980

SALARY GROUP	MINIMUM (RAND)	MIDPOINT (RAND)	MAXIMUM (RAND)
1	129	161	193
2	141	176	211
3	158	198	238
4	186	232	278
A	225	281	337
B	274	343	412
C	337	421	505
D	421	526	631
E	523	654	785
F	629	786	943
G	762	952	1 142
H	905	1 131	1 357
I	1 039	1 299	1 559
J	1 214	1 517	1 820
K	1 410	1 763	2 116
K + 3	1 650	2 062	2 474
K + 2	1 904	2 380	2 856
K + 1	2 873	3 591	4 309

NOTE:

1. Figures represent base salaries excluding bonus.
2. Bonus factor = 1,0833.
3. Salary ranges effective 1st July 1979.

A P P E N D I X IV

SURVEY ORGANISATION SIMPLIFIED ORGANISATION CHARTS

NOTE:

1. For all organisation charts, only those "boxed" positions have been included in surveys.
2. Figures in parenthesis represent numbers of employees supervised.

CHART NO. 1
 SURVEY ORGANISATION
 SOUTHERN AFRICA

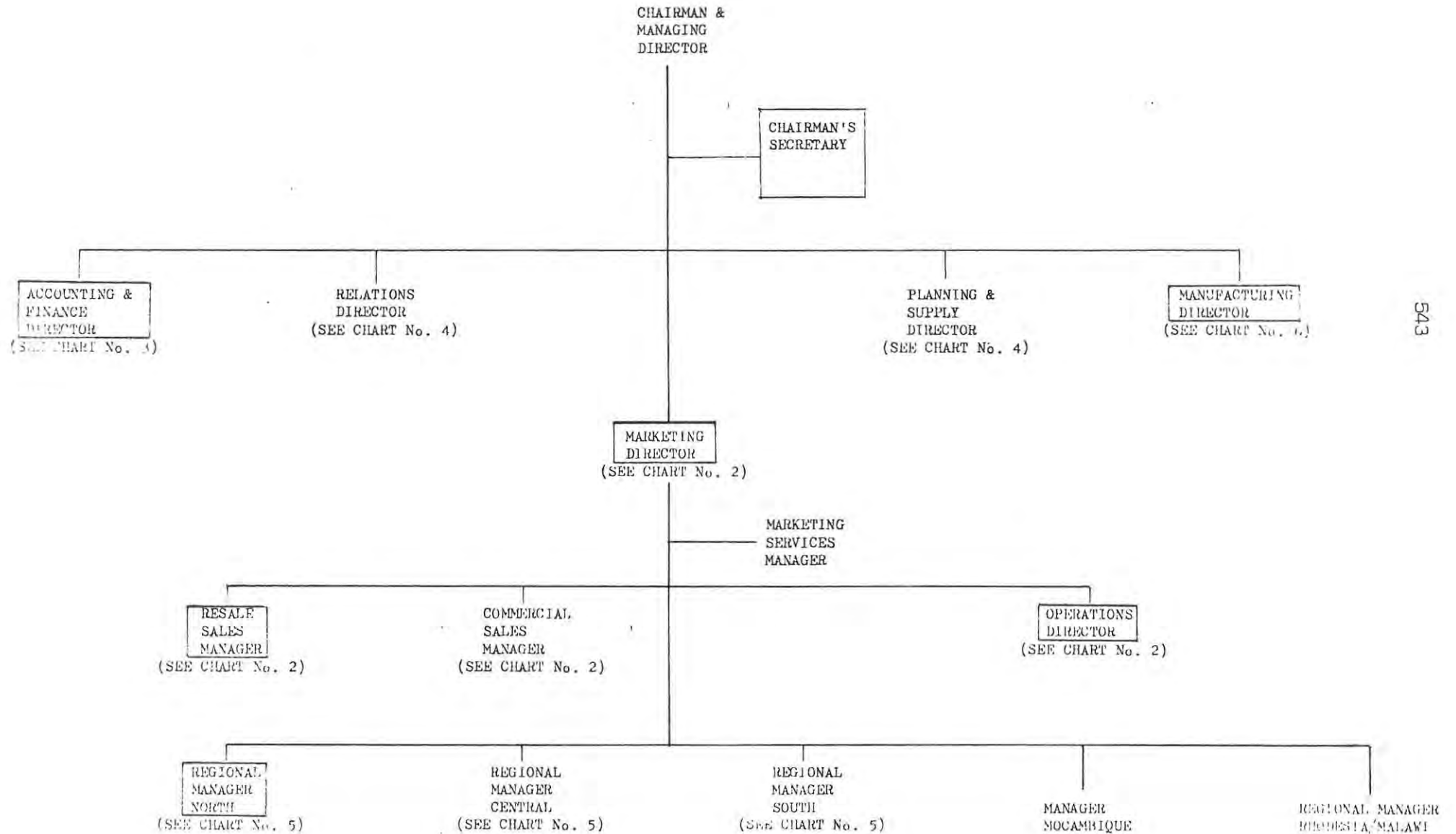


CHART NO.2
 SURVEY ORGANISATION HEAD OFFICE
 MARKETING AND OPERATIONS

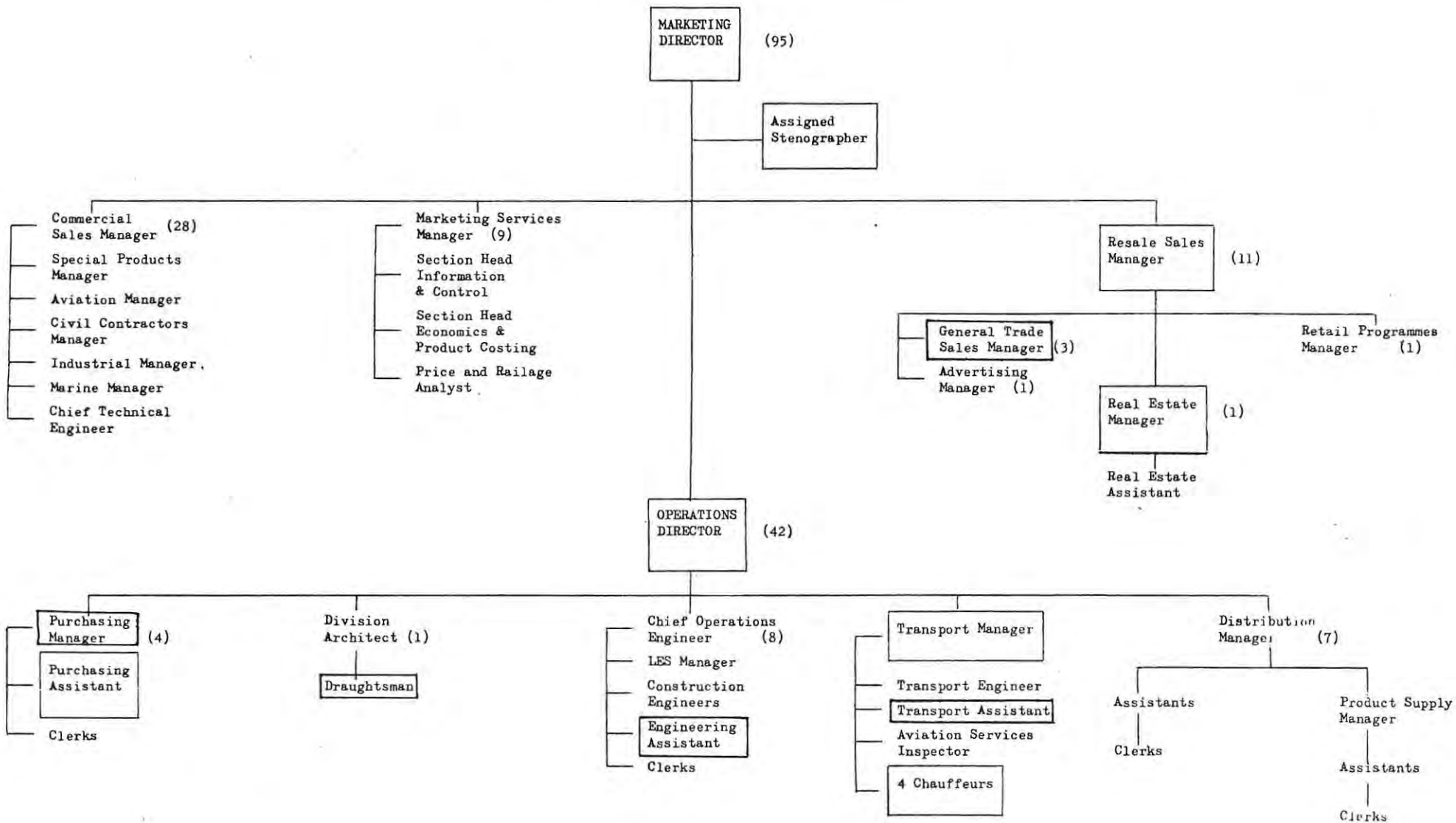


CHART NO. 3
 SURVEY ORGANISATION HEAD OFFICE
 ACCOUNTING AND FINANCE

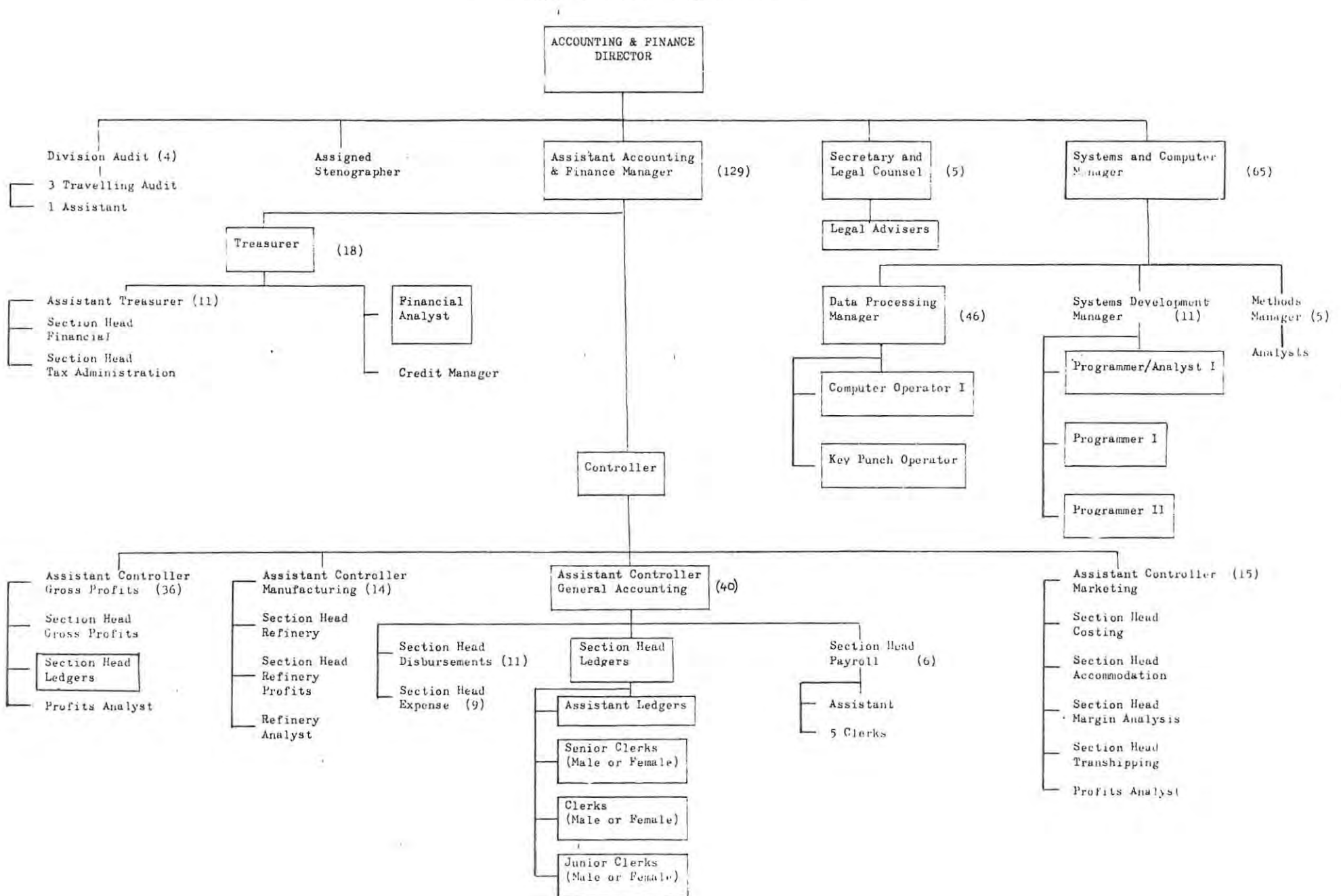


CHART NO.4
 SURVEY ORGANISATION HEAD OFFICE
 PLANNING AND RELATIONS

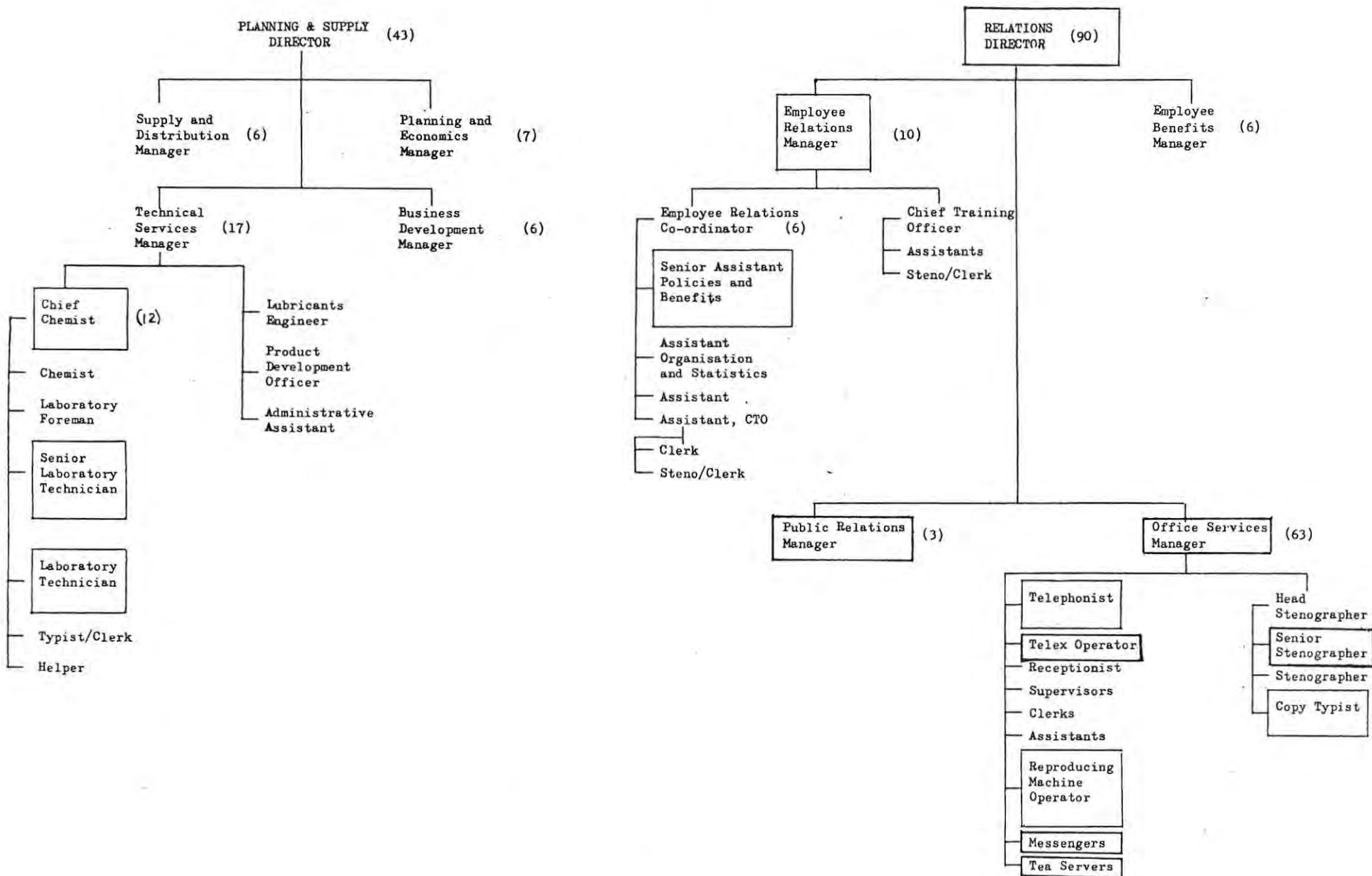


CHART NO.5
 SURVEY ORGANISATION
 TYPICAL REGION OFFICE

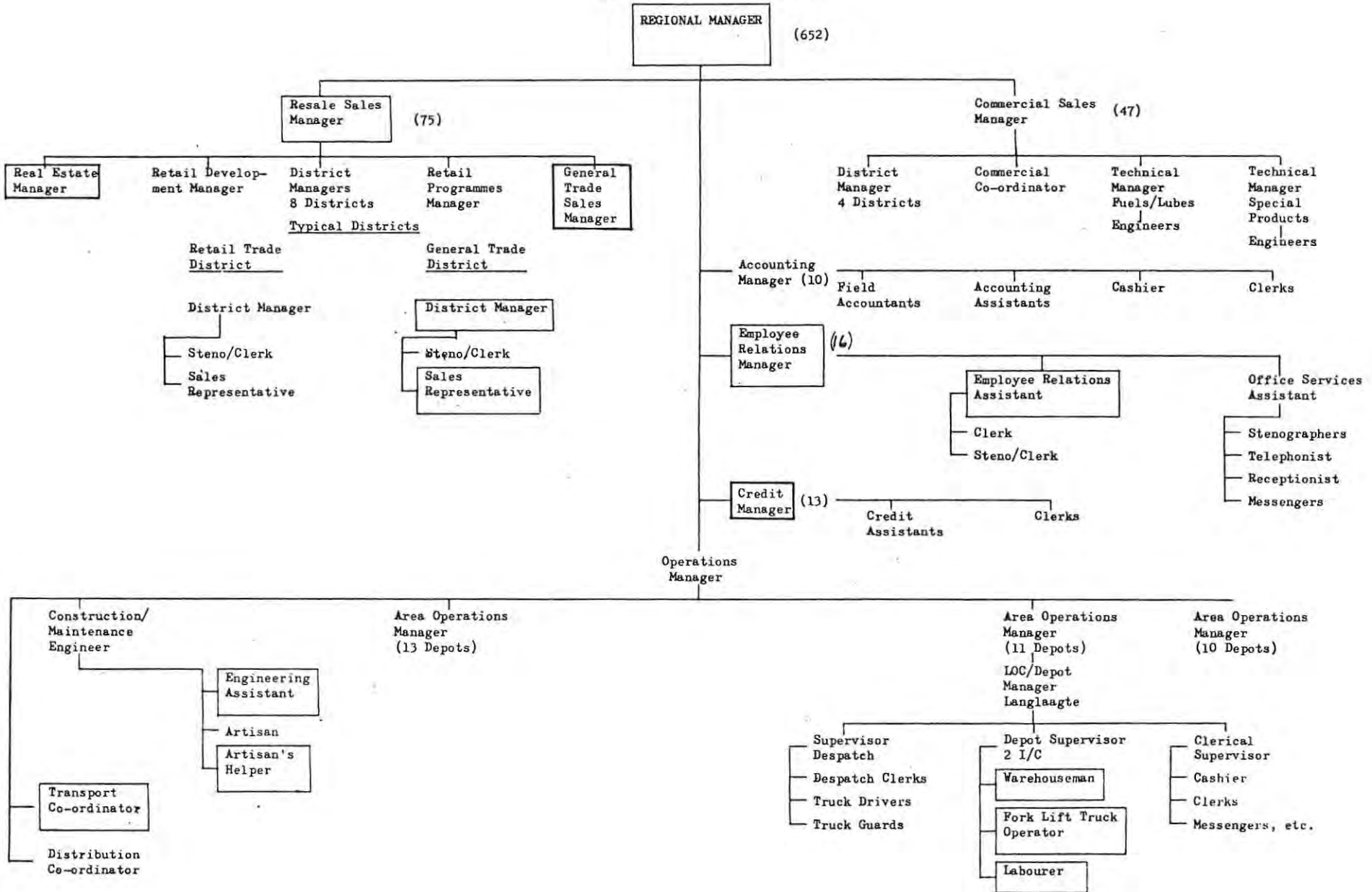
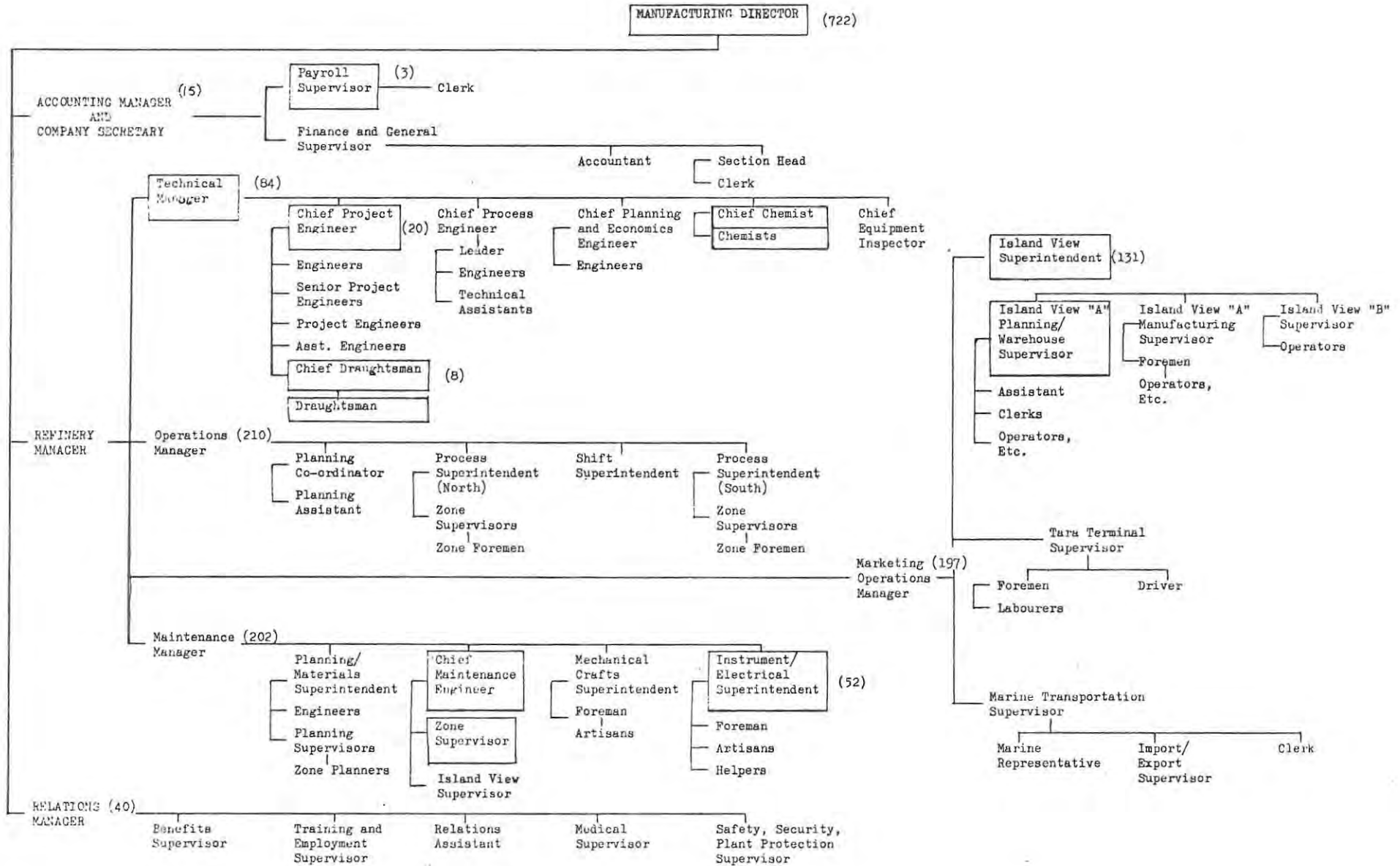


CHART NO.6
SURVEY ORGANISATION REFINERY



SAB

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