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Salary survey methods: comparability problems

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Most organizations regard the accurate determination of prevailing labour market rates as being of primary importance to decisions regarding the setting of competitive wage and salary levels. The techniques involved in establishing these rates are fraught with problems, mainly revolving around efforts at obtaining comparability. Justification has been provided for organizations using tailor-made survey approaches in preference to professional or 'commercial' surveys, as this allows reduction to a minimum of such comparability problems as those associated with job description responsibilities, and compensation mix. This study reveals the extent to which a single pay structure received differing adjustments as a result of analysis of data obtained from a tailor-made survey approach as opposed to that obtained from a 'commercial' survey. Results indicate significant differences in adjustments over a three-year survey period, attributable essentially to the wide range of comparability difficulties associated with use of 'commercial' survey data.

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Die meeste ondernemings beskou 'n akkurate bepaling van bestaande arbeidsmagtariewe as van primêre belang vir beslissings rakende die stel van mededingende loon- en salarissvlakke. Die tegnieke betrokke by die vasstelling van hierdie tariewe is belaaie met probleme wat hoofsaaklik sentreer om pogings om vergelykbaarheid te bekom. Daar bestaan regverdiging vir ondernemings wat selfontwikkelde opnames bo 'kommersiële' opnames verkies. Die rede hiervoor is dat selfontwikkelde opnames vergelykbaarheidsprobleme in verband met posbeskrywingsverantwoordelikheid en vergoedingsmoontlikhede tot 'n minimum beperk. Hierdie studie toon die mate waartoe verskillende aanpassings aan 'n enkele betalingstruktuur gemaak is, gegrond op ontledings van data bekom uit 'n selfontwikkelde opname in teenstelling met data verkry met 'n kommersiële opname. Bevindinge toon beduidende verskille in aanpassings oor 'n drie-jaar-opnameperiode wat hoofsaaklik toegeskryf kan word aan die wye reeks vergelykbaarheidsprobleme wat verband hou met gebruik van data verkry met 'n 'kommersiële' opname.

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The reliance on salary survey data as an aid in shaping compensation policies is increasingly recognized as being a highly problematic method by compensation specialists. Although 'comparable rates' are a basic factor if an organization is interested in external equity as a pay criterion, problems with job comparisons, salary averages, different sampling methods, and widely differing methods of analysing and interpreting salary survey data can lead to unnecessary pay structure adjustments (Belcher, Ferris & O'Neil, 1982; Perlin, Kaplan & Curcia, 1979; Snelgar 1984). According to Conway (1984), this is especially the case when organizations rely on salary survey data provided by professional associations or consulting firms, due to the range and variety of salary data provided for each job.

The objective of any salary survey is to ensure that the organization is paying competitive rates that will enable management to attract and retain quality individuals needed to be successful. However, there are many factors other than pay which affect ability to attract and retain employees. These factors include prestige, security, growth opportunities, and location to mention a few. Thus, the validity of the survey depends entirely on the degree of job comparability, not only in terms of pay, but many other factors ranging from corporate culture to objectives of pay policy. Without these vital comparability factors taken into consideration the survey really becomes meaningless (Berg, 1976).

The problem of obtaining comparability is complicated by diversity in analysis and interpretation of survey data (Milkovich & Newman, 1984). This may reflect the absence of a single correct approach, or that compensation professionals have adjusted their analysis to deal with a variety of circumstances. Certainly, different approaches to analysing and interpreting data will produce a wide range of possible results. A further factor which adds to the complexity of the issue is that if a large element of sampling, recording, and other measurement errors are added to the difficulties of achieving comparability, an organization may just as well set its levels based on information available from its experience in hiring people. Some executives argue that partial information is better than none. A counter argument is that inaccurate salary survey data are worse than none, because inaccurate information may result in unwise pay policy strategy. For example, a biased sample may use only data from lowest paying organizations, and if pay policy is based on such a study without taking this bias into account, it will undoubtedly set its pay level too low (Nash & Carrol, 1975).

Research into these comparability and related problems has suggested that there are effects on the organization's

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internal pay structure and levels, and the methods used to determine necessary adjustments. A South African study revealed that an organization's internal pay structure received significantly different adjustments as a result of applying three different survey methods to the same labour market, over a seven-year period (Snelgar, 1984). Other studies have revealed that organizations are recognizing the impracticality of trying to obtain accurate, comparable data on all variables to be included, and are attempting to avoid comparisons of specific jobs by looking at the entire compensation picture for all jobs in particular functional or occupational areas (Adelberg, 1960; Elder, 1968; Foster, Wajda & Lawson, 1961; Snelgar, 1982). This approach recognizes that employers may tailor jobs to the organization or individual employee; rarely do several organizations have identical jobs.

This research has thus suggested that most salary survey systems do not provide enough controlled information on all relevant variables so that they can be relied on to aid in competitively adjusting individual job rates or overall salary levels. A paucity of information on the reliability and validity of survey information tends to support this conclusion. What does exist is quite dated and indicates that less than 10% of surveys used field interviews to collect information (Tolles & Raimon, 1952). Only 50% used job descriptions to ensure comparability. Another study suggested that when the range of rates for a particular job exceeds 50%, there is cause to be suspicious about the quality of information (Harker, 1952).

However, interviews with South African compensation specialists have revealed that most organizations conducting their own surveys use both field interviews and job descriptions to ensure a degree of job comparability. 'Commercial' surveys rely on job descriptions as field interviews with all clients would prove too time-consuming and costly. However, it is a fact that the comparability problem exists as a result of differences in not only approaches to how to establish job comparability, but also differences in company comparability, compensation 'mix' comparability, functional comparability, and timing (Conway, 1984). These problems are aggravated by the fact that each different survey method suggests a different set of guidelines as to how to deal with each problem.

It has recently been suggested that this comparability dilemma stems from the shortcomings of professional or 'commercial' salary surveys (Conway, 1984; Milkovich & Newman, 1984). By understanding these shortcomings, the compensation specialist can devise custom surveys that provide realistic comparisons. The result of this tailor-made approach may be a survey with much less data for each survey job, and which will compare compensation in its entirety, and provide a basis for annual refinement. A strong argument in favour of this approach has been provided by Belcher, *et al.* (1982) who, in their research concerning the analysis of data received by organizations from 'commercial' surveys, found no commonality in methods of analysis by industry, company size or union presence. Belcher, *et al.* concluded that this diversity in analysis of survey data is a result of the diversity and amount of data presented for analysis. This problem is compounded by the number of surveys conducted, which brings to mind words such as 'deluge' (Grigsby & Burns, 1962) and 'surveyitis' (Engelke, 1972).

However, the tailor-made approach entails high costs (Grigsby & Burns, 1962), and may be imprecise and poorly

designed, which in turn could lead to inadequate interpretation of data. Conway (1984) argued in favour of the tailor-made approach on cost grounds, suggesting that survey costs may well be offset by the possibility of costs linked to unwise pay structure adjustments as a result of 'commercial' surveys. Further, the major advantage of the tailor-made approach is that it can be tailored to accommodate the company's unique needs completely.

Lester's study (1967) indicated that over 50% of responding organizations used the tailor-made approach, but often as a supplementation to others. Stockton (1959) found that size, location, and plant type were related to whether organizations conducted their own surveys or had surveys made by outside associations. Statistics relating to the number of South African organizations participating in one 'commercial' survey reveal that data are supplied by 211 organizations, 32 of them in the Financial Mail's top hundred companies (Biesheuvel, 1985). An earlier South African report (FSA, 1984) has revealed that during 1984 over 700 organizations embracing a variety of industries and geographical areas submitted data to one particular 'commercial' survey organization, and used such survey results for possible competitive adjustments to pay structures. Of these organizations only 25% used a 'tailor-made' approach to ensure individual organizational comparability in conjunction with 'commercial' approaches.

Ultimately then, various research has led to the questioning of survey methods in terms of provisions of reliable salary data due to lack of job comparability for individual organizations. The South African study that revealed the extent to which three basic survey methods were used to gather and analyse data that led to significant differences in the alteration of one organization's pay structure, lends strong support to this criticism (Snelgar, 1984).

This study aims at highlighting the above-mentioned survey and comparability problems even further by assessing the extent to which 'commercial' survey data differed in its effect on pay structure adjustments when compared with adjustments according to a 'tailor-made survey' approach. In short, this study emphasizes the difficulties associated with selecting from a 'commercial' survey salary data which may be regarded as representative of jobs which are comparable with those surveyed by a tailor-made survey approach developed for a particular organization.

Method

Adjustments to the pay structure of a large national organization were made according to salary survey data provided by both a 'tailor-made' survey method and data obtained from a 'commercial' survey. The 'tailor-made' survey method has been developed for the organization in question after extensive research into available survey methods and the comparability needs of this particular organization had been completed (Snelgar, 1979; 1982.)

In order to develop this method it was necessary to move away from individual job comparisons. This would result in a movement away from surveying of *actual* salaries. Rather, a technique was developed which relied on comparisons of complete individual organizational pay structures which would ensure comparison of all relevant 'going rates' in the form of pay range midpoints applicable to respective pay structure grades of those organizations regarded as being competitive within the labour market.

In order to make comparisons on this basis, it was necessary to 'standardize' the pay structures of all participating

organizations according to the structure of the survey organization. In this way each organization's number of pay ranges was readjusted in order to ensure that there was a uniform number of ranges for each organization. This ensured that there was range matching, and therefore range-to-range comparisons which in turn allowed midpoint comparisons. This was so because the midpoint is recognized as the organization's 'going-rate' for the group of positions, or jobs falling within that particular pay range. As this is the case it becomes evident that midpoint comparisons thus allow, in effect, comparisons of groups of positions falling within those particular pay ranges as represented by those midpoints. Comparisons of midpoints over total pay structures thus allow comparisons of going rates reflecting all positions within each organization.

Salary data collection involves collation of participating organizations' midpoint values rather than key job *actual* salaries. Market pay range going rates are then calculated as averages of these standardized pay range midpoints.

Salary surveys were conducted according to this 'standardized' pay structure comparison approach during years 1982 and 1984, and market pay curve trend lines established according to salary data thus obtained. Organizations participating in the surveys were the 16 organizations forming the survey community applicable to the organization conducting such surveys.

The 'core' of this survey community was formed by the four major oil industry organizations, all competing for labour skills on a national labour market basis. The organization conducting above-mentioned surveys was one of these organizations, and selected the remaining participants on the basis of labour skills requirements on a national level. In short, these organizations competed for similar labour skills from the national labour market, and were furthermore comparable in terms of compensation 'mix' factors (differences in salary *versus* benefits compensation), size and asset considerations, and functional factors (differences in responsibilities of matching jobs).

Salary data were also drawn from surveys conducted for the same period by a commercial survey organization, and corresponding market pay curve trend lines established accordingly. Care was taken to ensure that surveys corresponded in terms of timing. These survey organizations conduct surveys on behalf of clients, and gather data on a national basis, drawing from organizations in all industries, and covering all possible 'key' jobs within the hypothetical position hierarchy. Salary details are collected for each position according to 'key' job descriptions provided by the commercial organization. These key jobs have been defined as reference points representing the entire job structure under study, with a sizable proportion of the workforce being employed in them. The contents of these jobs are relatively stable and well known, with market supply and

demand also relatively stable.

Data are presented to clients in a bi-annual report, broken down for basic and total pay according to sex and race of workers, industrial sector, individual jobs, as well as main functional categories, on a national basis as well as regional areas, with means, medians, standard deviations, and quantities given. Key jobs are defined for comparison purposes, and job evaluation is used to fit the jobs into a hierarchy of grades for reference purposes. Salary data represent actual salaries of individual key jobs, rather than midpoints.

The salary data provided by the commercial survey were analysed for the sample of key jobs used in the tailor-made surveys, drawn from the standardized pay ranges. This sample ranged from unskilled to senior management levels, thus drawn from the entire job structure range. The analysis procedure used to establish the market pay curve, range midpoints, and progression rates was identical to that used in the tailor-made survey. This was done to ensure that discrepancies in market pay curve trend lines could not be attributed to different approaches to data analysis.

The market pay curve trend line values were used to calculate pay range midpoint values for the number of grades applicable to the tailor-made survey organization. This organization has a pay structure consisting of 24 pay grades.

Results

In order to facilitate comparison of individual job discrepancies, raw score salary data representing averages for each range of key jobs per grade have been provided in Table 1. These raw score averages are provided as it is not practical to provide salary data for each job for each survey. However, Table 2 provides examples of such individual key job data drawn from different levels of the pay structure. This table allows comparison of degree of discrepancy due to individual job incomparability.

The midpoints for each salary range/grade calculated according to this raw data for each survey are represented in Table 3. These midpoint values represent the market pay curve values as derived from each set of salary data provided by respective surveys.

In order to provide a comparison of degree of variance, or deviation, between respective pay curves for each survey year, percentage differences are represented in Table 4. Adjustments to pay curves at three different levels are compared according to each survey and each year. These comparisons in effect allow a comparison of different adjustments to the organization's pay structure as a whole, as necessitated by each survey.

These market pay curves are compared on three different levels, as per calculated progression rates, and basically represent lower, middle, and upper levels of the position hierarchy.

Table 1 Pay grade raw score data: average monthly base salary in rand

Survey Year	Survey Type	Pay grade																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
1982	T-M	260	322	331	429	499	551	693	771	910	1027	1069	1294	1333	1569	1671	1693	1731	2055	2263	2495	2639	3100	3969	4201	1536
	COM	295	340	420	465	555	673	729	831	987	1111	1210	1301	1501	1553	1806	1999	2234	2365	2546	3111	3599	4244	4592	5130	1817
1984	T-M	390	465	520	563	666	744	834	970	1113	1200	1301	1490	1650	1750	2101	2153	2494	2605	2763	2991	3777	4360	4802	5425	1964
	COM	423	501	555	636	701	865	951	1201	1300	1414	1515	1699	1798	2090	2200	2550	2891	2990	3426	3926	4499	5155	5907	6769	2331

T-M = Tailor-made; COM = Commercial

Such progression rates indicate rate of progression from one pay range midpoint to the next, and within themselves provide a further basis for comparison. Comparisons of these progression rates are provided in Table 5, with different levels representing pay grades 1 to 9 (labourer to clerical), grades 9 to 18 (clerical to supervisory and lower management), and grades 18 to 24 (middle management to senior management).

A final comparison revealing the cumulative effects of adjusting the pay structure according to 'tailor-made' versus 'commercial' surveys is represented in Table 6. This table reveals extent of discrepancies in terms of overall upward movement over the entire pay curve from 1982 to 1984, using the same pay curve in 1982 as a base, and adjusting such curve according to respective survey data.

Discussion

The analysis of raw score data clearly reveals widely differing rates obtained by the respective surveys for many of the key jobs. These discrepancies are particularly notice-

able at the higher levels of the job hierarchy, represented by pay grades 9 to 18, and in particular pay grades 18 to 24 which represent upper management positions. Discrepancies at the lower levels of the job hierarchy are also evident, but are not as prominent and varying. This may be as a result of the relatively easier process of describing and matching such jobs.

The above-mentioned discrepancies have led to significant differences in the midpoint values applicable to the respective survey market pay curves. These midpoint values have been obtained for each pay range subsequent to trend line analysis of each survey scattergram. These calculations have reduced the impact of widely differing individual job pay rates evidenced in Tables 1 and 2 as the pay curves must have relatively uniform progression rates from one pay range

Table 2 Comparison of individual job salary data: monthly base salary in rand

Salary grade	Position title	Survey method/Survey year			
		1982		1984	
		T-M	COM	T-M	COM
1	Labourer	200	210	265	286
2	Artisan's helper	300	313	397	425
3	Chauffeur	329	415	435	564
4	Copy typist	420	434	556	590
5	Clerk	500	540	662	734
6	Storeman	562	604	744	821
7	Senior clerk	693	729	917	991
8	Programmer I	771	831	1020	1130
9	Programmer II	904	912	1197	1240
10	Sales representative	1020	1212	1276	1555
11	Analyst	1069	1292	1337	1657
12	Draughtsman	1291	1403	1615	1800
13	District manager	1402	1559	1754	2000
14	Legal Advisor	1570	1692	1964	2170
15	Personnel manager	1699	1799	2125	2308
16	Data processing manager	1798	1999	2249	2564
17	Project engineer	1731	2234	2165	2866
18	Treasurer	2055	2365	2571	3034
19	Systems manager	2263	2546	2903	3774
20	Assistant financial manager	2495	3111	3201	4044
21	Regional manager	2639	3698	3386	4807
22	Accounting manager	3100	4123	3977	5360
23	Management manager	3969	4693	5092	6101
24	Marketing manager	4201	5130	5390	6669

T-M = Tailor-made; COM = Commercial

Table 4 Comparison of market pay trend line values: percentage variance

Grades	Survey year	
	1982	1984
1 - 9	10,9	12,6
9 - 18	12,2	15,7
18 - 24	19,1	20,7

Table 5 Grade-to-grade progression rates: percentage progression

Grades	Survey year/survey method			
	1982		1984	
	T-M	COM	T-M	COM
1 - 9	17,0	16,3	14,0	15,1
9 - 18	9,5	10,3	9,9	9,7
18 - 24	12,7	13,8	13,0	14,6

T-M = Tailor-made; COM = Commercial

Table 6 Comparison of market pay curve movements: percentage movement 1982-1984

Grades	Survey type	
	T-M	COM
1 - 9	32,4	36,0
9 - 18	25,1	28,3
18 - 24	28,3	30,0

T-M = Tailor-made; COM = Commercial

Table 3 Market pay curve trend line values: midpoint monthly base salary in rand

Survey Year	Survey Type	Pay grade																								Mean
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1982	T-M	260	304	356	416	487	568	664	777	910	996	1090	1193	1306	1430	1565	1713	1875	2055	2315	2608	2938	3310	3729	4201	1544
	COM	295	343	399	464	540	628	730	849	987	1088	1199	1321	1456	1604	1768	1948	2147	2365	2690	3060	3484	3964	4510	5130	1790
1984	T-M	390	445	507	578	659	751	856	976	1113	1223	1344	1477	1623	1784	1960	2155	2368	2605	2944	3327	3759	4248	4800	5425	1971
	COM	423	487	560	644	741	853	982	1130	1300	1426	1564	1716	1882	2065	2265	2485	2726	2990	3102	3969	4233	4991	6304	6769	2317

T-M = Tailor-made; COM = Commercial

midpoint to the next. However, the effects of these positional raw data discrepancies on midpoints is clearly evident in Table 3. Once again the greatest effects are evident at the higher levels of the pay structure, which will prove most costly to the organization.

As mentioned, midpoint calculations provide progression rates for each market pay curve, representing the slope of such curves or rate of progression from midpoint to midpoint. The percentage differences calculated over the three levels of the pay curve, and the differences in the progression rates themselves, further highlight the problem of differing adjustments to the organization's pay curve predicated by each survey.

Inevitably these discrepancies will affect the cumulative effects on the organization's base wage bill. We may determine, for example from Table 6, that wide discrepancies existed in market pay curve adjustments from 1982 to 1984. The organization would have had a much higher basic wage bill should it have chosen to adjust its own pay curve according to market pay curves derived from the 'commercial' survey data analysis as opposed to those derived from its own tailor-made approach.

Conclusion

The results of this study have emphasized the possible effects associated with comparability problems in salary surveying by revealing the extent of discrepancies between survey data obtained from commercial surveys versus data obtained from tailor-made surveys, and resultant effects on a single pay structure.

These discrepancies suggest the need for an approach which allows as much confidence in structure adjustments as is possible through reduction of comparability problems. Some research has suggested that in order to reduce these problems to a minimum, an alternative to commercial surveys is for the organization to design and conduct its own salary survey (Conway, 1984; Fielder, 1982; Milkovich & Newman, 1984). This tailor-made approach reduces possibility of comparability problems to a minimum because the scope, definitions, and methodology of the survey would be determined on the basis of the organization's own particular requirements and the characteristics of a real competitive job market. Such surveys will then on this basis be able to compare compensation in its entirety, cover relevant management groups in comparable organizations, and provide a basis for annual refinement and continuing surveys for many years.

The result of this tailor-made approach may be a survey with much less data; perhaps a dozen organizations instead

of the hundreds surveyed by major 'commercial' survey organizations, with less 'distorting' factors associated with aforementioned comparability factors. The surveying of pay grade midpoints which represent series of job clusters may further alleviate the job comparability problem associated with surveying the many *actual* salaries, as is the practice by 'commercial' surveys. If the survey is thus planned its results will at least provide basic guidelines for ensuring realistic and competitive adjustments to pay structures, and ensure that salaried employees are not overpaid or underpaid.

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