EVALUATING AND MANAGING EMPLOYEE TURNOVER USING BENCHMARKS: A STUDY OF NATIONAL GOVERNMENT DEPARTMENTS BASED ON ORGANISATIONAL SIZE

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Abstract

The purpose of the paper is to identify key factors influencing employee retention in the South African national government departments as a guide towards developing effective employee retention strategies.

The research was conducted in three phases. For the determination of employee turnover rates and benchmarks, 33 national departments were classified into three homogenous subgroups with respect to their number of employees (Phase one). Thereafter the employee turnover rates for each department and benchmarks for each subgroup were determined (Phase two).

These employee turnover statistics were analysed for all 33 national departments in the three subgroups and used as guidelines for the selection of cases for the multiple case (Phase three). Four departments were selected from each subgroup for the case study where selection was based on a department's turnover rate relative to the benchmark rate. These departments participated in a cross sectional survey. The data from the survey was analysed quantitatively.

Employee turnover has a significant impact on business performance primarily due to the fact that it takes too long to fill vacant posts together with uncompetitive salary scales and the lack of skilled candidates. Further, the lack of human resourcing strategies, recruitment difficulties, problems related to monitoring and measuring of employee turnover and employee retention difficulties were important issues that influence employee retention.

Future research on knowledge and systems for managing employee turnover is recommended.

Introduction

Official employment data from Statistics South Africa's Quarterly Employment Statistics (QES) (2009) survey show that the government is the largest employer in the South African formal sector. To quantify this, the numbers of employees in the national and provincial departments alone comprise approximately twenty percent of the total formal sector workforce. These employees are contracted to the Department of Public Service and Administration (DPSA).One of the major challenges facing policy makers involves the effective management and reduction of the high employee turnover in government. Within this context, it is crucial for government to design and implement innovative ways to manage its human resources and make the public service more effective than it presently is.

In order to effectively manage employee turnover it first needs to be measured. The rate and type of turnover needs to be readily available to managers. Managers must be in a position to regularly monitor and evaluate employee turnover against benchmarks. Failure to monitor labour turnover may result in a situation whereby there are insufficient skills to achieve efficient service delivery. Public sector managers need to know why turnover takes place and what amount of turnover is acceptable.

According to Kirschenbaum and Mano-Negrin (1999:1236), turnover is affected by organisational size, with size being the key factor of an organisation's internal labour market. They further suggest that organisational size impacts on turnover primarily through wage rates but also through career progression paths. Thus, there is a complex interactive effect

of both size and organisational structure on employee retention. No study to date has analyzed practices of employee retention in the South African public service according to organisational size. This study will fill a research gap by identifying organisational variables (as opposed to individual characteristics) that influence employee retention and contribute to better understanding of employee retention at the organisation level.

Literature review

According to Campion (1991:201), the need for organisations to measure employee turnover is substantial. Turnover is an index of organisational effectiveness (Vandenberg and Nelson, 1999), and as such it warrants attention and some understanding per se. The message for organisational leaders is that they must develop clear strategies for attracting and retaining good employees (Holthom, Mitchell, Lee and Inderrieden, 2005:337).

Firms should simultaneously measure and manage employee turnover. Measuring involves such things as surveys, consultation processes, intra- and extra-firm career guidance, exit interviews and leaver profiling. Managing is needed in key operational areas to minimize the effects of change to key business areas. Both elements are important to negotiate the complexities inherent in implementing widespread change (Morrel, Clarke, Wilkinson, 2004:172). Where turnover is unavoidable, then it is important to manage the effects of turnover and minimize indirect costs.

Measures of employee turnover derived from cross sectional surveys will tend to be lower than those derived from longitudinal studies. In cross-sectional surveys some employee losses and employee gains occurring between observation points will cancel each other out and will not be observed. Thus for the purposes of this study, the measures of voluntary employee turnover were derived from a longitudinal study. Most of the studies on employee

turnover focused on understanding why employees leave. There were few studies at the organisational level of analysis to investigate whether and how employers could reduce turnover (Barrick and Zimmerman, 2005:160).

From a managerial perspective, the analysis of employee turnover as an organisational attribute has a number of advantages. Conceptualizing and measuring employee turnover at the organisation level allows for the monitoring and assessment of employee turnover and thus opens the way for administrative intervention through changes in organisational design and staffing arrangements. It is also one aspect of human resources management that is commonly monitored for both intervention and for making personnel policy projections (Alexander, Bloom and Nichols, 1991:4).

Detailed analysis of employee turnover statistics, particularly the magnitude and profile of voluntary turnover across different groups and in contrast to other organisations, can play an important role in evaluating the functioning of organisations. Benchmarking turnover statistics with other organisations provides the opportunity to view how an organisations turnover rates compare with rates in similar agencies. Reviewing characteristics of the turnover profile within an organisation allows particular demographic groups and/or areas in need of attention to be recognized and explored. In this way, a comprehensive examination of turnover statistics can assist in isolating turnover hot spots within an organisation and, in turn, guide the development of appropriate interventions to assist in minimizing voluntary turnover (Lynch and Tuckey, 2008:8).
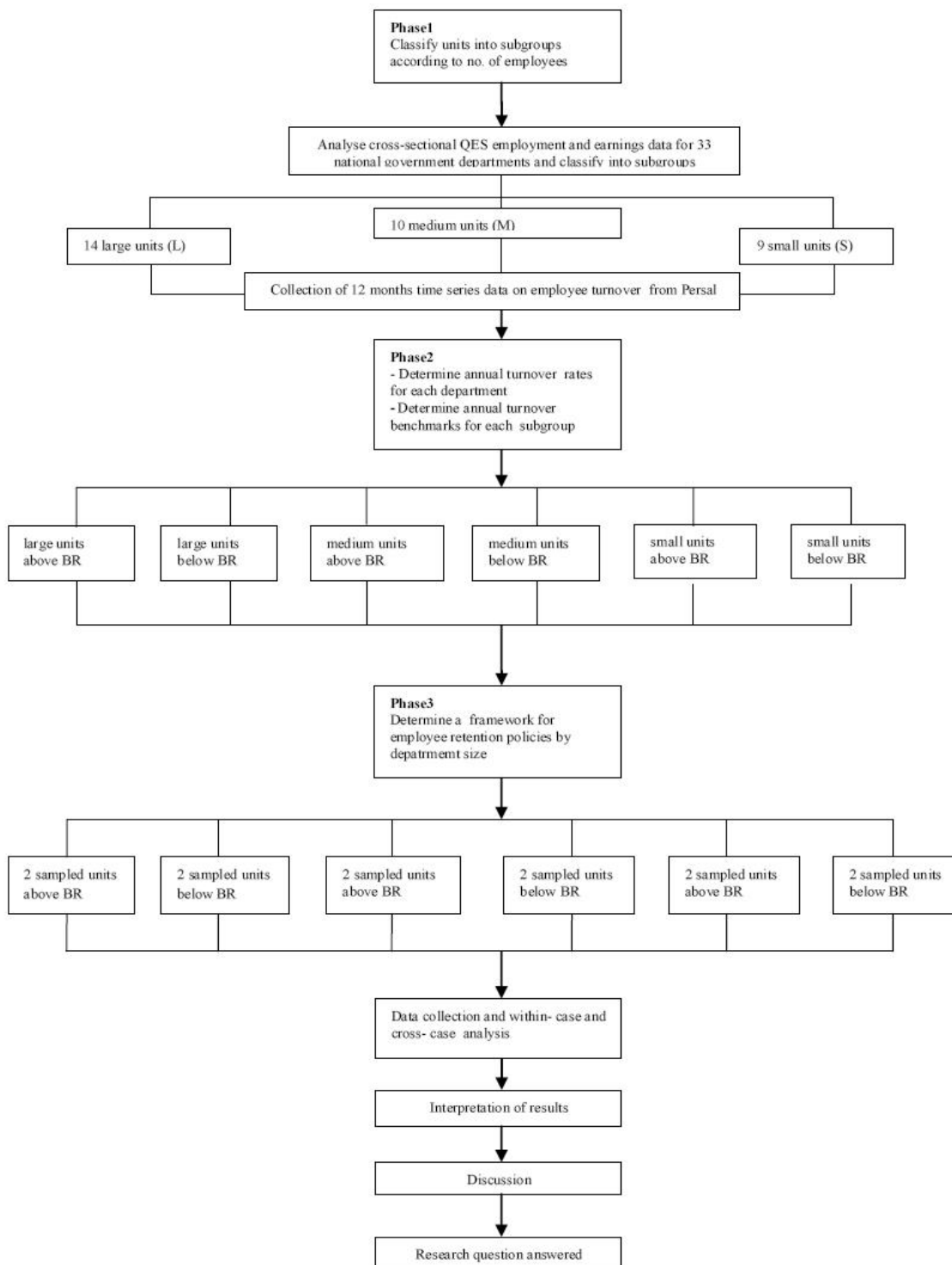
Methodology

The research was conducted in three phases (Figure 1). In *phase one d*ata from the QES (2009) survey was analyzed for 33 national departments. This was done by analysing the

differences in employment after ranking each of the 33 units so that turnover rates and benchmarks could be determined separately for the large, medium and small subgroups of national departments (Table 1).

The aim of *phase two* was to determine the average turnover rates for each department and the benchmark rates for the small, medium and large subgroups. During this phase data was collected from the government personnel and salary administrative system over a 12 month period and analysed. The analyses provided statistics on employee turnover rates for each department and benchmark rates for each of the three subgroups. The turnover rate was calculated by measuring the number of leavers in a period as a percentage of the number employed during the same period. The turnover rate was computed for the voluntary separations for a period of twelve months. The average number employed was taken to be the number working at the start of the period added to the number working at the end, divided by two. This index was calculated for each national department and an overall index (benchmark) was calculated for each of the small, medium and large subgroups (Table 2).

After the turnover rates and respective benchmark rates were determined for each subgroup, the multiple cases were selected (*phase three*). The aim of this *phase three* was to determine the factors influencing employee retention in the selected national government departments. To ensure a representative sample, a pair of good performers and a pair of poor performers were selected from each subgroup as cases. This was done relative to the benchmark of the subgroup. The 12 selected national departments participated in a cross-sectional survey.

Figure 1 Schematic representation of the three phases

Phase1
Classify units into subgroups
according to no. of employees

Analyse cross-sectional QES employment and earnings data for 33
national government departments and classify into subgroups

10 medium units (M)

14 large units (L)

9 small units (S)

Collection of 12 months time series data on employee turnover from Persal

Phase2
- Determine annual turnover rates
for each department
- Determine annual turnover
benchmarks for each subgroup

large units
above BR

large units
below BR

medium units
above BR

medium units
below BR

small units
above BR

small units
below BR

Phase3
Determine a framework for
employee retention policies by
depatrmemt size

2 sampled units
above BR

2 sampled units
below BR

2 sampled units
above BR

2 sampled units
below BR

2 sampled units
above BR

2 sampled units
below BR

Data collection and within- case and
cross- case analysis

Interpretation of results

Discussion

Research question answered

The aim of the survey was to determine the factors that influenced the government's ability to attract and retain employees. These factors should identify the top drivers of attraction and the top drivers of retention. Therefore, the questionnaire focussed on current practices in areas related to resourcing strategies, recruitment difficulties, attracting and selecting candidates, diversity, employee turnover, and employee retention.

The questionnaire consisted of 32 questions and was structured in such a way that respondents were able to answer it easily. For all the questions, answers to closed questions were sought. The closed questions were designed to collect data for quantitative analysis and contained free-standing (not dependent on other questions) multiple choice questions with two possible answers, "yes" or "no". Each of the thirty two questions were equally weighted and designed such that a "yes" response reflected a favourable outcome.

Each "yes" response was given a score of 1 and each "no" response was given a score of 0 (Table 3). The responses were then summed for each category using 2x2 contingency tables. Statistical methods involving categorical analysis were applied to assess the relationship (association) between employee turnover and the responses. These analyses were done for the entire group of selected national departments and for each subgroup surveyed.

In order to determine whether there were any relationships between the current practices with respect to employee attraction/retention and employee turnover, the hypothesis was centred on whether there is a relationship between employee turnover and responses for each of the categories. Acceptance of the null hypothesis implies that employee turnover in national departments is not associated to the responses. Rejection of the null hypothesis shows a probable association.

Thereafter, when a relationship was observed, the next step of the analysis was to determine which items (from the questionnaire) contributed mainly to this relationship.

This involved comparing the cumulative "yes" scores (for each question/item) for the above and below the benchmark categories. Each question with a score of 3 or more from the category below the benchmark was compared to the corresponding score in the category above the benchmark. If the difference (cumulative score for category below the benchmark minus the cumulative score for category above the benchmark) between the scores were greater than or equal to 2 then the corresponding items were selected for further analysis. These selected items were considered to be the main factors influencing employee retention in small, medium and large national departments.

Findings and interpretation

Departments (units) were classified into three subgroups, small from 0 to 1000 employees, medium from 1001 to 5000 employees and large with employment above 5000. The percentage difference in employment between the last small unit and the first medium unit is approximately 29 percent and the difference in employment between last medium unit and first large unit is approximately 42 percent. The tables below show the size group classification for each department. The total number of employees in the 33 national government departments is approximately 237 000 with the total gross earnings for December 2009 approximately R3.3 billion (Table1).

Table 1: Distribution of national departments by size

Department	No. of empl.	No. of units	salaries R'm	% of total empl.	% of total salaries
Small (S)	6 375	14	153.6	2.7	4.6
Medium (M)	22 946	10	433.3	9.7	13.0
Large (L)	207 557	9	2 742.3	87.6	82.4
Total	**236 878**	**33**	**3 329.2**	**100.0**	**100.0**

The summary information (Table 2) shows that the benchmark turnover rates for each of the three subgroups vary considerably, with 2.6 percent for small departments, 1.9 percent for medium departments, and 0.8 percent for large departments. These benchmarks were used as a guide for the selection of cases.

Table 2: Turnover benchmarks according to subgroup

Dept	Employees	No.	Total Employees	%	Total Turnover	%	Annual rate	Monthly rate
Small	<1000	14	6 603	2.8	2 079	7.9	31.5	2.6
Medium	1001-5000	10	22 943	9.6	5 169	19.6	22.5	1.9
Large	>5001	9	209 018	87.6	19 176	72.5	9.2	0.8
Total		**33**	**238 564**	**100**	**26 424**	**100**	**11.1**	**0.9**

The criteria for selection for the survey were based on their average employee turnover rate relative to the benchmark rate of the respective subgroup. From the subgroup of small departments pair S1 and S2, below the benchmark, and pair S3 and S4, above the benchmark were selected. Similarly, departments M1 and M2, M3 and M4, L1 and L2 and, L3 and L4 were selected relative to the benchmarks (Table 3).This selection ensured a mix of both good performers and poor performers.

Table 3: Departments selected for survey

Department	Average annual employment	Average monthly turnover rate	Benchmark turnover rate
S1	834	1.7	2.6
S2	334	1.9	2.6
S3	213	3.2	2.6
S4	509	3.3	2.6
M1	1207	0.8	1.9
M2	1826	1.0	1.9
M3	1716	2.3	1.9
M4	3592	3.8	1.9
L1	7818	0.4	0.8

Department	Average annual employment	Average monthly turnover rate	Benchmark turnover rate
L2	15342	0.4	0.8
L3	15528	1.3	0.8
L4	24664	2.9	0.8

Table 4: Summary of cumulative responses of 12 selected departments

Category	Cumulative (Yes) responses				Cumulative (No) responses			
	Large	Medium	Small	TOTAL	Large	Medium	Small	TOTAL
Above BM	27	39	28	94	37	25	36	98
Below BM	41	45	48	134	23	19	16	58
TOTAL	68	84	76	228	60	44	52	156

All Departments

The reliability analysis (Cronbach's) showed internal consistency reliability for both the instrument and each item in the instrument. The statistical categorical analysis based on the total of 384 yes and no responses (Table 4) showed an extremely significant relationship between the responses and turnover for the group of 12 selected departments (Table 5). Once this relationship was determined the next step involved comparing the "yes" counts (for each question) for the above and below the benchmark categories. The average "yes" count for the category above the benchmark was computed to approximately 3. Each question with a count of 3 or more from the category below the benchmark was compared to the corresponding score in the category above the benchmark. If the difference between the scores were greater than or equal to 2 then the corresponding items were flagged. The findings of this analysis show the important factors influencing employee retention in the selected national departments (Table 6).

Table 5: Tests table for 12 selected departments

Responses(N)	Degrees of freedom(DF)	-LogLike	RSquare (U)
384	1	8,7129271	0,0336
Test		**ChiSquare**	**Prob>ChiSq**
Likelihood Ratio		17,426	<,0001*
Pearson		17,274	<,0001*
Fisher's Exact Test			**Probability**
Left			1,0000
Right			<,0001*
2-Tail			<,0001*

Table 6: Factors influencing employee retention in the 12 selected departments

Factors	Cronbach's
Counter-offer policy	0.7298
Up-to-date workforce plan	0.7593
Monitoring of employee turnover	0.7298
Alternate career paths and skills development	0.7580
Identification of talent pools	0.7658
Succession planning policy for key positions	0.7580
Job re-designs to reflect the diversity of skills and capabilities required	0.7510
Performance system to evaluate staff competencies	0.7704
Employee performance plans	0.7551
Evaluation of employees performance	0.7551
Equitable job grading	0.7551
Accessibility to senior management	0.7656

Similar analysis was conducted for each subgroup and the following findings were recorded:

Large Departments:

For the subgroup of large departments the statistical categorical analysis (Table 7), showed that an extremely significant relationship exists between the responses and turnover. This means that, for the four large departments surveyed, the factors influencing employee turnover are a subset of the response items.

Table 7: Tests table for selected large departments

Responses(N)	Degrees of freedom(DF)	-LogLike	RSquare (U)
128	1	3,1000213	0,0350

Test	ChiSquare	Prob>ChiSq
Likelihood Ratio	6,200	0,0128*
Pearson	6,149	0,0131*

Fisher's Exact Test	Probability
Left	0,9962
Right	0,0105*
2-Tail	0,0209

Medium Departments

For this subgroup the statistical categorical analysis (Table 8) showed there is no relationship between the responses and employee turnover. This means that, for the four medium departments surveyed, there is no conclusive evidence to show that the factors influencing employee turnover are a subset of the response items.

Table 8: Tests table for selected medium departments

Responses(N)	Degrees of freedom(DF)	-LogLike	RSquare (U)
128	1	0,62483658	0,0076

Test	ChiSquare	Prob>ChiSq
Likelihood Ratio	1,250	0,2636
Pearson	1,247	0,2642

Fisher's Exact Test	Prob
Left	0,9038
Right	0,1761
2-Tail	0,3522

Small Departments

For the subgroup of small departments the statistical categorical analysis (Table 9), showed that an extremely significant relationship exists between the responses and turnover. This means that, for the four small departments surveyed, the factors influencing employee turnover are a subset of the response items.

Table 9: Tests table for selected small departments

Responses(N)	Degrees of freedom(DF)	-LogLike	RSquare (U)
128	1	6,6099080	0,0765
Test	**ChiSquare**		**Prob>ChiSq**
Likelihood Ratio	13,220		0,0003*
Pearson	12,955		0,0003*
Fisher's Exact Test		**Probability**	
Left		0,9999	
Right		0,0003*	
2-Tail		0,0006	

Conclusion

The aim of the analysis was to determine whether there is a relationship between the current employee retention practices and turnover for the 12 national departments surveyed. The analysis was based on the total cumulative responses (Table 4).

While the results show no evidence of association between employee turnover and positive responses for this selected subgroup of medium sized departments, there is a highly significant association between both these variables for the combined group of small, medium and large departments. This implies that the responses from large and small departments are the major contributors to the overall relationship, given that relationships were also observed for the subgroups of small and large departments.

The statistical categorical analysis (Table 5) showed that an extremely significant relationship between the cumulative responses and employee turnover exists in this group. This means that, for the 12 selected departments surveyed, the important factors that contribute to employee turnover and retention could be derived from the list of the item responses.

The findings show that employment size is an important factor for the measurement and analysis of employee turnover (mainly for large and small departments). The findings also show that employee turnover rates decrease with larger organisations. This is consistent with other research that found employees of large organisations stay in their jobs longer than employees of small establishments (Hope & Patrick, 2007:1).

The average monthly benchmark rate is 2.6 percent for the subgroup of small national departments (less than 1000 employees), followed by 1.9 percent for the subgroup of medium national departments which employ between 1001 and 5000 employees and 0.8 percent for the subgroup of large national departments (more than 5001 employees). These benchmarks allow for targeted intervention to manage employee turnover in departments where the employee turnover rate is higher than the benchmark rate.

Even if a department measures its employee turnover, it will not know whether its turnover rate is acceptable or not, unless there is a benchmark rate to compare to. The findings have shown that there are extreme cases (with respect to employee turnover rates) within each of the three subgroups. This reinforces the need for national departments to measure and manage turnover against employee turnover benchmarks.

A study by Lynch & Tuckey (2008:8) has also shown that benchmarking employer turnover statistics with other organisations provides the opportunity to view how an organisation s employee turnover rates compare with rates of similar organisations.

Finally, a methodology on the selection of multiple cases using turnover statistics was also covered. The employee turnover benchmarks and departmental employee turnover rates could be used as a guide for the selection of multiple cases. A representative sample consisting of two pairs of cases from similar subgroups, one pair above and one pair below the respective benchmark turnover rates is suggested. This sample design also allows for within case and cross case qualitative analysis.

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