Curtin University of Technology

Quality About RPHRM Current Issue Submissions Archive

RESEARCH AND PRACTICE IN HUMAN RESOURCE MANAGEMENT

SHRI Powering Human Capital

Highlight, copy & paste to cite:

Clark-Rayner, P. & Harcourt, M. (2000). The Determinants of Employee Turnover Behaviour: New Evidence from a New Zealand Bank, *Research and Practice in Human Resource Management*, 8(2), 61-71.

Volume 8: Issue 2

Editorial

Regular Papers

Practitioner Focus

The Determinants of Employee Turnover Behaviour: New Evidence from a New Zealand Bank

Paul Clark-Rayner & Mark Harcourt

ABSTRACT

None.

A MODEL OF EMPLOYEE TURNOVER AT A NEW ZEALAND BANK

We use logistic regression to analyse turnover at a New Zealand bank. We test various hypotheses that tenure, performance, age, education and remuneration affect, and can therefore be used to predict, employee turnover. Results of the study confirm three of the hypotheses.

Employee turnover can involve substantial costs, only some of which may be readily apparent to the organization. Most obviously, the organization probably has major recruitment, selection, and training costs associated with hiring replacement employees. Less obviously, the organization may lose important clients if the employees had performed critical marketing functions (Fitz-Enz, 1997). In some cases, it can take several years for new sales staff to build the kind of client base established by predecessors. These costs are particularly high in financial service organizations. A New Zealand bank (1997) estimates the costs of external recruitment at NZ$4,500 and NZ$12,500 for non-management and management employees respectively, not including the costs of lost sales and customers.

In our study, we examine a variety of factors to determine why employees left a New Zealand bank between October 1, 1996 and September 30, 1997, using logistic regression to analyse employee information from the bank ' s Human Resource Information System.

LITERATURE REVIEW

We have developed five hypotheses from previous research on the effects of different factors on employee turnover.

The first hypothesis is that the longer an employee stays with the same organization the less likely he/she will resign. Youngblood, Mobley, and Meglino (1983) argue that higher turnover among newer employees reflects the incongruities between expectations of work roles and the organization before joining and experiences of work roles and the organization after joining. These incongruities subsequently produce lower job satisfaction, make outside jobs and organizations appear more attractive, and thereby encourage the employee to leave.

In their early review of tenure studies, Porter and Steers (1973: 165) found that increased tenure " appeared to strengthen the propensity for employees to remain. " The Mobley, Griffeth, Hand and Meglino (1979: 493) review of significant research after the earlier Porter and Steers (1973) review confirmed that tenure is consistently and negatively related to turnover. Similarly, Cotton and Tuttle ' s (1986) later meta-analysis of turnover studies produced strong evidence of a negative relationship between tenure and turnover. More recent studies (see for example, Lucas, Parasuraman, Davis and Enis,1987; Kirschenbaum and Weisberg, 1990) have generally supported

this earlier research.

The second hypothesis is that higher performing employees are less likely to resign than average to lower performing employees. McEvoy and Cascio ' s (1987: 758) meta-analysis of 24 studies indicated that " good performers are significantly less likely to leave an organization than are poor performers. " Williams and Livingstone ' s (1994) later meta-analysis of 55 studies also found that high performers were less likely to resign than low performers, especially in firms with contingent reward systems. McEvoy and Cascio (1987: 758) provide two possible reasons for this relationship. First, poor performers are likely to be identified as such via the employer ' s performance management system. This negative attention is likely to cause some stress to these individuals, who may decide to leave in an attempt to alleviate the stress. Second, good performance provides employees with a sense of achievement and intrinsic job satisfaction which makes them more likely to want to stay. Sheridan ' s (1985: 105) Catastrophe Model of Employee Withdrawal provides an alternative explanation for the link between poor performance and turnover, arguing that both are " discontinuous responses to socio-psycho withdrawal. " In this scenario, an employee who has decided to leave an organization for any of a variety of reasons proceeds through a withdrawal process, which begins with a major reduction in performance, possibly to unacceptable levels, and later ends with resignation.

The third hypothesis is that older employees are less likely to resign than their younger colleagues. Werbel and Bedeian (1989) suggest that older non-performers are less likely to leave than younger non-performers due to difficulties in obtaining alternative employment. However, older employees may find it difficult to leave their organizations, irrespective of their performance, if, as the empirical evidence suggests (McGoldrick and Arrowsmith, 1993; Perry, Kulik and Bourhis, 1996), employers discriminate against older people in their recruitment and selection practices.

Porter and Steers (1973) identified a strong, negative relationship between age and turnover in their early review of turnover studies. Mobley et al. ' s (1979: 493) review of later studies also indicates that " age...is consistently and negatively related to turnover. " Similarly, Cotton and Tuttle ' s (1986) meta-analysis findings show that turnover declines with age. However, in a more recent meta-analysis, Healy, Lehman and McDaniel (1995) found no statistically significant relationship between age and turnover.

The fourth hypothesis is that more educated employees are less likely to resign than less educated employees. Earlier studies did not examine the relationship between education and turnover, because qualifications were either relatively uniform as, for example, with nurses or clerical workers, or non-existent as, for example, with production workers and soldiers. However, in a study of US Marines, Youngblood et al. (1983:515) found that highly educated soldiers were more likely to stay than their poorly educated colleagues, given that they were more likely to be assigned the better jobs. Mobley et al. (1979: 493) also found that job content was " consistently and negatively related to turnover. " and one can assume that the better jobs were more likely to be performed by the more highly educated employees.

The fifth hypothesis is that higher paid employees are less likely to resign than lower paid employees. Human capital theorists posit that firms pay skilled employees more than their unskilled counterparts, because skilled employees have higher marginal productivity (Becker, 1975). However, many highly paid employees may have firm-specific skills which are much more valuable to their present employer than to prospective employers. As a result, they may earn considerably more at their present employer than they could ever hope to earn at another, in which case turnover would be a relatively unattractive option.

There is some evidence to support a negative relationship between wage or salary level and turnover. For instance, Kirschenbaum and Weisberg (1990) found that higher wage employees were less likely to leave than lower wage employees in a sample of nearly 500 Israeli textile workers. Similarly, Lakhani (1988) found that high-income US military personnel were less likely to resign than low-income personnel, especially if they had combat-specific skills.

METHODS

Data Sources

Our information comes from the computerised records of the 4,865 permanent staff employed by the bank on September 30, 1996. Permanent staff recruited between September 30, 1996 and September 30, 1997 are excluded from the sample, because of insufficient data on their performance. Temporary, casual, and contract staff are also excluded, given the very different nature of their employment and connection to the firm.

Dependent Variable. The dichotomous variable RESIGN indicates whether or not each permanent staff member voluntarily resigned after October 1, 1996 but before September 30, 1997. Resignations are the predicted category.

Independent Variables

SERVICE measures the length of service with the bank in years. SERVICE SQUARED is the length of service with the bank squared. Together, the service variables identify any non-linear effects of service length on the odds of resigning.

PERFORMER indicates that the employee ' s performance was rated as either Commendable (exceeding the performance requirements of the role) or Outstanding (significantly exceeding the performance requirements of the role). COMPETENT indicates that the employee ' s performance was rated as Fully Competent (meeting the requirements of the role). NOT ASSESSED indicates that the employee ' s performance was not rated because he or she was new to the position. The omitted category in all three variables refers to those employees who were rated as non-performers.

BONUS95 indicates that the employee received a bonus in January, 1995. BONUS96 indicates that the employee received a bonus in January, 1996. B0NUS9596 indicates that the employee received a bonus in both years. Bonuses were awarded to all employees whose rated performance was above the median. This last variable was created to test whether repeated recognition had a more (less) significant effect than a single recognition event. Discretionary bonus payments are awarded annually to the top 50% of employees, often resulting in bonuses being distributed to employees within the High Performer, Fully Competent and Not Assessed Groups. This data therefore classifies a larger group (51.2% - 56.3%) as higher performers compared to the performance variables which classify 35.1% of employees as high performers.

AGE refers to the employee ' s age in years. AGE SQUARED is the employee ' s age squared and is included to measure any non-linear effects of increasing age on turnover.

GRADUATE, BACHELOR, and SCHOOL indicate the employee ' s highest qualification. GRADUATE indicates that the employee ' s highest degree is a Masters or Doctorate. BACHELOR indicates that the employee ' s highest qualification is a bachelor degree or post graduate diploma. SCHOOL indicates that the employee ' s highest qualification is a high school diploma. The omitted category in all three variables refers to those employees who did not finish high school.

SALARY measures the employee ' s 1996 salary in thousands of New Zealand dollars.

Three control variables are also included in the model. MANAGEMENT indicates that the employee was a manager. FULLTIME indicates that the employee had full-time status.

FEMALE indicates that the employee is a woman.

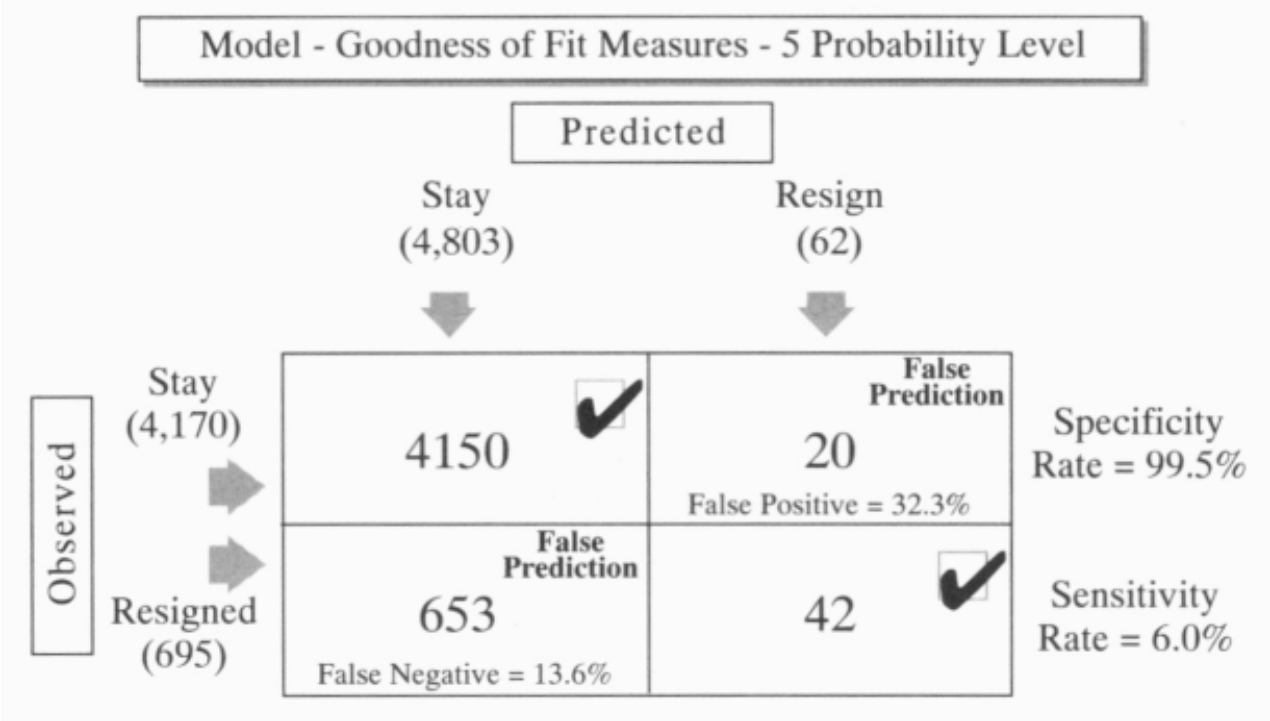
Analysis

We use logistic regression to predict the odds of the employee voluntarily resigning rather than staying during the period October 1, 1996 to September 30, 1997.

RESULTS

The results show that 695 (14.29%) of the 4,865 permanent staff who worked at the bank on September 30, 1996, had resigned before September 30, 1997. Average tenure with the bank was 9.4 years. There were 1,710 (35.1%) staff rated as high performers in their performance reviews, 2,186 (44.9%) rated as competent, 207 (4.3%) rated as non-performers, and 762 (15.7%) who were not assessed. 2,492 (51.2%) employees received a bonus in 1995; 2,740 (56.3%) received one in 1996; 1,432 (29.4%) received a bonus in both years. The average age of the workforce was 37 years. There were 117 (2.4%) employees with masters or doctorate degrees, 545 (11.2%) with bachelor degrees or post-graduate diplomas, and 798 (16.4%) with high school diplomas. 1,766 (36.3%) employees were managers. 4,169 (85.7%) employees worked full-time at the bank.

Figure 1
Model Classification Table



The classification table in Figure 1 shows how accurately the logistic regression model predicts whether or not the employee actually resigned. If the model predicts a greater than 50% chance of resignation, we classify the prediction as a resignation. If the model predicts a less than 50% chance of resignation, we classify the prediction as a non-resignation. Accordingly, we find that the model predicts 62 resignations, of which 42 were accurately predicted. We also find that the model predicts 4,803 non-resignations, of which 4,150 were accurately predicted. This means that 653 employees who actually did resign were predicted to stay. As a result, the model is much better at predicting whether people stayed than left.

The coefficient estimates for the model are presented in Table 1. If a variable has a positive coefficient, an increase in the variable ' s value raises the odds of resignation from the bank. In contrast, if a variable has a negative coefficient, an increase in its value lowers the odds of resignation from the bank.

The coefficient for SERVICE is significant and negative and indicates that the odds of resigning decrease 17.8% for each additional year of service with the bank. However, SERVICE SQUARED is significant and positive. Each unit increase in the length of service squared increases the odds of resigning by 0.5%. Together, SERVICE and SERVICE SQUARED indicate that an increase in service initially lowers the odds of resignation, but this effect is moderated considerably, although not cancelled out or reversed, for long service employees.

The coefficients for PERFORMER and COMPETENT are both significant and negative, but the coefficient for NOT ASSESSED is insignificant. The odds of a high performer resigning are 302% lower than for a non-performer. Similarly, the odds of a competent person leaving are 38.2% lower than for a non-performer. However, people who have not been assessed are no more or less likely

to resign than non-performers.

The coefficient for BONUS95 is significant and positive, so the odds of resigning are 32.5% higher for the employee who received a bonus in 1995 but not in 1996 than for the employee who received a bonus in neither year. The coefficient for BONUS96 is significant and negative, so the odds of resigning are 69.9% lower for an employee who received a bonus in 1996 but not in 1995 than for the employee who received a bonus in neither. The coefficient for BONUS9596 is also significant and negative. The combination of BONUS95, BONUS96, and B0NUS9596 indicate that the odds of resigning are 73% lower for the employee who received a bonus in both years than for the employee who received a bonus in neither.

The coefficients for AGE and AGE SQUARED are not significant, which suggests that age has no effect on the odds of resigning rather than staying.

TABLE 1
Binomial Logit Analysis of Resignation Decisions at a New Zealand Bank
(standard errors in parentheses)

	Resigned	
INTERCEPT	1.07	(0.73)
SERVICE	-0.20***	(0.02)
SERVICE SQUARED	0.0005***	(0.0000)
PERFORMER	-0.36*	(0.21)
COMPETENT	-0.48**	(0.19)
NOT ASSESSED	0.18	(0.20)
BONUS95	0.26	(0.16)
BONUS96	-1.20***	(0.14)
BONUS9596	-0.37*	(0.19)
AGE	-0.02	(0.04)
AGE SQUARED	0.00	(0.00)
GRADUATE	0.70***	(0.26)
BACHELOR	0.16	(0.14)
SCHOOL	-0.07	(0.13)
SALARY	-0.01***	(0.00)
MANAGEMENT	-0.19	(0.13)
FULL TIME	0.14	(0.15)
FEMALE	-0.10	(0.11)

Notes: * (**,***) statistically significant at the .10 (.05, .01) level (two-tailed test)

Educated employees are more likely to resign than uneducated ones. The coefficient for GRADUATE is both significant and positive. If the employee had a doctorate or masters degree, the odds of his resigning were 100.7% higher than for a high school dropout. However, employees with bachelor degrees or high school qualifications were no more or less likely to resign than high school dropouts.

The coefficient for SALARY is significant and negative. Higher paid employees were less likely to resign than lower paid employees. The odds of resigning decreased 1.4% for every $1,000 increase in salary.

The coefficients for MANAGEMENT, FULLTIME, and FEMALE are not significant. Managers were thus no more likely to resign than other staff. Likewise, full-time staff were no more likely to resign than part-time staff and women were no more likely to resign than men.

DISCUSSION

We found that the estimated model cannot effectively predict whether or not employees will leave. The model ' s sensitivity rate is just 6%. This is not surprising given that previous researchers (Mobley et al., 1979) can only assign 20% of the variance in turnover to the influence of commonly researched variables.

Our results support the first hypothesis. The longer the employee stays with the same organization the less likely he/she is to resign. This is consistent with past studies, which have provided evidence of a strong negative relationship between tenure and turnover (Porter and Steers, 1973; Price and Mueller, 1981; Mobley et al., 1979; Lucas et al., 1987; and Kirschenbaum and Weisberg, 1990). However, the SERVICE SQUARED variable, which was designed to place a heavier weighting on each subsequent year of service, showed some reduction in the impact of long service with each additional year on the job. This might be because the reasons for staying progressively weaken over time, whereas the reasons for leaving progressively strengthen, but never to the extent that the latter outweigh the former. For example, promotional opportunities may eventually decline as the employee nears the top of the hierarchy. At the same time, the employee may amass new skills and expertise over time, making the employee more marketable elsewhere and providing more opportunities to leave.

Our findings also support the second hypothesis. Higher and average performing employees were less likely to resign than lower performing employees. Also, higher performing employees awarded a bonus in 1995 and 1996 or in 1996 alone were less likely to resign than lower performing employees, awarded a bonus in neither year. This suggests that good performance is important to job satisfaction and that poor performance is linked to stress and increased ' search ' activity for other employment. Alternatively, Sheridan ' s (1985) ' Catastrophe Theory ' proposes that low performance and resignation are steps in the same withdrawal process. In particular, declining performance could indicate preliminary withdrawal behaviour. This might explain why employees awarded a bonus in 1995 but not in 1996 were more likely to resign than any other group.

Contrary to expectation, high performers were also more likely to leave than competent performers. However, this is consistent with Jackofsky ' s (1984) claim that higher performing employees are likelier to leave than average performing employees, because of better job opportunities. It is also consistent with much of the empirical evidence of a curvi-linear relationship between performance and turnover, which is initially negative but eventually turns positive (Schwab, 1991; Williams and Livingstone, 1994).

Our evidence contradicts the third hypothesis. We did not identify any strong statistical relationship between the age of employees and their propensity to resign, contrary to the findings of Lucas et al. (1987), Mobley et al. (1979), Porter and Steers (1973), and Werbel and Bedeian (1989). One could argue that some studies of the effects of age have not adequately controlled for tenure and that it is tenure that affects turnover rather than age. However, our results could also reflect a restriction of range problem, since the bank has lost virtually all of its older employees after 8 years of restructuring.

This study does not support the fourth hypothesis. Contrary to expectation, more educated staff at the bank were actually more likely to resign than less educated staff. In contrast, Youngblood et al. (1983: 515) found that " higher educated employees were more likely to stay due to the chance of better assignments. " One explanation for our findings is that employees with Masters or PhD degrees are generally employed in more specialist roles and are potentially more positive about their relative marketability. Another is that these employees are insufficiently stimulated by bank work, given their high qualifications, and so look for more interesting jobs elsewhere.

Our findings do support the fifth hypothesis. Consistent with past studies (Kirschenbaum and Weisberg, 1990; Lakhani, 1988), higher paid employees at the bank were less likely to resign than lower paid ones. Bonus payments, which are a component of an employee ' s compensation, were also found to have a strong negative relationship with turnover, providing further support for this hypothesis. This suggests that, once one controls for qualifications, higher paid employees possess

firm-specific skills which are not easily marketable to other firms.

Conclusions

This study has implications for both organizations and researchers. At a macro level it has added to the existing research on turnover and specifically identifies a number of potential policy areas organizations should focus on in their efforts to discourage good employees from leaving.

In accordance with Catastrophe Theory, we suggest that a normally high-performing employee who starts to perform poorly may be withdrawing from the organization in preparation to quit. Tools/interventions need to be developed to then diagnose whether or not this performance drop is symptomatic of withdrawal and to decide whether or not the organization can subsequently rehabilitate and retain the employee at a higher-performing level.

The results indicate that more educated employees are more likely to resign than their colleagues. We identified two possible reasons for this. First, higher educated employees, recruited for specialist corporate functions like Marketing, Sales or Finance, may find their jobs unstimulating and therefore tedious. Second, credential inflation and high unemployment may mean that new graduates join the bank as a short-term employment option, until they have paid off their student loans and found work in fields better suited to their qualifications. Further research needs to be undertaken to identify whether the increased resignations are due to ' push ' factors, such as lack of intellectual stimulation, or ' pull ' factors, such as increased marketability. If the former is an issue, jobs may need to be redesigned to provide more varied and interesting tasks. If the latter is an issue, recruitment and selection methods may have to be re-assessed so that they place less emphasis on educational qualifications.

This study clearly shows that discretionary bonus payments have a significant impact on the employee ' s decision to remain or leave. Managers should realise that not paying a bonus risks triggering ' search behavior ' , especially if the employee did receive a bonus the previous year. In particular, the common practice of promoting high performers and denying them a bonus, because they are ' learning the job ' or have been rewarded already through the promotion, risks alienating these individuals and encouraging them to look for jobs elsewhere.

References

Becker, G. (1975). *Human Capital.* New York: National Bureau of Economic Research.

Cotton, J. L. & Tuttle, J. M. (1986). Employee Turnover: A Meta-Analysis and Reviewwith Implications for Research. *Academy of Management Review*, 11, 55-70.

Fitz-enz, J. (1997). Its costly to lose good employees. *Workforce*, 76, 50-51.

Healy, M. C., Lehman, M. & McDaniel, M. A. (1995). Age and voluntary turnover: quantitative review. *Personnel Psychology*, 48, 335-345.

Hom, P. .W., Caranikas-Walker, F., Prussia, G. E. & Griffeth, R. W. (1992). A Meta Analytical Structural Equations Analysis of a Model of Employee Turnover. *Journal of Applied Psychology*, 77, 890-909.

Jackofsky, E. (1984). Turnover and job performance: An integrated process model. *Academy of Management Review*, 9, 74-83.

Kirschenbaum, A. & Weisberg, J. (1990). Predicting Worker Turnover: An Assessment of Intent on Actual Separations. *Human Relations*, 43, 829-847.

Lakhani, H. (1988). The Effect of Pay and Retention Bonuses on Quit Rates in the US Army. *Industrial & Labor Relations Review*, 41, 430-438.

Lucas, G H. Jr., Parasuraman, A., Davis, R. A. & Enis, B. M. (1987). An Empirical Study of Salesforce Turnover. *Journal of Marketing* 51, 34-59.

McEvoy, G. M. & Cascio, W. F. (1987). Do Good or Poor Performers Leave? A Meta Analysis of the

relationship between Performance & Turnover. *Academy of Management Journal*, 30, 744-762.

McGoldrick, A. E. & Arrowsmith, J. (1993). Recruitment advertising: Discrimination on the basis of age. *Employee Relations*, 15, 54-65.

Mobley, W. H., Griffeth, R. W., Hand, H. H. & Meglino, B. M. (1979). Review and conceptual analysis of the employee turnover process. *Psychological Bulletin*, 86, 493-522.

Perry, E. L., Kulik, C. T. & Bourhis, A. C. (1996). Moderating effects of personal and contextual factors in age discrimination. *Journal of Applied Psychology*, 81, 628-47.

Porter, L. W. & Steers, R. M. (1973). Organizational, Work, and Personal Factors in Employee Turnover & Absenteeism. *Psychological Bulletin*, 80, 151-176.

Price, J. L. & Mueller, C.W. (1981). A Causal Model of Turnover for Nurses. *Academy of Management Journal*, 24, 543-565.

Sheridan, J. E. (1985). A Catastrophe Model of Employee Withdrawal leading to Low Job Performance, High Absenteeism, and Job Turnover during the First Year of Employment. *Academy of Management Journal*, 28, 88-109.

Schwab, D. P. (1991). Contextual variables in employee-turnover relationships. *Academy of Management Journal*, 34, 966-975.

Werbel, J. D. & Bedeian, A. G. (1989). Intended Turnover as a Function of Age and Job Performance. *Journal of Organizational Behavior*, 10, 275-281.

Williams, C. R. & L. P. Livingstone (1994). Another look at the relationship between performance and voluntary turnover. *Academy of Management Journal*, 37, 269-298.

Youngblood, S. A., Mobley, W. H. & Meglino, B. M. (1983). A Longitudinal Analysis of the Turnover Process. *Journal of Applied Psychology*, 68, 507-516.