

To have and to hold:

## Retaining and utilising skilled people

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The views and opinions expressed in this document are those of the author/project team and do not necessarily reflect the views of the Australian Government, state and territory governments or NCVER

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# About the research



## *To have and to hold: Retaining and utilising skilled people*

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Not being able to hire people with the required skills is an obvious impediment to the productivity and prosperity of any organisation and, ultimately, to a country's economy. An equally important concern for employers is how to keep skilled employees and how to use their skills fully.

This report, *To have and to hold: Retaining and utilising skilled people* by Andy Smith, Eddie Oczkowski and Chris Selby Smith, examines the ways in which Australian employers retain skilled staff at a time of low unemployment and skills shortages. It also considers the ways in which employers enhance their ability to use the skills of their people. The study analysed retention and utilisation at the organisation level. Its focus is on the role of human resource management practices, including training and high-performance work practices, in enabling employers to retain and utilise the skills of their staff.

### Key messages

- The key driver for both skills retention and utilisation is the presence of a learning orientation in the organisation. People stay in organisations if they feel they are learning and progressing in their careers.
- Retention or utilisation of skilled people is not necessarily improved through strategies such as increasing wages, adopting family-friendly working policies, and the use of non-monetary rewards. These things help make people feel satisfied, but they are not sufficient to retain skilled people in a tight labour market.
- What does facilitate retention is the application of high-performance work practices such as a commitment to learning, open-mindedness and shared vision. More widespread adoption of these practices would benefit employers and workers alike.
- Training as part of an overall learning culture, particularly nationally recognised training, is also important in retaining skilled people and making better use of their skills. This also offers opportunities for registered training organisations to work with employers to improve retention and utilisation strategies for employees.

Tom Karmel  
Managing Director, NCVER

In memoriam:

Chris Selby Smith (1942–2007)

A valued friend and colleague

# Contents

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Tables	6
Executive summary	7
Snapshot of the literature	10
Survey results	13
Skill retention and utilisation	14
Modelling the drivers of skill turnover, retention and utilisation	21
Conclusion	22
Findings from the case studies	24
The case study organisations	24
Retention and utilisation of skills	27
Conclusions	36
References	40
Appendices	
A: Survey methodology	41
B: Survey questionnaire	47
C: Training and human resource practices	58
D: Models of skill turnover and utilisation	60
E: Models of skill retention and utilisation (alignment with long-term goals)	64

# Tables

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1	Annual percentage of skill turnover by organisational characteristics	14
2	Extent of skill utilisation: 0 (not utilised)–100 (fully utilised), percentages	15
3	Skill retention, utilisation and knowledge: Alignment with long-term goals, by organisational and employment characteristics	16
4	Most used retention strategies, by organisational and employment characteristics	16
5	Management practices	17
6	Teamwork practices, percentages	18
7	Organisational/market characteristics	20
8	Skill retention and utilisation (alignment with long-term goals) models: Significant drivers	22
A1	Sampling frame and responses	41
A2	Sample and database concordance: Primary industry type	42
A3	Sample and database concordance: Number of employees	42
A4	Employee and ownership characteristics of respondents	43
A5	Skill-related variable definitions and items	44
A6	Management practices and philosophies: Variable definitions and items	45
A7	Training-related practices: Variable definitions and items	45
A8	Human resources practices: Variable definitions and items	46
A9	Organisational/market characteristics: Variable definitions and items	46
C1	Training practices: All employees and key industries	58
C2	Training practices: Employer size and skilled trade workers	58
C3	Human resource management practices: All employees and key industries	59
C4	Human resource management practices: Employer size and skilled trade workers	59
D1	Skill turnover models: Significant drivers	60
D2	Skill turnover models: Statistics	61
D3	Extent of skill utilisation models: Significant drivers	62
D4	Extent of skill utilisation models: Statistics	63
E1	Retention and utilisation long-term goal models	64

# Executive summary

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The factors that affect whether employees choose to remain in jobs and organisations or look for opportunities elsewhere have been the focus of much research. However, these labour turnover studies have been predominantly focused on the individual (what makes someone quit or intend to quit), rather than on a consideration of what organisations can do to retain and better use skilled people. Previous research has pointed to the importance of job satisfaction and to employees having a sense of organisational commitment in ensuring more permanent attachment to organisations (Winterton 2004). This suggests that there are many things that employers might do to increase the retention of skilled people, including implementing different approaches to human resource management.

The research has also highlighted the importance of high-performance work practices, such as working as a team, information-sharing and extensive training, in reducing levels of employee turnover and achieving higher levels of productivity through the better use of employee skills. This study examines the role of human resource management and high-performance work practices in the retention and utilisation of skilled people in organisations.

## Method

This study comprised three phases. Phase 1 involved a series of expert interviews with employers, employer and employee associations and other bodies such as national skills councils. Responses and discussion from these interviews relating to retention and utilisation of skilled staff informed the development of the survey. A national survey of employers carried out in late 2006 constituted the second phase of the project. The survey asked about the human resource management and high-performance work practices of employers and questioned the retention and utilisation of employees. The results of the survey were statistically modelled to allow conclusions to be drawn about the practices that improved retention and utilisation and those that did not. The third phase of the project involved eight case studies with organisations, in which some of the issues arising from the survey were pursued in more depth and more detailed information was gained on retention and utilisation practices. The organisations that participated ranged in size from 13 to over 25 000 employees and were drawn from the manufacturing, health and community services, finance and insurance, and retail sectors.

## Results of the research

This report examines the results of the survey and the case studies. The most important finding from the study was that the 'learning climate' of an organisation determines the extent to which skilled employees are retained and how their skills are used to greatest effect in organisations. For the purposes of the study, 'learning climate' refers to organisation-wide activities of creating and using knowledge to enhance competitive advantage. The learning climate consists of three components: commitment to learning; open-mindedness; and shared vision. Learning climate was the strongest factor in the modelling of the survey results, where its presence reduced the level of employee turnover and increased the utilisation of employee skills more than any other factor.

Learning climate does not simply mean training (which was also important in its own right), but rather the extent to which the organisation gives employees opportunities to learn, grow and develop through their work. The importance of this learning climate was expressed by an employee working as a call centre operator in a large national bank. When asked why he stayed with this organisation he commented:

Yeah, just learn new things every day. I do like to be challenged; so advancement, progression. Of course money does come into it. I want to be secure and that also comes into it and also a few things like that. But to add to what I was saying, the thing that generally people would want is something that challenges them, keeps you stimulated, keeps you interested so that you want to keep doing the job and to be able to have the opportunity to learn while you're doing that.

Challenge and opportunity for employees is a priority, and the case studies and survey results reflect this.

The level of unionisation also played a role in increasing the utilisation of skills, but its strength varied across the groups of workers. Not surprisingly, unionisation is highest in the intermediate skilled workers area, which includes the trades, traditionally the most unionised segment of the workforce.

Training was also important. However, this is different from the learning climate identified earlier and refers more to specific training initiatives conducted by organisations. The survey and the case studies found that training was widespread, with training opportunities available to most groups of employees. As previous research in Australia and overseas has demonstrated, organisations use training programs in a variety of ways and for many reasons. However, few training initiatives have a direct impact on the retention and better utilisation of skills, the major exception to this being nationally recognised training.<sup>1</sup> In both the survey and, more emphatically, in the case studies, the use of nationally recognised training was strongly linked to employees deciding to stay with their organisation and with employers claiming that they were better able to use the full range of their employees' skills. This seems to be related to the value placed by employers and employees on qualifications. Employees regard the acquisition of a qualification as a significant benefit of working for an organisation, while employers see it as a confirmation of the level of skills possessed.

The traditional responses of organisations to the problems of retention have included such measures as increasing pay levels and improving working conditions; they also make use of non-monetary rewards. The study found that, although these measures were popular with employers, many using a combination of them, they had very little effect on retention. This bears out the findings of previous research—that these measures are 'hygiene' factors (Herzberg 1966). That is, these factors need to be present in the workplace to avoid dissatisfaction amongst employees, but they are not the factors that persuade and motivate employees to stay or to give more. Motivating factors are more closely linked to issues of learning, growth and development.

Similarly, many modern human resource management practices are designed to increase employee retention and loyalty to organisations. Policies such as flexible work time arrangements, time off for personal reasons and family-friendly policies, which have become the staple of advanced human resource practice, did not seem to reduce turnover or increase the organisation's ability to utilise the skills of employees. The reason for this was revealed in the case studies, where employees identified how important these policies were for their level of satisfaction with their job or organisation, but

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<sup>1</sup> Nationally recognised training is an accredited program of study leading to vocational qualifications that meet the requirements agreed under the National Training Framework. The framework is a system of vocational education and training that applies nationally. It is made up of the Australian Quality Training Framework (AQTF) and nationally endorsed training packages. It can apply to a whole course (qualification) or components of a course (units of competency and modules).

which did not appear to influence their decision to stay or leave. Good human resource practices are a necessary backdrop to increasing retention and utilisation of skilled people but they are not sufficient to guarantee this outcome.

High-performance work practices do seem to have a more direct impact. The notion of the learning climate incorporates a number of high-performance work practices and was identified in this study as the strongest factor in improving retention and utilisation. Teamwork was also considered to be important. The case studies, where human resource management and high-performance work practices were probed in more depth, also revealed that organisational culture plays a very important role in retaining and using skilled people. This seems to be particularly true in smaller organisations, where feelings of employee commitment are often related to the informal culture of smaller organisations or loyalty to family-owned firms. The broader issue of fashioning a high-performance 'culture' can be very powerful in motivating skilled people to stay in an organisation and to use their skills to the fullest extent.

## Lessons for employers

Clear lessons for employers who wish to improve the retention and utilisation of skilled employees emerge from this research.

- ✧ Create an organisational climate in which employee learning, growth and development are fostered and where people feel that their best opportunities and experiences for the future will be realised.
- ✧ Training is a critical component of the learning climate of an organisation, but equally important is ensuring that training is mutually beneficial. Nationally recognised training is an important way of achieving this. This is good news for registered training organisations and the vocational education and training (VET) system, because nationally recognised training can provide an effective platform for working closely with employers on these issues.
- ✧ The old ways don't work. Pay, working conditions and a happy workplace are all important factors in making employees feel satisfied, but they have to be part of a broader approach that combines good human resource management and the use of high-performance work practices to give employees opportunities for growth and development.

# Snapshot of the literature

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Much research has been carried out on the supply of skills to industry through the national vocational education and training (VET) system. This research has often focused on factors that affect the development and formation of skilled people within organisations (see for instance Warhurst, Grugulis & Keep 2004). However effectively skills are developed by the training system or within industry, organisations will not be able to reap the benefits unless they can utilise and retain the skilled employees that they employ.

There have been many studies of the factors that determine whether employees leave an organisation and how organisations can best structure their management practices to retain skilled employees. Many of these studies have examined the psychological processes that lead people to leave their jobs. An early study in this area highlighted the different stages that people progress through before they decide to leave an organisation and a job (Mobley 1977). Mobley's model essentially involved identifying the build-up of job dissatisfaction that led employees to consider leaving the organisation and to assess opportunities in the labour market. The notion of job satisfaction has been linked to turnover in a number of studies (Hom & Griffeth 1991; Lee et al. 1996; Lum et al. 1998). Many of these studies focused on nurses and similar occupational groups, where high levels of employee turnover have been experienced. The studies bore out Mobley's model that intentions to quit the organisation and actual leaving it were related to job satisfaction—as job satisfaction declined, turnover increased. However, what is not clear is whether job satisfaction is the main determinant of turnover and its inverse, retention.

Job dissatisfaction has also been linked to other forms of behaviour, such as gradual withdrawal from the organisation or employee disengagement. In a development of Mobley's original model, Lee and Mitchell (1994) suggested that the decision to leave an organisation or a job, rather than simply withdrawing commitment while remaining employed, is often affected by an external shock to the person. In this unfolding model the decision to leave a job may be related to a sudden change in personal circumstances (for example, pregnancy) or it may be related to the nature of the workplace (for example, new management policies or the announcement of redundancy). The employee who may be dissatisfied is 'shocked' into considering alternative employment. Lee and Mitchell suggested that shocks may occur at different levels and in different ways, but they act as the trigger that turns dissatisfaction into a definite decision to leave—in some cases not to another job.

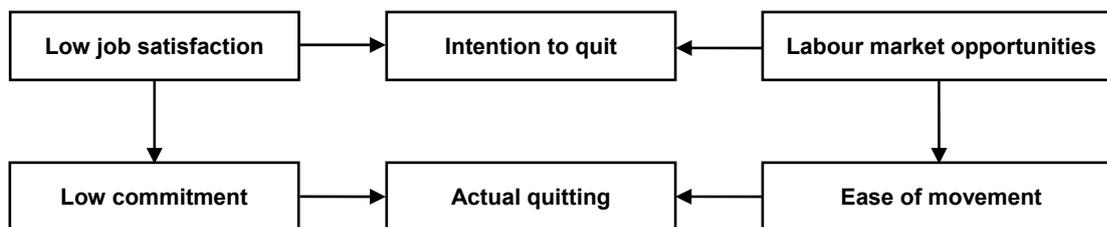
Job satisfaction has long been a focus for human resource management. From the early theories of motivation at work, which showed that job satisfaction is closely linked to higher levels of motivation and performance at work (Maslow 1943; Herzberg 1966; Alderfer 1972), human resource managers have been concerned with designing jobs which increase motivation and job satisfaction. Most of these theories have shown how factors such as pay, working conditions and relationships with supervisors—the so-called 'hygiene' factors—while important in building job satisfaction, do not result in higher levels of motivation. Motivation comes from factors such as recognition, opportunities for career development and a sense of personal achievement.

Research has shown that perhaps the strongest influence on retention and turnover of staff is organisational commitment. A number of studies of employee turnover have shown that the level of commitment of an individual to the organisation is the strongest predictor of both the intention to leave and the actual quitting behaviours (Tang, Kim & Tang 2000; Griffeth, Hom & Gaertner

2000). Studies of organisational commitment normally distinguish between affective commitment (identification with organisation), continuance commitment (awareness of the costs of leaving an organisation) and normative commitment (sense of obligation to the organisation). All three forms of commitment have been linked inversely with turnover and the intention to quit, but the strongest link has been established with affective commitment. Thus, a major factor in retention is the extent to which organisations can engender a sense of emotional commitment, an area which is very much the province of human resource management. The notion of organisational commitment became popular in the human resource management literature of the 1990s as a means of explaining the differences between the old approach to personnel management and new approaches to human resource management. Storey (2001) produced a definition of human resource management that is still widely used and which encapsulates the centrality of commitment to the mission of the human resource manager:

Human resource management is a distinctive approach to employment management which seeks to achieve competitive advantage through the strategic deployment of a highly committed and capable workforce using an array of cultural, structural and personnel techniques. (Storey 2001, p.5)

There is a very close connection between of job satisfaction and organisational commitment. In a review of the literature on labour turnover, Winterton (2004) linked job satisfaction to organisational commitment. He suggests that low job satisfaction itself is unlikely to lead to a decision to quit the organisation but that it can result in reduced organisational commitment, which appears to be the trigger for leaving. When this is linked to job opportunities elsewhere and few ties to the organisation (ease of movement), then turnover is more likely to occur. Winterton’s model is reproduced below.



Sturges and Guest (2001) found that commitment and job satisfaction also played a major role in the decisions of recently recruited graduates to stay with or leave their organisations and identified three factors that determined graduate behaviour: firstly, the extent to which pre-joining expectations were met, particularly in relation to the type of job and the help graduates received with career management. This meeting of expectations is often referred to as the psychological contract. Secondly, the culture of the organisation and how well graduates fit into the culture and the quality of their work relationships. Finally, other influences such as work–life balance, individual recognition and rewards. Sturges and Guest suggest many of these factors are within the purview of the modern human resource management function in organisations.

Other factors are identified in the debate about the retention and utilisation of skilled people in organisations, but the research has shown that these are often limited in their influence. A key factor is pay: often the response of many organisations to the threat of losing skilled staff is to increase pay or to promote for the same purpose. Findings from studies on the effect of pay on retention in particular are mixed. Pay is often seen as a ‘trigger’ for leaving, or the reason that employees might give at exit interviews (Campion 1991). However, exit interviews are notoriously misleading, as many employees will not divulge the true underlying reasons for leaving to organisational personnel. Most studies show that pay is not a strong factor in retention and turnover decisions (Griffeth, Hom & Gaertner 2000). This fits with the theories of motivation, where pay can be an important source of overall satisfaction at work but it is not a motivator.

Other factors include training and development, but as Shah and Burke (2003) suggest, training has little impact on the decision to stay with an employer. However, Sturges and Guest (2001) found that opportunities for development and career progression were important in their study of graduate turnover. Finally, unionisation has also been linked to lower levels of turnover and higher retention (Martin 2003). Martin suggests this may be a result of the influence that unions have on pay and working conditions. However, the apparent lack of effect that these 'hygiene' issues have on turnover cast some doubt on the findings.

Related to the impact of human resource management practices and policies on retention and utilisation of skilled people in organisations is the notion of high-performance work systems. American researchers (Osterman 1995; MacDuffie & Kochan 1995) found that the major people-management elements of high-performance work systems include: extensive use of teamwork; adoption of total quality management methods; job rotation; extensive training of all workers; recruitment for personal rather than technical skills; performance-related pay; and the reduction of barriers between managers and workers (single status). These people-management initiatives were accompanied by the use of flexible production methods (lean production) and by extensive investment in new technologies.

Studies of the impact of high-performance work systems on organisational performance have tended to show an increase in both the retention and utilisation of skills. Huselid's seminal studies (1995) showed that the use of practices associated with high-performance work systems relates positively to a number of indices of organisational performance, including lower turnover, especially amongst lower-level workers, and to higher productivity as a result of the better utilisation of skills. Guthrie (2001) examined the impact of the use of high-performance work systems amongst New Zealand firms and found that the more practices that organisations employed, the lower their levels of turnover and the higher their levels of labour productivity. This was especially marked for non-management employees. Guthrie explained the positive impact of high-involvement work practices by suggesting that the use of these advanced management practices put the performance of individual employees at the centre of organisational strategy. The retention and utilisation of this crucial resource in the organisation became a key element in improving overall organisational performance. Although related to human resource management, high-performance work systems also encompass the development of new forms of work organisation and the use of technology. Nevertheless, the human resource management practices adopted under high-performance work systems are critical to the success of these systems (Butler et al. 2004), as they are clearly designed to elicit the fullest commitment of workers to the objectives of the organisation.

Human resource management and high-performance work systems appear to be very important in the successful retention and utilisation of people in organisations. This study examines the role of these practices.

# Survey results

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The study comprised three phases. In the first phase 14 experts were interviewed; six of these interviews were conducted face to face, with eight by telephone. Interviews were held with four industry skills councils: Community Services and Health Industry Skills Council; Innovation and Business Skills Australia; Manufacturing Skills Australia; and Service Skills Australia. Interviews were also held with the Business Council of Australia, the Australian Industry Group and the Australian Services Union. Four enterprises were interviewed: South West Sydney Area Health Service; Huntsman Chemicals; Brumby's Bakery; and Insurance Australia Group. We also interviewed Professor David Ashton and Dr Johnny Sung, experts in the area of skills and high-performance work systems from the Centre for Labour Market Studies at the University of Leicester in the United Kingdom. Responses to the interviews were used to structure a survey that was administered as part of the second phase, the results of which are reported here. The third phase involved case studies and these are described later in the report.

The survey instrument was piloted in September and October 2006 with a group of human resource managers and leading human resource management academics. The Australian Bureau of Statistics (ABS) Statistical Clearing House provided advice on survey design, including sampling. A random sample of 2500 organisations was drawn from the Dun and Bradstreet database of Australian organisations, human resource management subset. The survey was administered in November to December 2006. Of the 2500 surveys distributed, 328 useable responses were received, a response rate of 13.1%. The sample demonstrates close concordance with the employed database and there is some evidence that non-response bias is unlikely to affect the findings. For further details of this and the method of administration refer to appendix A.

In general, the survey examined the hypotheses that skill turnover, retention and utilisation depend upon the following factors: management practices; training-related and human resource practices; and organisational/market characteristics. A copy of the questionnaire can be found in appendix B.

The purpose of the survey was to acquire information from organisations about their use of skills strategies, their management and human resource management practices, and their perceptions of their business environments. The responses from the organisations on management and human resource management practices and the business environment were then modelled against measures of skills retention and utilisation to determine what factors were most influential in organisations for retaining and using the skills of their workers.

This section of the report describes the responses of the organisations to the various measures and presents the results of the statistical modelling. The analysis highlights three key industry sectors—manufacturing, wholesale and retail, and services. Together these sectors account for over 70% of organisations in the Dun and Bradstreet database and provide, therefore, important contrasts in the data. Full details on the methodology employed in the survey can be found in appendix A.

The survey and subsequent results in part focus on four categories of workers. These categories cover the majority of employees in the workplace and are:

- ✧ managers, professionals and technicians (for example, senior/middle managers, information and communications technology professionals, engineering technicians)

- ✧ skilled trade workers (for example, electricians, plumbers)
- ✧ intermediate skills (for example, clerical, sales and service operators)
- ✧ elementary skills (for example, labourers, machine operators).

## Skill retention and utilisation

This section provides basic descriptive statistics on the data collected. It also reports on statistical tests performed to ascertain whether differences exist for the variables according to: key industry type (manufacturing vs wholesale and retail trade vs services); employee size (small vs medium vs large); and whether or not the organisation employs skilled trade workers.

The measures of skill turnover for the four skill categories are presented in table 1. For all organisations, rates vary from 12.7% for skilled workers to 21.9% for elementary skills. Statistically significant differences occur for the managers, professionals, technicians group, with the services turnover being much higher than that for manufacturing. Wholesale and retail suffers from the highest levels of turnover, with almost 28% turnover for elementary skilled workers. For intermediate skills, the turnover in manufacturing is significantly lower than both the services and wholesale and retail sectors. It is interesting to note that, in the context of the debate on shortages of skilled trade workers, turnover for this group is lowest of all the skill categories, at 12.7% (only 12% in manufacturing). For employee size, the largest variation across skill categories occurs for small firms. No statistically significant differences exist between size classifications for any of the skill categories, although turnover for elementary skilled workers is highest in small organisations, at around 29%.

**Table 1 Annual percentage of skill turnover by organisational characteristics**

	All	Key industries			Employer size		
		Manufacturing	Wholesale and retail	Services	Small	Medium	Large
Managers, professionals, technicians	13.5	8.0 <sup>a</sup>	14.2	18.7 <sup>a</sup>	12.9	12.3	15.4
Skilled trade workers	12.7	12.0	16.6	14.5	12.9	10.7	14.9
Intermediate skills	17.0	10.2 <sup>ab</sup>	22.9 <sup>a</sup>	20.6 <sup>b</sup>	15.8	16.1	18.5
Elementary skills	21.9	18.0	27.7	16.9	28.9	21.2	21.1

Note: a and b denote significant (5% level) pair differences within key industries or size groups for a skill category.

The measures of the extent of skill utilisation for the four skill categories are presented in table 2. Skills utilisation refers to the extent to which organisations perceive that the skills of their workers are being fully used by the organisation. The extent of utilisation was measured on a 7-point Likert scale, but for the purposes of clarity in this report the results have been translated into percentages. Table 2 shows that the perception of utilisation of different groups is quite hierarchical, with all organisations rating their use of management skills at 86%, but of elementary skilled workers at 75%. It is interesting to note that organisations generally consider that there is significant spare capacity of skills to be used amongst all groups of workers in their workforces. Across key industries a statistically significant difference exists for managers, professionals and technicians between the manufacturing and wholesale and retail sectors. For all key industries this group is still the most utilised, while the elementary skilled workers group is the least utilised. There are no significant differences across employee size groups and the same broad ranking exists for employee size classifications, where managers, professionals and technicians are still the most utilised, with elementary skills the least utilised.

**Table 2 Extent of skill utilisation: 0 (not utilised)–100 (fully utilised), percentages**

	All	Key industries			Employer size		
		Manufacturing	Wholesale and retail	Services	Small	Medium	Large
Managers, professionals, technicians	86	89 <sup>a</sup>	81 <sup>a</sup>	84	86	87	84
Skilled trade workers	80	83	75	76	74	81	81
Intermediate skills	79	80	76	79	80	80	77
Elementary skills	75	77	74	69	73	77	74

Note: <sup>a</sup> denotes significant (5% level) pair differences within key industries or size groups for a skill category.

The measures of skill retention and utilisation as they satisfy long-term organisational goals are presented in table 3, together with information on skill knowledge. These measures were developed to give us information on the extent to which the organisation has long-term access to skills. These measures appear to have acceptable reliability and validity properties (see appendix A for more details). The definitions of long-term skill retention and utilisation were:

- ✧ *Skill retention, alignment with long-term goals*: the extent to which an organisation has continuous access to the employee skills it believes it requires to achieve its long-term goals.
- ✧ *Skill utilisation, alignment with long-term goals*: the extent to which an organisation can usefully employ the skills of its employees to achieve its long-term goals.
- ✧ *Skills knowledge*: the extent to which an organisation knows its skill capability.

For all organisations, the mean scores on retention are not too far removed from the mid-point of four for the 7-point Likert scale (table 3). In terms of long-term utilisation of skills, the rating of 69% (4.82/7) is lower than that for immediate utilisation of skills by all organisations (table 2: 75–86%). This suggests that organisations are more pessimistic about their abilities to retain skills and effectively use the skills of their workers in the longer term, a reflection perhaps of an expectation that tight labour market conditions are likely to worsen in the future. For all organisations skill knowledge scores are slightly higher than those for retention, at about five. This suggests that, although organisations are more confident about their knowledge of skills, there are still areas in which they do not know enough about the skills capabilities of their workers. There are no statistically significant differences for these measures when cut across the key industries.

For employee size classifications, skill retention is significantly lower for large organisations compared with both small and medium-sized organisations. Skill utilisation is also significantly lower for large compared with medium-sized organisations. Skill knowledge is significantly lower for large organisations compared with both small and medium-sized organisations. The size of organisations is a critical variable in organisations' long-term confidence in accessing skills and knowledge. It appears that large organisations are significantly less confident that they will have knowledge about and good access to the skills they require to meet strategic objectives in the future.

**Table 3 Skill retention, utilisation and knowledge: Alignment with long-term goals, by organisational and employment characteristics**

	All	Key industries			Employer size			Skilled trade workers	
		Manu- facturing	Wholesale and retail	Services	Small	Medium	Large	Employed	Not employed
Skill retention	4.63	4.57	4.73	4.66	4.90 <sup>a</sup>	4.78 <sup>b</sup>	4.36 <sup>ab</sup>	4.58	4.71
Skill utilisation	4.82	4.87	4.77	4.78	4.98	4.93 <sup>a</sup>	4.63 <sup>a</sup>	4.82	4.82
Skill knowledge	4.93	5.1	4.71	4.77	5.29 <sup>a</sup>	5.07 <sup>b</sup>	4.63 <sup>ab</sup>	4.95	4.89

Notes: Measured on a 1–7 scale, with 1 = strongly disagree and 7 = strongly agree for various statements measuring the listed constructs. Precise definitions provided in appendix A.  
a and b denote significant (5% level) pair differences within key industries or employee groups.

## Skills retention strategies

Table 4 reports the strategies most often used by organisations to retain skilled employees. For all organisations ‘higher pay’ is clearly the most used strategy, followed by ‘engendering a happier workplace’. The only other two strategies that appear to have widespread use are ‘improved working conditions’ and ‘better career progression’. For the skilled trade workers classification, it appears that organisations that employ skilled trade workers use ‘higher pay’ to a slightly greater extent and ‘better career progression’ to a slightly smaller extent than those organisations that do not use skilled trade workers. When assessing retention strategies across key industries, some interesting differences emerge. The manufacturing sector uses ‘higher pay’ to a far greater extent than the other industries, while ‘engendering a happier workplace’ is the most highly ranked strategy for wholesale and retail, and ‘higher pay’ and ‘engendering a happier workplace’ are the highest for services. It appears that a ‘better career progression’ is more prominently used in services than in the other sectors. For the employee size classifications, it appears that ‘higher pay’ and ‘engendering a happier workplace’ are used to a greater degree by small rather than by medium and large organisations. The other noticeable difference is that large organisations compared with small and medium organisations used ‘better career progression’ to a greater extent.

**Table 4 Most used retention strategies, by organisational and employment characteristics**

	All	Key industries			Employer size			Skilled trade workers	
		Manu- facturing	Wholesale and retail	Services	Small	Medium	Large	Employed	Not employed
Higher pay	32.1	43.1	31.4	23.9	39.3	34.6	27.7	33.9	28.4
Engendering a ‘happier’ workplace	23.6	16.9	37.3	22.9	32.1	22.1	23.4	22.0	25.7
Improved working conditions	16.6	15.4	15.7	16.9	17.9	16.2	16.1	17.0	16.5
Better career progression	15.2	13.8	7.8	19.7	7.1	9.6	24.1	13.3	18.3
Other non- monetary benefits	5.1	4.6	5.9	7.1	0.0	6.6	4.5	5.5	4.6
Improved fringe benefits	2.2	1.5	2.0	2.9	0.0	3.7	0.9	1.8	2.8

## High-performance management practices

Tables 5 and 6 present results for high-performance management practices. The survey instrument measured the use of four sets of major management practices commonly associated with high-performance work systems. These were:

- ✧ *Learning orientation*: referring to organisation-wide activities for creating and using knowledge to enhance competitive advantage. It consists of three sub-constructs: commitment to learning; open-mindedness; and shared vision.
- ✧ *Total quality management (TQM)*: referring to the management philosophy that seeks continuous improvement in the quality of performance of all processes, products and services of an organisation.
- ✧ *Lean production*: combines the features of total quality management and teamwork into a system of work organisation that allows organisations to run their operations with a minimum of resources.
- ✧ *Teamwork*: measured in this study by the extent of the use of teamwork and the degree of autonomy allowed to team members.

For all organisations, the mean scores are similar for the three major practices of learning orientation, lean production and total quality management, with scores varying from 4.6 to 5.1 on the 7-point scale (table 5). In terms of differences across key industries, significant differences exist for lean production, where the services sector uses lower levels of lean production than both the manufacturing and wholesale and retail sectors. In addition, the services sector uses significantly lower levels of total quality management compared with the manufacturing sector.

In terms of employer size, large organisations have lower levels of: learning orientation (compared with small); lean production (compared with both small and medium); and total quality management (compared with both small and medium). Approximately 63% of organisations use teams and, on average, about three out of five attributes that make teams autonomous are observed (table 6). Teams where workers depend upon other members' work are the most common type of teamwork autonomy; appointing own team leaders is the least common. For teamwork, large organisations use teams significantly more than small organisations, but large organisations permit less teamwork autonomy than both small and medium-sized organisations. Large organisations in particular permit less role rotation, appointing own team leaders and allowing team members to jointly decide on work. There are no significant differences in high-performance management practices between organisations who employ skilled trade workers and those who don't.

**Table 5 Management practices**

	All	Key industries			Employer size			Skilled trade workers	
		Manu- facturing	Wholesale and retail	Services	Small	Medium	Large	Employed	Not employed
Learning orientation	4.70	4.77	4.70	4.60	5.15	4.79	4.47	4.63	4.82
Lean production	4.59	5.03 <sup>a</sup>	4.78 <sup>b</sup>	4.20 <sup>ab</sup>	5.09 <sup>a</sup>	4.70 <sup>b</sup>	4.32 <sup>ab</sup>	4.55	4.66
TQM	5.09	5.40 <sup>a</sup>	5.11	4.76 <sup>a</sup>	5.60 <sup>a</sup>	5.17 <sup>b</sup>	4.83 <sup>ab</sup>	5.12	5.03

Notes: Measured on a 1–7 scale, with 1 = strongly disagree and 7 = strongly agree for various statements measuring the listed constructs. Definitions provided in appendix A.  
a and b denote significant (5% level) pair differences within key industries or employee groups.

**Table 6 Teamwork practices, percentages**

	All	Key industries			Employer size			Skilled trade workers	
		Manu- facturing	Wholesale and retail	Services	Small	Medium	Large	Employed	Not employed
Teamwork employed	63.1	59.5	61.7	68.6	49.3 <sup>a</sup>	62.4	68.3 <sup>a</sup>	60.1	67.4
<b>Teamwork autonomy</b>									
Depend on others' work	88.0	82.1 <sup>a</sup>	94.4 <sup>a</sup>	86.8	81.8	87.7	89.8	85.9	91.1
Roles rotate	58.6	71.1 <sup>a</sup>	57.4	46.0 <sup>a</sup>	72.7 <sup>a</sup>	65.1 <sup>b</sup>	45.8 <sup>ab</sup>	61.4	54.2
Appoint own leaders	10.6	14.5	15.1	7.8	22.6 <sup>a</sup>	14.0 <sup>b</sup>	3.3 <sup>ab</sup>	11.4	9.3
Jointly decide on work	48.7	43.4	55.4	48.7	66.7 <sup>a</sup>	52.9 <sup>b</sup>	38.7 <sup>ab</sup>	44.9	54.5
Given specific responsibility	84.9	76.9	89.1	87.3	87.1	83.4	86.1	83.4	87.1

Note: a and b denote significant (5% level) pair differences within key industries or employee groups.

## Training practices

Tables C1 and C2 in appendix C present results from the survey organisations relating to training practices. Some of the key features for all organisations are the following.

- ✧ Organisations train employees for about 40% of the listed soft and hard skills.
- ✧ On average, 22 hours are spent on induction activities for each new employee.
- ✧ 44% of experienced workers are given time for training.
- ✧ About one-quarter of employees are trained to do other jobs.
- ✧ 29% of all employees have received nationally recognised training.

Significant differences were identified across key industries including the following.

- ✧ Manufacturing trains for fewer soft skills than services.
- ✧ The services sector gives more experienced employees time off work for training than both the manufacturing and wholesale and retail sectors.

In terms of employer size, the following significant differences were identified.

- ✧ Large organisations train more for skill objectives (see definitions in appendix A) than small organisations.
- ✧ Large organisations train more for specific soft skills than medium-sized organisations, who train more than small organisations.
- ✧ Large organisations are more likely to give experienced workers time off for training compared with small and medium organisations.

There are no significant differences in training practices between organisations who employ skilled trades workers and those who don't.

## Human resource management practices

Tables C3 and C4 in appendix C present survey results relating to human resource management practices. The human resource management practices measured were those that expert interviewees

had suggested might be linked to better retention and utilisation of skilled workers. The following are some of the key outcomes.

- ✧ 52% of organisations have an internal recruitment focus.
- ✧ On average, about half of the six indicated that flexible working-time arrangements are practised.
- ✧ On average, fewer than one of the five listed the use of family-friendly working arrangements.
- ✧ About 50% of organisations permit flexitime for at least some employees.
- ✧ 49% of all organisations formally survey employees.
- ✧ About two-thirds of non-managerial employees are formally appraised.
- ✧ On a scale of 1 to 7, an average score of 4.3 is achieved for both career planning and job design.

Significant differences across key industries include the following.

- ✧ Service organisations use more flexible working-time arrangements than both manufacturing and wholesale and retail.
- ✧ More employees in services have at least some reduced working hours than those in manufacturing.
- ✧ More employees do jobs other than their own in wholesale and retail than do employees in services.
- ✧ Non-managerial employees in services received more formal appraisals than employees in both the manufacturing and wholesale and retail sectors.
- ✧ Appraisal results in an evaluation of training needs more in the services sector than in the wholesale and retail sector.

For employer size the following significant differences are identified.

- ✧ Large organisations use more flexible time and family-friendly working arrangements than both medium and small organisations.
- ✧ In percentage terms, fewer employees in small organisations have reduced working hours compared with both medium and large organisations.
- ✧ Large organisations have less flexibility in job design than both small and medium organisations.
- ✧ A greater percentage of employees in small organisations do other jobs (than their own) than do employees in medium and large organisations.
- ✧ In percentage terms, large organisations formally survey more employees than medium organisations who, in turn, survey more than small organisations.
- ✧ In percentage terms, large organisations provide written communication of survey results to more employees than do small organisations.
- ✧ Large organisations use personality tests for recruitment more than medium-sized organisations.

Organisations that employ skilled trade workers display the following characteristics as opposed to those that do not. They:

- ✧ use less flexible job design practices
- ✧ use fewer surveys
- ✧ appraise employees less frequently.

## Organisational/market characteristics

Table 7 presents findings for the organisational/market characteristics of the respondents. The following are some of the key features for all organisations.

- ✧ About 49% claim to be in the growth phase of the organisational cycle.
- ✧ There is slightly more technological than market turbulence among the organisations.
- ✧ Fewer than one in five employees are union members.

In terms of significant differences across key industries, we note the following.

- ✧ There is more market turbulence in the wholesale and retail sector compared with the services sector.
- ✧ The services sector has lower competitive intensity than both the manufacturing and wholesale and retail sectors.
- ✧ The level of unionisation is much higher in manufacturing compared with both the wholesale and retail and services sectors.

In terms of employer size, the following significant differences are identified:

- ✧ More medium-sized organisations are in the growth stage of the life cycle than small organisations.
- ✧ Large organisations experience lower levels of competitive intensity than medium-sized organisations.
- ✧ Large organisations have a higher level of unionisation than medium organisations, which have a higher level than small organisations.

In terms of unions, the level of union membership is significantly lower for organisations that do not employ skilled trade workers.

**Table 7 Organisational/market characteristics**

	All	Key industries			Employer size			Skilled trade workers	
		Manu- facturing	Wholesale and retail	Services	Small	Medium	Large	Employed	Not employed
Growth stage in life cycle (%)	49.00	47.00	42.00	52.00	32.00 <sup>a</sup>	55.00 <sup>a</sup>	45.00	46.00	53.00
Unionisation (%)	16.00	22.00 <sup>ab</sup>	7.00 <sup>a</sup>	10.00 <sup>b</sup>	11.00 <sup>ab</sup>	14.00 <sup>bc</sup>	22.00 <sup>ac</sup>	19.00 <sup>a</sup>	10.00 <sup>a</sup>
Market turbulence (scale 1–7)*	4.09	4.16	4.71 <sup>a</sup>	4.07 <sup>a</sup>	3.93	4.26	3.91	4.07	4.11
Competitive intensity (scale 1–7)*	4.77	5.08 <sup>a</sup>	5.38 <sup>b</sup>	4.44 <sup>ab</sup>	4.65	5.03 <sup>a</sup>	4.46 <sup>a</sup>	4.76	4.77
Technological turbulence (scale 1–7)*	4.49	4.34	4.79	4.39	4.31	4.53	4.52	4.41	4.63
Organisational innovativeness (scale 1–7)*	4.23	4.40	4.31	3.92	4.14	4.26	4.24	4.24	4.22

Notes: \* Measured on a 1–7 scale, with 1 = strongly disagree and 7 = strongly agree for various statements measuring the listed constructs. Precise definitions provided in appendix A.  
a, b and c denote significant (5% level) pair differences within key industries or employee groups.

# Modelling the drivers of skill turnover, retention and utilisation

This section presents the results of the modelling of skills retention and utilisation with the other sets of variables in the survey: nature of the organisation; high-performance management practices; human resource practices; and business environment.

The intention of the modelling was to isolate factors that act as drivers for the retention and utilisation of skills in organisations. Structural equation modelling (SEM) techniques were employed to identify the statistically important drivers of the skill-related variables. Four broad sets of models were developed:

- ✧ models of skill turnover for each of the four skill categories
- ✧ models of the extent of skill utilisation for each of the four skill categories
- ✧ a model of skill retention as it aligns with long-term goals
- ✧ a model of skill utilisation as it aligns with long-term goals.

The variables to be examined as potentially important drivers are: management practices; training-related variables; human resource practices; and organisational/market characteristics (appendix A).

## Skill turnover drivers

In order of importance, the statistically significant drivers for skill turnover (opposite of skill retention) are presented in table D1 (see appendix D). The table presents the drivers of skill turnover for each of the categories of workers in the survey. In this table and the following tables a positive sign (+) indicates a positive relationship between skill turnover and the particular category and a negative (-) sign indicates a negative relationship.

The key finding from this model is that only two factors reduce turnover (increase retention) across all worker categories. These are the presence of a learning orientation in the organisation and a high level of unionisation. In addition, there are other individual important drivers for the various skill categories. For the skill category of managers, professionals and technicians, having more employees in teams increases turnover. Having employees who have received a nationally recognised training qualification reduces turnover, as does having more flexible working-time arrangements. After accounting for the other factors, the manufacturing sector has a lower turnover rate and the services sectors a higher turnover rate. While compared with other ownership structures, a privately owned organisation has a lower turnover rate.

With skilled trades, if employees do other jobs, turnover increases. After accounting for the other factors, the wholesale trade sector and large organisations have a higher turnover.

For intermediate skilled workers, organisations with employees who have received a nationally recognised training qualification, who conduct appraisals frequently, who offer more flexible working-time arrangements, or who use higher pay all reduce turnover. After accounting for the other factors, the manufacturing sector and privately owned organisations have lower turnover of intermediate skilled workers.

With elementary skilled workers, being formally appraised reduces turnover, as does using attributes in recruitment. After accounting for the other factors, the agriculture and mining sector has a higher turnover and not-for-profit and other organisational structures have a lower turnover.

## Skill utilisation drivers

In order of importance, the statistically significant drivers for the extent of skill utilisation are presented in table D3. There is no single driver across all skill categories. Learning orientation,

however, is significant for all categories except elementary skills. Other important drivers for the various skill categories include the following.

- ✧ For managers, professionals and technicians, having more employees formally trained to do other jobs reduces utilisation. More employees being surveyed increases utilisation. Greater technological turbulence reduces utilisation. After accounting for the other factors, the manufacturing sector increases utilisation and the retail trade sector reduces utilisation.
- ✧ For skilled trades workers, having more attributes of teamwork autonomy reduces utilisation. Having more employees who receive nationally recognised training increases utilisation. An increase in unionisation increases utilisation. After accounting for the other factors, the agriculture and mining sector increases utilisation.
- ✧ For intermediate skilled workers, greater technological turbulence reduces utilisation. Foreign-based multinational organisations tend to have lower utilisation.
- ✧ For elementary skilled workers, having more employees who have a nationally recognised training qualification increases utilisation, while the services and finance sectors are associated with a reduction in utilisation.

### Skill retention and utilisation and long-term organisational goals drivers

Table 8 presents, in order of importance, the statistically significant drivers for measures of how retention and utilisation align with organisational long-term goal models (refer to table E1 in appendix E for detailed statistics).

Learning orientation has been identified as a significant positive driver for both skill retention and skill utilisation as they align with long-term goals. For skill retention, other positive impacts that have been identified are: more personal attributes used in recruitment; and appraisals resulting in the evaluation of training needs. Further, after accounting for the other factors, organisations in the retail trade sector and medium-sized organisations have more retention.

As noted above, learning orientation is a positive driver for skill utilisation, and it is the only one. All other factors, such as greater technological turbulence and soft skills training, all reduce skill utilisation. Furthermore, after accounting for the other factors, organisations in the public administration sector, small organisations and privately owned organisations have lower levels of utilisation.

**Table 8 Skill retention and utilisation (alignment with long-term goals) models: Significant drivers**

Skill retention		Skill utilisation	
Driver	Direction	Driver	Direction
Learning orientation	+	Learning orientation	+
Technological turbulence	-	Technological turbulence	-
Growth in life cycle	-	Soft skills training	-
Training for skill objectives	-	Growth in life cycle	-
Medium-sized organisations	+	Public administration sector	-
Retail trade sector	+	Small organisations	-
Attribute-based recruitment	+	Private ownership	-
Appraisal resulting in training needs	+		

Note: Drivers listed in order of statistical importance as determined by beta coefficients.

## Conclusion

The results from the statistical modelling provide an interesting account of the factors that influence the retention and utilisation of workers at different skill levels in organisations. The

relatively small number of factors which emerged in the modelling process as having a direct influence was surprising, given the testing of a range of management, human resource management and training practices that might be expected to impact on retention and utilisation.

The principal finding from the modelling is that the strongest factor in retention and utilisation is the presence of a learning orientation in organisations. The learning orientation scale closely approximates the recently popular concept of the 'learning organisation' and might be usefully considered as a climate of learning opportunity in organisations. This issue was explored further in the case studies. The level of unionisation is also important, but its strength varies across the groups of workers. Not surprisingly, unionisation is highest in the intermediate skilled workers area, which includes the trades, traditionally the most unionised segment of the workforce.

Very few human resource management practices appear to be influential, apart from flexible working-time arrangements for managers and intermediate skilled workers, and formal appraisal for elementary skilled workers. Training measures are also conspicuous by their absence from the models, with the exception of nationally recognised training, which appears to reduce turnover for managers and intermediate skilled workers and increase utilisation for skilled trades workers and elementary skilled workers. Critically absent from the models are any of the skills retention strategies that the survey measured. Thus, while many of these strategies are being widely adopted by organisations, it appears that they have no real impact on either the ability of organisations to retain their skilled staff or the extent to which they can utilise the skills of their workers.

# Findings from the case studies

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The third phase of the project involved eight case studies of organisations. The case studies examined in more detail the issues of skills retention and utilisation and also followed up on issues identified in the survey. The organisations that participated in the case studies were drawn from four industry areas:

- ✧ manufacturing
- ✧ health and community services
- ✧ finance and insurance
- ✧ retail.

The case studies were carried out through interviews with vertical slices of organisational members covering, in most cases: the most senior human resource manager/director or equivalent; the learning and development manager or equivalent; a line manager; and two focus groups of non-managerial employees.

The case studies ranged in size from organisations with 13 employees to those with over 25 000 employees.

## The case study organisations

### ‘Bank’

This is a large bank based in Australia with a growing international presence. Bank employs some 25 000 people in Australia and its operations cover the full span of banking, insurance and finance services. The organisation is divided into two large operating areas, retail banking and business banking. The case study focused on the business banking sector, but the findings of the study are applicable across the entire organisation. A few years ago Bank faced an internal governance crisis that has since had a significant impact on the operations and management of the organisation. A key element in the reform program implemented by Bank as a response to this crisis was a renewed emphasis on human resource management and on developing a new organisational culture. Bank has put in place a large-scale culture change program, together with a re-branding exercise designed to restore public confidence in the organisation. A major element in the culture change program has been the recruitment of talented individuals to the organisation and the introduction of policies to enhance the retention and better use of people. Turnover at Bank has been high, but it is now in the region of 10%.

### ‘Broker’

This is a small employer association in the finance and insurance industry, employing 13 people at its national head office. Broker represents over 500 professional members in the finance and insurance industry. It provides a range of services, including government lobbying and other member services. In recent years the major growth area for the organisation has been in the provision of educational services to its members. Broker is a registered training organisation and

provides a range of qualifications from the Finance and Insurance Training Package for its members. As a small organisation, Broker's approach to human resource management is informal. The organisation does not keep accurate turnover statistics, but turnover is estimated to be about 20%. A key element in the retention and utilisation of the skills of employees is the tightly knit nature of the team at head office and the relatively young age of the workforce. Cultural fit is thus very important in recruiting and retaining staff at Broker, and there have been instances of employees leaving who do not fit into the culture of the organisation.

### 'Credit Union'

This is a small regional credit union employing about 30 people in two offices in regional Australia. Credit Union provides a full banking service for its customers and has been in operation for 43 years. It is run on a fully mutual basis, with the organisation being owned by its members. Credit Union has avoided the wave of de-mutualisation that swept through the finance and insurance industry in the 1990s and employees are proud of being part of a community-owned and operated organisation. In recent years the chief executive officer (CEO) has sought to reinforce the strong community links of the organisation by introducing savings schemes that allow profits to be distributed to local charities and service organisations. Human resource management has, until recently, been quite informal, but as the organisation has grown the CEO has realised the necessity for a more formal approach and has created a human resources officer position. The human resources officer has introduced a number of new human resource policies and procedures. Turnover at Credit Union has dropped from quite high levels a few years ago to about 20% currently. There has been a renewed emphasis on careful recruitment to ensure that the organisation hires the right staff. The organisation has also recently completed a review of salaries to ensure that it remains competitive in the local labour market.

### 'Restaurant'

This is part of a multinational fast-food organisation employing some 12 000 people in 600 stores throughout Australia. The case study was carried out in the Victoria/Tasmania division of the organisation. Employees are employed on a mix of full-time, part-time and casual terms and conditions. Restaurant operates through a mix of franchised and company-owned stores; about two-thirds of its stores are franchised. The organisation provides a number of services to its franchisees, including a range of human resource management services; it also directly controls human resource management in its company-owned stores. Retention of staff is a major human resource issue for the organisation. This is manifested at two levels in the organisation. Turnover amongst team members in the stores is traditionally high in the fast-food industry, with its reliance on young student workers. However, the organisation is keen to retain its skilled staff for promotion into career and management positions in the organisation. At the moment the turnover among its store managers and assistant managers is running at 12% and the organisation wishes to reduce this wastage so that it can promote talent from within. Restaurant has developed a number of innovative human resource strategies to enhance its retention and utilisation of key staff.

### 'Care'

Care is an incorporated organisation providing residential and community-based care for the aged and women and children suffering the effects of domestic violence in New South Wales and the Australian Capital Territory. Care provides counselling services and supports childcare and training centres in New South Wales. It is a registered training organisation. Care is a large organisation employing 3199 people, with many of its employees employed on a part-time and casual basis. Care has expanded quickly in recent years as governments have outsourced more community services. This has meant that Care has had to adopt a more strategic approach to human resource management, in particular to recruitment and retention of staff. Care is also a Christian organisation with a strong ethos of values-based management. It is important that all employees subscribe to the

mission and values of the organisation, although there is no imperative to be a practising Christian. In recent years Care has managed to reduce employee turnover from about 40% to around 20%.

### ‘Chemical’

This is a long-established pharmaceuticals company operating a single manufacturing plant in Australia. Chemical manufactures and supplies pharmaceuticals and other chemicals to the agricultural and other industries. Chemical is the Australian subsidiary of a large United States-based multinational pharmaceutical and chemicals organisation. In recent years Chemical has experienced severe competition and has gradually sold off portions of its operations to concentrate on the styrene operations. Chemical now employs a workforce of 340 employees in its manufacturing plant, most of whom work full-time. The organisation has a well-established human resource management function. The workforce has been downsized on a number of occasions. Turnover at the plant is very low (about 1% per annum). The organisation pays well above local labour market and award rates, and there are a large proportion of skilled trade workers (44% of the workforce) and workers with intermediate-level skills (29%).

### ‘Tools’

This is a long-established and Australian-owned manufacturer of tools for the retail consumer market. The organisation operates three plants in Australia and one in New Zealand. The organisation employs 400 workers, most of whom are employed at Tools’ largest manufacturing plant. The company faces strong overseas competition. At the low end of the tools market the organisation faces strong competition from emerging Asian economies, and at the high-precision end of the market, from well-established European and United States competitors. The company is still family-owned and this has played a very important role in the development of the organisation’s culture. Turnover at Tools, like Chemical, is very low, at about 1–2% per annum. As a result there is a relatively low level of recruitment. Much of the effort in human resource management is focused on training. The organisation is not a registered training organisation, but over 75% of the workforce has received nationally recognised training (principally the Certificate IV in Lean Manufacturing). The organisation is keen to increase competitiveness through the addition of lean production on the Toyota model. Apart from the formal nationally recognised training, the company strives to create a learning environment for all staff and has developed a high level of workplace-based learning focused on the better utilisation of the skills of its workers, which it sees as critical to future productivity and survival.

### ‘Health’

This is a large health authority based in a metropolitan centre. Health covers a large metropolitan area, including 20% of the state’s population with a very high level of ethnic diversity—39% of population in the area speaks a language other than English at home. Health operates nine major hospitals, including teaching hospitals, and employs over 22 000 staff, including 10 500 nurses, 2500 medical staff and 1700 allied health professionals. Health puts a very high premium on sophisticated and strategic human resource management. The function is headed by the Director for Strategic Workforce Planning and Development. A major thrust of human resource management in Health in recent years has been the training and development of staff. Health is a registered training organisation and has established the Centre for Education and Workforce Development, whose responsibilities include the enhancement of new staff orientation, the introduction of a new recruitment unit and e-recruitment, and the establishment of vocational medical training networks in the authority, as well as the provision of a suite of nationally recognised training programs. Health is also a major provider of medical training and is registered as a higher education provider. Despite the traditionally high level of turnover in the health professions, especially in nursing in recent years, turnover at Health is quite low by industry standards, at about 10% per annum. There is a major emphasis on teamwork in Health and the

teams enjoy a significant level of autonomy. Health has emphasised the development of a learning climate in the organisation as a means of increasing the utilisation of skills, which is quite high, especially for managers and skilled professionals.

## Retention and utilisation of skills

While the level of retention of skilled workers varied significantly between the case study organisations (1–2% for Chemical and Tools, through to about 20% for Broker and Credit Union), all were very concerned about increasing levels of skills retention and were devising strategies to achieve this. A number of factors emerged at each case study site that seemed to have a major impact on the ability of organisations to retain their skilled workers.

### Small organisations

In the smaller organisations, Broker and Credit Union, human resource management was not as well developed as in the larger organisations. Despite the fact that retention in both of these organisations was lower than the larger organisations in the group, managers and workers felt that turnover would probably not drop much further on such a low employment base. Nor was it felt that lower turnover would necessarily be desirable, as the injection of new blood into the organisations was seen to be important in their future success. In these organisations, workers often suggested the climate and culture of the organisation as the main reasons for their staying with the organisation. At Broker, the professional development manager stressed the precariousness of staffing in smaller organisations: ‘I always feel the threat of people leaving the organisation.’

The relatively small size of the organisation has meant that there could be little effective succession planning. Positions only became available as people left, and it was not always possible to fill vacancies from within the organisation, thereby giving people the expectation of a career path within the organisation. Management at Broker had deliberately fostered a team of young people (aged in their mid-20s to early 30s) and this had produced a more informal organisational culture, with frequent social events after work and casual days. However, while this had been a useful development to attract and retain younger workers, this culture did not always suit older workers, who struggled to fit into the tight-knit culture that had arisen. On a couple of occasions, older workers had found it difficult to fit in and eventually left the organisation for other positions.

This development of a youthful culture at Broker had resulted in recruitment policies that emphasised cultural fit within the organisation. The organisation was happy to provide training and professional development for individuals to learn the skills required for their job, but it tended to hire on the basis of fit rather than qualification. This policy, in turn, meant that there was considerable emphasis on training and learning at Broker. The employees interviewed at Broker emphasised the provision of professional development opportunities at work as a major reason for their staying. As one worker said:

Professional development cannot be separated from the work in this job. We are learning all the time ... The industry changes all the time with new regulations and so we are continually learning. If this did not happen I might not stay.

For this particular worker, the chance to learn and to keep abreast of the rapid changes in the finance industry were critical to her remaining engaged at work and remaining with this employer.

Credit Union was more structured in its approach to recruitment and retention. The larger size, 30 employees, meant that the organisation had to face the challenge of greater attention to procedure and process as the organisation grew. Credit Union had moved towards recruiting young people through traineeships in the last two years and claimed that this had yielded very positive results for them. The trainees were recruited through an employment agency and the screening and other selection processes used by them had worked well in selecting what were seen to be good

employees with a future in the organisation. The organisation had also addressed pay levels in a recent review of salaries, which had resulted in all employees receiving substantial pay rises in a sector where salaries are often quite low. However, the retention of skilled staff was seen to be more related to the overall management culture of the organisation. Staff particularly emphasised the family-friendly nature of the organisation, especially under the present CEO who had arrived at Credit Union some eight years previously. As the human resource officer said:

And one thing about Credit Union, I think, is the care that they show for family situations. Glenn [the CEO] has always been one to encourage the staff, say one of the children [is] sick or something like that, h[as] just got a runny nose or whatever, bring them in, let them sit in the board room and watch videos or, you know, duck out if you've got to go and pick them up from school. He's always been like that.

This family-friendly policy and the general approachability of the management team were repeated by focus groups of workers when talking about their reasons for staying at Credit Union. The organisation stressed that they look for skills that will allow people to deal with customers and with other workers. Like Broker, Credit Union looked for personal skills first and was prepared to train workers to acquire the technical skills required for the complexities of the job. Workers also mentioned the training and learning provided at Credit Union, but the learning is seen in the context of the changing nature of the work done:

The opportunities are always there. I suppose our learning over the last few years ha[s] come from these different projects, we've been forced into those areas where we've had to learn different skills, not forced but encouraged into those areas. So I suppose for the last five years it has been all learning hasn't it?

One trainee mentioned the friendly atmosphere and the community-based nature of the organisation as major factors in her enjoyment of work:

I think maybe just the fact that we are community based and that we do give back to the community and that it's smaller, it's not huge ... and it's friendly. People come in and on our front desk we usually have Lynne and everyone who comes in says Hi. Lynne and the same person is always on the tellers and you just build friendly relationships with the customers [who] come in ... it's a job that's got a lot involved, I do have a specific job description but it's a good one and there's lots involved and it keeps me busy and I never get bored. The days just fly cause I might be out the back doing loans or out the front dealing with members or on the phones.

In both Broker and Credit Union, the nature of the organisational culture and the nature of the work, as well as the opportunity to learn and develop, were key factors in workers staying with the organisation.

The level of utilisation of skills in both Broker and Credit Union was difficult to assess. In general terms, managers and workers felt that employee skills were about 75% utilised. However, in both organisations managers commented that their knowledge of employee skills was limited. Neither organisation had systems designed to collect good-quality information on skills and, as a result, felt that there was probably considerable untapped potential for greater utilisation of skills. As the human resource officer at Credit Union said:

I think we need to dig further to know what people are capable of doing. There's probably a communication breakdown at this stage ... we haven't had the chance to speak to the staff at that level ... I believe that we have a lot of able people out there who could diversify what they're doing.

## Medium-sized organisations

In the two medium-sized organisations, a mix of factors seems to have been at work in terms of retaining skilled workers. Both Tools and Chemical reported very low rates of turnover (very high retention) in the order of 1–2% per annum. Both organisations are well-established manufacturing companies facing severe competition in their traditional markets and with stable but older workforces. At Tools, many workers displayed a high level of commitment to the family-owned firm that had employed generations within families. Typical comments included: ‘It is a good place to work. Good pay, a pleasant environment and flexible working arrangements.’

It is very much a family business, where the family has a real interest in the firm and where family members work in the organisation themselves. Other comments included: ‘The managers have a strong commitment to the business and to the staff; ‘The owners come up and say good morning; ‘They appreciate you; ‘They talk like your friend; ‘There is a feeling of belonging’. In the discussions with individual workers, some had had friends and relatives working at Tools before they arrived, including a mother, brothers, sister and brother-in-law. Others commented that it was a long-established firm which offered secure employment prospects; it was considerate to staff; there ‘was plenty of work to do’; it placed a high priority on occupational health and safety; and it was close to home. One worker commented that ‘they (the family and the management) are good people’; and another said: ‘I wouldn’t want to go elsewhere, even for an extra \$20 per week it wouldn’t be worth it.’

Tools had developed a much more sophisticated approach to human resource management than was evident in the smaller organisations. In particular, Tools placed significant emphasis on training. Nationally recognised training had been widely used, with over 75% of workers receiving this form of training. Tools has recently been undertaking a certificate IV program based on Toyota’s lean manufacturing approach and had been trying to engender a more critical attitude to the whole production process. Comments made during the interviews suggested it was seen as valuable by both management and staff. Comments by management included: ‘It is good for the business; ‘It reduces costs, increases productivity, raises morale and engenders a sense of belonging throughout the organisation; and ‘We are always trying to streamline, to use people’s time as efficiently as possible.’ One of the experienced workers who was interviewed said, ‘Lean manufacturing has encouraged a more questioning approach to all our activities. We are encouraged to challenge everything.’ Other comments from workers in the factory included: ‘We were encouraged to clean the place up; ‘to pay attention to the scheduling of the work; ‘to set targets; and ‘to figure out how to do things in an easier way’. The firm paid for all supervisors and managers and some workers to undertake the course through Swinburne University.

Effective utilisation of labour is very important at Tools. For Tools every product has to be made with the minimum input of labour and the maximum value added. One manager explained it:

[Utilisation] is the key driver. It is much the largest cost we can control. For other inputs, such as electricity, we are essentially a price-taker. We seek to achieve the highest possible level of labour utilisation. We see training as essential, but also as costly for the company, which highlights our objective of neither over- nor under-training. We want the right fit.

Much greater emphasis is now given to looking at the relationship between how much labour is put in and the output produced, with ‘the development of a labour efficiency measure, which is examined every month. If a process is no longer needed, we grab the operator and use them elsewhere, which has involved more multi-skilling and given people additional opportunities to work elsewhere.’

Interestingly, while it was emphasised that both technical and managerial skills are important for the efficient operation of the business, it was suggested that, at this time, perhaps the latter are even more important for the success of the company. It was commented that, while Tools in the past has tended to promote people on the basis of their technical skills, there is an increasing emphasis

now on people and organisational skills. The firm is currently upgrading the leader/supervisor/manager roles throughout the company, including developing more formal feeder and career paths. Tools judged that the highest level of utilisation was for those workers with ‘elementary skills’ rather than, as more commonly is the case, for ‘managers, professionals and technicians’ or ‘skilled trade workers’.

At Chemical, where retention was very high, more traditional factors had been involved in retaining skills in the organisation. As one interviewee commented, ‘Nobody leaves; we take them out in a box.’

Chemical’s strategy for retaining skilled employees had a particular emphasis on pay, although it also sought to provide good working conditions, including a strong emphasis on occupational health and safety, fringe benefits (such as counselling services) and a ‘happier’ workplace culture. Despite the long-term reduction in employment levels, Chemical pays well. For example, in the styrene plant, there was a six-level pay structure for operators, all of whom received some \$85 000–90 000 per annum after completing their training. After successfully undertaking additional training and related practical work experience, their pay could rise to as high as \$130 000–140 000 per annum. Additional training and re-assessment of competence occurs from time to time and are required for remaining at this level. When wage claims were negotiated recently, management sought commensurate increases in skill levels, responsibility and cross-training throughout the business.

This emphasis on good pay was also complemented by a range of human resource practices that seemed to have the effect of binding workers to the organisation. Team-working was important. Some 90% of all employees were organised into formally designated teams. This compares with an average of 63% for all the organisations included in the survey (table 6). The importance of effective teamwork—both in the teams themselves and between different teams—was frequently stressed during the case study interviews. It was a significant focus of Chemical’s training activities. One manager emphasised that ‘team members depend on each other’s work to be able to do their job’; ‘tasks or roles rotate among the members of the team’; ‘team members jointly decide how work is to be done’; and ‘teams are given responsibility for specific products or services.’ Some but not all teams at Chemical are able to appoint their own team leaders. Training fitted into the team-working structure. Over the previous 12 months about half of experienced employees at Chemical had been given time off from their normal daily work duties to undertake training. During the case study interviews one respondent emphasised ‘the importance of continuous learning in the operational teams, especially the training and learning during the first three years in the job’.

Chemical used to be a registered training organisation, but as the human resource manager remarked, ‘We dropped it some years ago, due to the excessive paperwork and our shiftwork arrangements, which made it difficult to undertake off-site training.’ Chemical now uses a technical and further education (TAFE) institute as the provider. There has been an improvement in the integration of training, learning and work. The national accreditation of the training has been an advantage: ‘The TAFE trainers are from our industry and they knew the questions to ask’; and the training ‘is now cheaper than it was.’ Some training is done cooperatively with other local organisations: ‘We use [Chemical’s] premises together with staff from a number of neighbouring companies, for example, to run train the trainer courses.’ When using outside consultants (for example, for highly specialised training for small numbers of staff), which can also bring the advantage of an independent approach, Chemical insists on knowledge transfer and company ownership after the course finishes: ‘The transfer of skills to our guys is critical. If the consultant won’t transfer skills, then [Chemical] won’t use them.’ Finally, work organisation and training are linked to an emphasis on career paths. For example, in discussion during the case study it was noted by one respondent that ‘there are career paths for all staff, including operational and maintenance staff, as well as administrative, managerial and sales staff; they are not just vertical, but can be horizontal (i.e. doing the same job, but better)’.

Chemical felt it was not using its staff as effectively as it might. As one respondent said:

Utilisation of staff could be increased, yes. A lot of people have hidden skills. Often it is a question of helping them to blossom later on (including in relation to management training, negotiation skills etc.) ... there could usefully be more training.

At all levels of staff, with the exception of skilled trade workers, Chemical ranked its utilisation of staff below the average for the other organisations included in the survey. For all organisations in the study, as the level of skill decreases, so too does the perceived utilisation of staff. This is particularly true at Chemical. These results suggest room for better utilisation of staff at all levels, but particularly those staff with elementary or intermediate skills only. A contributing factor may well be incomplete knowledge by management of the skills possessed by Chemical's staff. However, other factors could also be relevant, such as the degree of technological change. Nevertheless, without satisfactory information about the skills that workers have, it is more difficult to utilise them fully. These results are consistent with the impression gained during the interviews at Chemical. For example, one staff member commented, 'The information collected when employees start work here is not all transferred into the ongoing HR [human resource] system or effectively used later.'

In the medium-sized organisations, while a normative commitment to the organisation, which is dominant in small organisations, may still be important, as at Tools, the role of formal human resource management policies and processes becomes critical in the efforts of organisations to retain and utilise their skilled workers.

## Larger organisations

In the larger organisations, the deliberate human resource management policies and practices of the organisation came to the fore, as the commitment of employees to smaller or family-run organisations disappeared as a consequence of the size and complexity of organisations such as Health, Restaurant, Care and Bank. This is not a surprising finding. However, the disappearance of the personal connection to organisations, which was so apparent in the smaller organisations, does not mean that employee engagement or commitment was no longer important.

At Restaurant, the organisation's focus was on retention, both at the level of team members (serving in the restaurants) and at manager level, especially restaurant managers and their assistant managers. In fact, Restaurant management saw recruitment rather than retention as the major issue at the team member level. Restaurant has found that 'it is easier to source people with a retail background ... Targeting hospitality graduates has not been so successful.' Many recruits initially see the job as a fill-in between school and their subsequent 'real career'. Parents, school counsellors and vocational guidance staff still see employment in fast food as only a short-term career choice. At Restaurant the real issue in terms of retention was the recruitment of staff at the team member level who were likely to make it to restaurant manager and who see Restaurant as a career choice after school or university.

Thus at the level of recruitment, Restaurant segregates applicants into those who might have long-term career prospects with the organisation and those who will be more transient. Aptitude tests are used for recruitment at all levels. However, managers commented, 'We could do much better.' Initial training, which is the responsibility of the individual restaurant manager, takes about three to six months and it tends to raise the recruit's productivity faster than the increase in their junior rate of pay with age, at least for a while. Restaurant is seeking to move to only appointing 'All Stars'—recruits who have the potential to move up through the organisation rather than being confined to team member positions. As one manager said: 'Business is becoming more complex. Customer expectations are rising and so are the back-of-house demands.'

Training is a major part of the human resource management philosophy at Restaurant. Restaurant placed a high priority on a learning culture in their stores and encourages all staff to continually improve their own performance and that of the business. As one team member who had recently

become a shift supervisor said, ‘Almost every week now I am taking the responsibility of training new staff. I talk to them about their capacities and aspirations. Then I make a recommendation to the Restaurant manager.’ A manager said:

I may start the new team member off behind an experienced operator, then ask them what they observed and later give them the opportunity to take more responsibility, see how they perform and give them feedback on how to improve. Naturally, they cannot be perfect to start with.

Training at Restaurant relates to both hard skills, such as improved financial results, better human resource management and lower staff turnover, and softer skills, such as cleaner stores or improved handling of change during transactions with customers. Restaurant managers stressed that they were constantly on the lookout for the interests and aspirations of their team members. (‘Most can go further; and many want to do so.’) Each part-time staff member has an appraisal annually, both to improve areas of weakness and to enhance their desire and capacity to excel—‘to give all staff a road map of possibilities’ for their growth in capacity and for their potential advancement at Restaurant. Restaurant is also a registered training organisation using nationally recognised training for its staff at all levels.

Utilisation of staff is seen as very important at Restaurant. It is addressed at the level of the individual store, at the area level (in this case, Victoria and Tasmania) and at national level. Technical skills are important, for example, in relation to cooking and the appropriate use of chemicals for cleaning. However, people skills are critical, both in relation to customers and staff: ‘If you are not a people person, we can’t really help you. We try, but ...’; ‘You need a passion for customer service here and the ability to work with others (that is, team members and customers)’; and ‘This is a challenging industry and our human resources are critical for our success.’ Restaurant has developed a suite of human resource policies associated with the enhancement of staff utilisation, including the use of aptitude tests for recruitment, extensive training and monthly one-on-one performance feedback for team members in the restaurants.

A key element in the retention and utilisation of skills is the culture of the organisation. Restaurant’s organisational vision emphasises the importance of its culture, stresses the need for continuing learning and values its human resources as one of its critical competitive strengths. The management structure is relatively flat; restaurant managers and assistant managers are recognised as vital to the effective operation of the group; key performance indicators are tightly focused on the needs of the business; and the organisation is currently complementing its successful achievement of short-term objectives with a more strategic emphasis on the longer-term development of its best employees. The Restaurant website states that ‘work ... at Restaurant ... [is] about mixing a lively, friendly culture with some exceptional management training to help you achieve your career aspirations.’

At Bank, the issue of retention and utilisation is different. Although Bank has a relatively low level of turnover, about 10% across the group, the organisation is very dependent on talented individuals and, in the business bank division, on individuals who have developed relationships with their key accounts. Staff are in constant danger of being poached. As one manager in the business bank division put it:

There is a much greater awareness of self worth ... I spoke to what I would see as a small player in the search market, they (there’s only three of them), make 400 proactive calls a week. There wouldn’t be a business banker in the country they haven’t contacted in the last 6 months; they have the whole market mapped. And I would say there’s not one of our business bankers [who] doesn’t receive regular calls from many.

Bank has addressed this problem of reliance on individuals by developing career paths and remuneration systems linked to new forms of training and learning. This set of human resource initiatives is collectively grouped in Bank under a program known as the Academy. The Academy is

not an organisational structure in the conventional meaning of the concept, but rather a set of advanced human resource initiatives designed to support the culture change program initiated after the governance crisis described earlier. The role of human resource management in culture change has been publicly acknowledged by its incorporation as one of the six key global strategies for Bank under its new CEO. This represents an unusually high level of commitment to human resources, or culture and organisational development, as it is now known in Bank. A major element of the people and organisational development strategy is a new career and salary structure that allows much greater freedom of movement in the organisation. In the old structure, promotion in Bank rested on moving up a corporate ladder of increasing management responsibility to attain progress. High levels of management responsibility did not suit all people and Bank found that it lost successful account managers and specialists to management positions for which they might be unsuited as a result of this traditional career structure. A new two-dimensional career structure has been developed. This involves broad bands of responsibility along two dimensions—specialist skill and management responsibility. It is possible under the new structure for a person to earn, as a specialist, as much as a senior manager and move between these roles over a career. This structure has allowed new roles to be created, which can be used to retain staff who might otherwise have left. As the senior human resource manager put it:

It [the new structure] opens up flexibility in career choice and it puts more of the choice back in the employee's hands as opposed to the traditional hierarchy, which was the supervisor [and who] had all the power. They knew where the roles were coming up and they knew all the information and they kept it in a file and once a year opened the file before you walked in for your performance management conversation. This [structure] tips it on its head and an individual (of course many of these people are generation Y) wanders in and says 'you know what, I've done some research on what's possible for my career and I'd like to talk to you about it. I'm currently here, I've got more experience but I haven't got anyone reporting to me. I actually think my talents are over here going into a pure sales role. How do I keep going down that path or alternatively, I am at a point of choice in my career and I actually think I'm pretty good at managing people'.

The approach has allowed the development of new forms of performance management, career paths and jobs to be created, which can be far more effective in giving talented people in Bank greater options to stay within the organisation.

The new approach also places a greater emphasis on training and learning. The Academy uses the new structure to draw up competencies for all positions in the organisation and design training programs around them. The focus on learning and development and on flexible career structures resonated with workers at Bank, who indicated the importance of these factors in their decisions to remain with the organisation:

Yeah, just learn new things every day. I do like to be challenged; so advancement, progression. Of course money does come into it. I want to be secure and that also comes into it and also a few things like that. But to add to what I was saying, the thing that generally people would want is something that challenges them, keeps you stimulated, keeps you interested, so that you want to keep doing the job and to be able to have the opportunity to learn while you're doing that.

It is worth bearing in mind that this worker was a casual employee working in the call centre arm of Bank, which suffered from significantly higher levels of turnover than the organisation overall—but far lower than the call centre industry norm of around 30–40%.

The emphasis on learning and development appears to be critical to Bank's success in retaining and utilising the skills of its employees effectively.

Health is a large and complex organisation, employing over 22 000 staff and serving the health needs of a fast-growing and highly diverse metropolitan area, comprising some 1.3 million people.

Managers in Health have to balance the constraints imposed by the state public sector with the commitment of staff to provide high-quality health care. The technological environment for Health is also fast-moving and complex. New treatments, new drugs and new equipment are a feature of the health service environment and this complexity highlights the need for expertise amongst staff and constant re-training. Although Health experiences relatively modest levels of employee turnover, at around 10%, the organisation has to work hard to retain the skills it requires, and so retention of skilled staff is a major focus for the workforce development in the organisation.

Health invests heavily in the training and development of staff and this is used as an important retention strategy by the organisation. In its response to the survey Health ranked training as the top strategy used by the organisation to retain skilled employees (hardly any other enterprises in the survey ranked it so highly). Health ranked career progression as the second most important strategy for retention, whereas for all organisations who responded to the survey, only 15% ranked it first, and another 13% ranked it as the second most used retention strategy. Teamwork is also important for retention at Health, with an estimated 90% of employees organised into formally designated teams, compared with an average of 63% for all enterprises included in the survey. During the interviews one discussant commented that 'a lot of teamwork is developed through participation in courses', illustrating the reinforcing nature of these three elements of Health's retention strategies. Training and development is very well developed at Health, with an emphasis on formal induction for new entrants and the creation of the Centre for Education and Workforce Development to provide nationally recognised training to all employees, as well as the ongoing commitment of the organisation to medical training. This emphasis on training and development in the human resource management strategy of Health is also underlined by the culture of learning that appears to exist in the organisation. Health scored well over the average score for 'learning orientation' (5.33 as opposed to 4.70 for the sample average). This emphasis on learning subsumes elements of training with career progression and teamwork, which are critical to Health's retention planning. The organisation was seen to place high value on continuing learning throughout its operations. As one nurse said 'Our management [is] very supportive of training' and 'We nurses get a great deal of resources.' It was perceived as an investment rather than a cost, with considered reflection and continuous improvement strongly encouraged.

In relation to utilisation, the responses suggested that Health utilised its senior/middle managers, professionals and technicians and its skilled trade workers more fully than the average for all enterprises included in the survey, but that the converse held for the utilisation of workers with intermediate skills and those with elementary skills. Generally, Health scored slightly lower for overall utilisation of staff: 4.75 against 4.82 for the average. However, for a range of utilisation questions the Health responses suggested that considerably fuller utilisation of staff capacities was possible. One interviewee argued that further recognition of prior learning would assist in better utilisation of staff skills and experience. Relatedly, the results of the survey suggested that, while Health is well aware of the broad clinical skills its staff possess (by virtue of their occupational qualifications), it is not as well informed about the more specific skills and other capacities of its staff and that, therefore, there may be opportunities for improved utilisation: the measure averaged 4.88 for all enterprises in the survey, but only 4.33 for Health.

Care has grown very rapidly in the last five years as a result of the expansion of aged care and other community services and the semi-privatisation of these services through federal government funding. As a result Care has doubled in both revenue and employment, with an annual growth rate over the last five years in excess of 10%. This has presented Care with significant management challenges, particularly in the area of human resource management. Care is also a values-based organisation with a very strong Christian ethos. The organisation has developed an explicitly Christian-based mission statement and set of organisational values, and the senior management of Care is passionate in their commitment to Christian values informing all of their activities. This is implemented at all levels of the organisation. Members of the executive leadership team are all

practising Christians (of varying denominations) and all staff are required to confirm that they will abide by the mission and values of the organisation.

Care has suffered from high levels of employee turnover in the recent past. In some parts of the organisation turnover used to run at over 40%. However, through the development and implementation of a set of human resource management and training policies, Care has managed to bring turnover down to around 20%. Care runs a climate survey regularly every 18 months and the executive leadership team is careful to feed the results back to staff through focus groups and to use the results to benchmark their progress in human resource management. Care has also moved to improve staff salaries. The reliance of the organisation on government funding restricts the ability of Care to pay at the higher end of the industry spectrum, but it has raised its salary levels to the median for the aged care sector. Although this has increased the attractiveness of working at Care, it has also reduced the resources that might be used in the operational side of the organisation.

The workforce at Care is predominantly female, with a high proportion of part-time workers. Care has introduced a suite of people-friendly human resource policies that enable workers to better balance their work with their family and other commitments. These policies, which have been very popular with staff, include paid maternity and paternity leave, grandparent leave and more flexibility in working hours. However, the major thrust of the new approach to human resource management at Care has been in the training and development area. The management culture in Care, particularly in the residential care part of the organisation, reflects the traditional hierarchical and somewhat authoritarian management practices of the health sector in general. This old-fashioned management culture has been identified in the staff surveys as a major cause of employee exit. Care has developed a new leadership development program to improve management practice. As the CEO put it:

Staff out there have identified that some of their managers are less than collegiate in how they manage, so we've put in place a leadership development program where we are training those middle level managers in how to manage in the modern world. We're making sure they all understand the mission and values of the organisation and ... the history of the organisation so we're trying to get everybody on the same page and with the one culture rather than multiple cultures.

Care already has a strong tradition of training and this is reflected by the fact that the organisation is a registered training organisation and provides nationally recognised training in aged care and community care, as well as in frontline management. But the learning and development function is being considerably extended to encompass the area of organisational change and continuous improvement. This will lead to far greater learning opportunities, as opposed to training, for all staff.

This emphasis on training is reflected in the way staff see the organisation. As one Nursing Assistant put it: 'Oh there's a lot of training here, quite a lot of training ... there's about three educations a week.' But the major reasons staff gave for staying with Care were associated with their relationships with other staff and their commitment to caring work. Staff valued their relationships both to their colleagues and also to their managers and supervisors. This confirms Care's reading of the staff survey results highlighting the need for more collegial management. Staff also felt a deep normative commitment to their work. This does not mean that all staff were Christians, but the value of caring for others was a major factor in taking jobs with Care and remaining with the organisation. This also conforms with Care's emphasis on securing staff commitment to the mission and values of the organisation.

In terms of utilisation, managers at Care admitted that they did not yet have the necessary human resource information systems to enable them to track the skills of workers and judge the extent to which their skills were effectively used by the organisation. Staff informally felt that their skills were used at about 70%, but managers felt that there was considerable scope for better utilisation of staff skills.

# Conclusions

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This project sought to examine the ways in which human resource management and high-performance work systems help organisations to retain and utilise the skills of their employees.

The results from interviews carried out in the first phase of the research with representatives from key stakeholders highlighted the importance of a range of actions being taken by employers to improve the retention of skilled staff in the context of the very high levels of employment in the economy. These measures included:

- ✧ offering higher pay
- ✧ engendering a 'happier' workplace culture
- ✧ improving working conditions
- ✧ ensuring better career progression for employees
- ✧ improving fringe benefits
- ✧ offering other non-monetary rewards.

The survey showed that these measures had been widely adopted by employers, with many organisations applying a combination of the measures. However, the modelling of the results from the survey showed clearly that these traditional measures had little or no appreciable effect on levels of retention or utilisation. This was also borne out in the case studies. Although workers in the case study organisations often talked of their appreciation of pay and conditions at work, they rarely mentioned them as reasons for staying with the organisation. As one worker at Tools memorably put it: 'I wouldn't want to go elsewhere, even for an extra \$20 per week it wouldn't be worth it.'

This worker, like others at Tools, was discussing the importance of a sense of loyalty to an organisation and the importance of good relationships with colleagues and managers as critical reasons for staying in the organisation. This is not to say that workers do not leave organisations for higher pay. They do and, as the case studies and the expert interviews confirmed, this often occurs. Care, for instance, was explicit about the importance of their having recently raised overall pay levels for staff. However, pay and conditions are not the important drivers of skills retention and utilisation overall, which confirms the findings in the labour turnover literature of the importance of job satisfaction and organisational commitment over factors of pay and conditions (Winterton 2004).

The key driver for both skills retention and utilisation was what we have termed the 'learning climate' of the organisation. This was clearly shown in the statistical modelling of the results from the employer survey. In the modelling the strongest single factor influencing both skills retention and utilisation was learning orientation. This concept is derived from scales developed to detect the use of concepts of the learning organisation, such as trust and sharing of knowledge in organisations. It is important to note that it does not refer to traditional training strategies—these were measured by other questions in the survey. In the survey, learning orientation was defined as organisation-wide activities of creating and using knowledge to enhance competitive advantage. It referred to an overall organisational climate of learning rather than the presence of specific training

and learning initiatives. Learning orientation consists of three sub-constructs: commitment to learning; open-mindedness; and shared vision.

The concept of learning orientation was followed up in the case studies. As highlighted in the previous chapter, learning climate and the feeling amongst employees that there was a capacity for them to learn in their jobs and progress in career and personal development was a key element in skills retention. People in all of the case study organisations highlighted the importance of learning in their decisions to stay with organisations. In the smaller organisations, the sense of challenge and learning embodied in jobs which demanded a great deal of multiskilling and flexibility from employees was critical to reasons that employees gave for enjoying working at these two organisations.

At the other end of the size spectrum, Restaurant, Bank and Care were designing their human resource management and management practices around learning in the workplace and providing new and enhanced career pathways for those who took advantage of the opportunities to learn. At Restaurant this emphasis on learning was built into not only the extensive training program the organisation provided but also into performance management and recruitment systems. At Bank, the new career structure being implemented through the Academy was based on creating new jobs that allowed people to learn and build their careers on skills and strengths other than management. Care was also focusing its new approach to human resource management on learning and development.

It is important to distinguish the learning climate from the training activities and structures of the case study organisations. The survey showed that training activities are widespread in the sample organisations. Forty-four per cent of workers were given time off for training; workers on average received nearly 17 days of training per annum; 26% of workers had been trained to perform another job; and nearly 30% of workers had received nationally recognised training. The case studies also confirmed that many organisations, especially the medium-sized and large organisations, are operating extensive training programs, many involving formal nationally recognised training. Although, as Shah and Burke (2003) concluded, few of these training activities seemed to have an impact on skills retention and utilisation, a major exception to this was nationally recognised training. The statistical modelling demonstrated that nationally recognised training increased retention amongst managers, professionals and technicians and increased the utilisation of skills for skilled trades workers and elementary skilled workers.

In Tools, for example, 75% of the workforce had received nationally recognised training in lean manufacturing; Tools saw extensive training as a major part of their skills utilisation strategy, believing it to be critical to their future competitiveness in world markets. Chemical also ran an extensive training program, much of it based on nationally recognised training. Chemical had been, until recently, a registered training organisation. In the large organisations, training was highly developed: Restaurant supported very extensive training programs for both team members and for future restaurant managers and assistant managers. Much of this training was linked to nationally recognised training, and Restaurant was also a registered training organisation as were Care and Health. Bank had invested heavily in new training programs to support the culture change program at the organisation. Many of these programs were aimed at the development of talent within the organisation and at regenerating the leadership base. Although Bank did not use nationally recognised training to any great extent, many of the training programs provided to staff resulted in industry-based qualifications, which have a long tradition in the finance and insurance industry. Thus training and nationally recognised training featured prominently in the case study organisations, many of which had successfully kept turnover quite low—especially Tools, Chemical and, to a lesser extent, Restaurant, Care, Health and Bank. Managers in these organisations had little doubt that training was an important ingredient in both skills retention and utilisation.

Other human resource management practices appeared to have less impact on retention and utilisation. A full range of human resource management practices was measured through the survey questionnaire. Some of the more common human resource management practices included:

- ✧ internal focus for recruitment (promote from within)
- ✧ use of flexible working arrangements
- ✧ use of reduced working hours for at least some employees
- ✧ flexitime
- ✧ career planning policies
- ✧ improved job design
- ✧ formal surveys of employees
- ✧ formal employee appraisal
- ✧ appraisal linked to pay.

Interestingly, given the apparently extensive use of measures to retain employees, family-friendly working policies were quite rare, fewer than 10% of the sample. The case studies also showed that many of the organisations were using a range of quite formal and innovative human resource management practices and policies, with the exception of the small organisations, where human resource management was quite informal. However, the survey indicated that very few of the human resource management practices had a strong influence on skills retention or utilisation. Those that did (for example, flexible working-time arrangements reduced turnover for managers, professionals and technicians) were not strong or universal effects.

In the case studies, the organisations considered human resource management practices to be important for skills retention, but more so for skills utilisation. For organisations such as Tools, Chemical and Restaurant, human resource policies and practices were designed primarily to increase skills utilisation. The impact on retention was assumed to be positive, but of secondary importance. Care provides a good example of an organisation that had consciously re-fashioned its human resource management approach to successfully reduce turnover.

More important were the high-performance work systems practices. In this study, high-performance work systems were operationalised as sets of management practices related to team-working, total quality management, learning orientation and lean production.

As discussed earlier, team-working was quite widespread, with 63% of organisations reporting that they used teams (table 6). The other three management practices were quite common, with total quality management being the most commonly reported. However, the results from our research suggest that the previous studies of the performance impact of high-performance work systems (Huselid 1995; Guthrie 2001) are too simplistic in their explanations. In the current study, while high-performance work systems and other innovative management practices were examined in detail, it was learning climate that emerged as a critical element in both retention and utilisation. This does not negate the need for new management practices. The largest organisations, especially, were very conscious of the role of management philosophy in creating organisational cultures that induced higher levels of individual and organisational performance (for example, leadership development at Care, team-working at Chemical, total quality management at Health and the performance culture at Restaurant). In the smaller organisations, a different interpretation can be placed on the importance of organisational culture and new management practices. In both Broker and Credit Union, the informal nature of the organisations—the creation of the youth culture at Broker and the family-friendly orientation at Credit Union—played a key role in both the retention and utilisation of skilled staff. This was also apparent at Tools, where the family ownership of the organisation created a high level of loyalty amongst staff. Thus, issues of organisational culture and

management practices are important in the retention and utilisation of staff. This is somewhat broader than the common notion of high-performance work systems. Smaller organisations can work with and benefit from the informal nature of relationships and the accessibility of management, while larger organisations need to create organisational cultures through conscious management practices that will enhance skills retention and utilisation.

In summarising the findings from this project, it might be useful to refer to Herzberg's (1966) classic study of motivation in organisations. In this study Herzberg attempts to account for the range of organisational factors that induce higher levels of motivation and performance from professional workers. He distinguishes 'hygiene' factors from 'motivators'. As we have seen, hygiene factors include those factors that establish a good working environment in which workers can feel satisfied. Hygiene factors include pay, working conditions, security and general human resource policies. The absence of these factors induces worker dissatisfaction and a consequent loss of motivation leading to poor performance. However, even if the organisation establishes good hygiene factors—good pay and working conditions etc.—this will only lead to worker satisfaction, rather than to positive motivation. To induce a higher level of motivation, the workers have to be satisfied with the hygiene factors, but they also need to be motivated. Motivators include recognition, responsibility, opportunities to grow and develop and for achievement and advance. A similar logic may be applied to skills retention and utilisation. There is a set of hygiene factors whose presence is a necessary but not sufficient condition to ensuring retention and utilisation. The hygiene factors again include good pay, good physical working conditions, prospects for career progression, fringe benefits and flexible and family-friendly human resource policies.

The hygiene factors do not of themselves retain skilled workers or maximise their utilisation; other conditions need to be present to encourage workers to commit to organisations and unlock their full potential. These conditions include:

- ✧ a learning climate in the organisation
- ✧ opportunities for advancement and growth
- ✧ recognition of skills and strengths
- ✧ good training and learning, especially nationally recognised training
- ✧ an organisational culture that encourages commitment and engagement.

Organisations that successfully retain and utilise the skills of their workers are those which ensure the hygiene factors are present and which consciously build on the higher-level retention–utilisation factors.

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# Appendix A: Survey methodology

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## Sampling frame and responses

The sampling frame employed for this study was derived from the Dun and Bradstreet database of Australian organisations, as of October 2006. Each organisation entry includes basic demographic information about the organisation, including contact details, Dun and Bradstreet Australia classification codes, line of business and some basic data referring to employee size and annual turnover. The specific sampling frame used in this study relates to those organisations with an identified human resources decision-maker.

The complete survey instrument was piloted during September and October 2006 with a group of human resources decision-makers and academics. The instrument was also assessed by the ABS Statistical Clearing House (SCH). The SCH provided substantial feedback and, in response, significant changes were made to the instrument. The SCH also provided important feedback on the sampling and mail-out methodology.

A four-step approach was used for the administration of the survey:

- ✧ initial approach letter to the organisation
- ✧ first wave survey
- ✧ second wave survey sent to all 2500 organisations again
- ✧ follow-up telephone interview with non-respondents.

Overall, the effective sampling frame consists of approximately 2500 organisations who received at least one survey, from which 335 responses were gained. Of the 335 responses, seven were grossly incomplete, with more than 25% of questions unanswered and were discarded from the analysis; this resulted in 328 usable responses and translates to an effective response rate of 13.1%. Data on the time taken to complete the survey were collected, resulting in a mean time of 28.3 minutes with a standard deviation of 16.3 minutes.

**Table A1 Sampling frame and responses**

Mail-out	Surveys posted	Return to sender	Responses
1	2500	148	200
2	2500	71	120
3	45	0	15

## Sample adequacy

Two checks for the adequacy of the sample as it reflects the database were conducted. The first assesses the compatibility between the sample and database characteristics. The second check examines any possible non-response bias. Tables A2 and A3 make comparisons between the sample and database for the main industry type (table A2) and employee size classifications (table A3). A statistically significant difference between the sample and database was identified for

primary industry type but not for employee size. In a general sense the differences between sample and database percentages for industry type are not alarmingly large. Weighting the data to reflect the database characteristics for industry type made little difference to the analysis. Consequently, the original and unweighted data are used for further analysis. The number of available cases from the survey differs for some variables. The employed modelling strategy appropriately caters for any missing data.

**Table A2 Sample and database concordance: Primary industry type**

	<b>Respondents</b>	<b>Expected database</b>	<b>Residual</b>	<b>Sample</b>	<b>Database</b>
	No.	No.		%	%
Agriculture, forestry, fishing and mining	22	10	12	6.7	3.0
Construction	17	16	1	5.2	4.9
Manufacturing	82	78	4	25.0	23.8
Wholesale trade	39	42	-3	11.9	12.9
Retail trade	22	23	-1	6.7	7.1
Finance, insurance and real estate	27	32	-5	8.2	9.7
Services	82	93	-11	25.0	28.3
Public administration	14	10	4	4.3	3.1
Transportation, communications, etc.	23	24	-1	7.0	7.2
<b>Total</b>	<b>328</b>	<b>328</b>		<b>100</b>	<b>100</b>

**Table A3 Sample and database concordance: Number of employees**

	<b>Sample</b>	<b>Expected database</b>	<b>Residual</b>	<b>Sample</b>	<b>Database</b>
	No.	No.		%	%
Small (1–19)	34	44	-10	10.4	13.6
Medium (20–199)	166	172	-6	50.8	52.5
Large (200 and over)	127	111	16	38.8	33.9
<b>Total</b>	<b>327</b>	<b>327</b>		<b>100</b>	

As a check for likely non-response bias, statistical tests for differences in the means between responses from the first and subsequent (second and third) mail-outs were conducted. It is postulated that the respondents to the subsequent (second and third) mail-outs are relatively uninterested and require prompting from an additional stimulus, and therefore are similar in nature to non-respondents. Very few differences were identified, which indicates the possible absence of any serious non-response bias.

## Profile of respondents

Table A4 presents the sample characteristics of respondents according to employee classification and ownership structure. The distribution across employee skill categories is roughly even, with only skilled trade workers being significantly smaller than the other categories. Most organisational respondents employed full-time males. In terms of ownership, most respondent organisations were Australian and privately owned.

**Table A4 Employee and ownership characteristics of respondents**

Employee classification	%	Employee classification	%	Employee classification	%	Ownership structure	%	Ownership structure	%
Managers, professionals, technicians	28.8	Full-time	78.3	Female	37.9	Australian national	76.5	Privately owned	67.8
Skilled trade workers	14.1	Permanent part-time	9.9	Male	62.1	Australia-based multinational	7.0	Publicly listed	16.6
Intermediate skills	31.0	Casual	11.8			Foreign-based multinational	16.5	Not-for-profit government etc.	15.6
Elementary skills	26.1								

## Questionnaire

In general, the survey examines the hypotheses that skill turnover, retention and utilisation depend upon the following factors: management practices; training-related practices; human resource practices; and organisational/market characteristics. To facilitate the reliable and valid measurement of various concepts, numerous multi-item measurement scales are employed. These scales are derived from previous studies and/or developed from related literature and suitably adapted. A large number of constructed variables for training and human resources practices are taken from the United Kingdom's Workplace Employment Relations Survey (WERS). This survey is a large government-organised survey, now having been repeated five times. The most recent survey was conducted during 2004 (WERS5).

The questionnaire consists of five sections covering:

- 1 Nature of organisation
- 2 Skill retention and utilisation
- 3 Management practices and philosophies
- 4 Human resource practices
- 5 Business environment.

## Measurement for skill-related variables

We collected data on six different variables relating to employee skills in an organisation:

- 1 Employee turnover
- 2 The extent of skill utilisation
- 3 Skill retention as it pertains to long-term organisational objectives
- 4 Skill utilisation as it pertains to long-term organisational goals
- 5 Skill knowledge
- 6 Strategies employed to improve skill retention.

For the first two variables, measures of turnover and the extent of skill utilisation are collected for four skill categories: managers, professionals and technicians (senior/middle managers, ICT professionals, engineering technicians); skilled trade workers (electricians, plumbers); intermediate skills (clerical, sales and service workers); and elementary skills (labourers, machine operators). The latter four variables are measured for all employees only. The measures are described in table A5.

A key and distinctive feature of this project is to develop measures of skill retention and skill utilisation as they are defined with regard to satisfying the long-term objectives of an organisation.

This necessitated the development of new multi-item measures of skill retention and skill utilisation. Initially, a definition of skill retention and utilisation as they pertain to long-term organisational goals was provided (see table A5) and this was sent together with 20 items for each concept to seven industry and academic experts. These experts were asked to rate each proposed item out of ten on how well the proposed item related to the provided definition. Based on these scores, the best items were included in the final questionnaire: seven items for skill retention and five items for skill utilisation. The measure for skill retention is further refined to consist of four items after analysing the survey data. The Cronbach alphas and average variance extraction (AVE) measures were acceptable for the various skills measures: skill retention ( $\alpha = 0.846$ ,  $AVE = 0.582$ ); utilisation ( $\alpha = 0.831$ ,  $AVE = 0.519$ ); and knowledge ( $\alpha = 0.727$ ,  $AVE = 0.500$ ).

**Table A5 Skill-related variable definitions and items**

Variables	Description	No.
Skill turnover	Percentage annual average based on past three years. Measured for four skill categories	4
Extent of skill utilisation	Extent to which skills have been utilised, based on past three years. Scale 1–7 (1 not at all utilised, to 7 fully utilised). Measured for four skill categories	4
Skill retention, alignment with long-term goals	The extent to which an organisation has continuous access to the employee skills it believes it requires to achieve its long-term goals	4
Skill utilisation, alignment with long-term goals	The extent to which an organisation can usefully employ the skills of its employees to achieve its long-term goals	5
Skill knowledge	The extent to which an organisation knows its skill capability	3
Retention strategies	Rank the top three strategies directly employed to retain skilled employees	5

## Measurement of explanatory drivers for skill-related variables

The variables to be used to explain the drivers for the skill-related variables fall under four groupings: management practices and philosophies; training-related practices; human resource practices; and organisational/market characteristics. When employing all the items for the measures proposed below, the measurement properties of constructs proved to be unacceptable in terms of reliability and validity. As a consequence, a number of items had to be discarded and refined scales constructed to provide measures with acceptable measurement properties. The items listed in the tables below for the various measures pertain to the retained items only.

### *Management practices and philosophies*

A number of multi-item scales were deployed to measure the use of four major management practices or philosophies; these are described in table A6.

### *Training-related practices*

These practices cover the standard training issues experienced in industry. The survey covers the following areas: training for skill objectives; soft skills; hard skills; induction; experienced worker training; training to do other jobs; and nationally recognised training. Detailed items are provided in table A7.

### *Human resources practices*

These practices cover most of the commonly employed human resource practices in industry. The survey covers the following areas: recruitment; appraisal; flexible and family-friendly working practices; career planning; compensation; job design; and the use of employee surveys. Detailed items are provided in table A8.

### *Organisational/ market characteristics*

In part these characteristics pertain to the nature of the business environment in which organisations operate and any peculiar organisational attributes pertinent to the retention and utilisation of skills. The survey covers the following areas: market and technological turbulence; competitive intensity; the organisational life cycle stage and innovation; and the degree of unionisation. Detailed items are provided in table A9.

**Table A6 Management practices and philosophies: Variable definitions and items**

<b>Variables</b>	<b>Description</b>	<b>No.</b>
Learning orientation	Learning orientation refers to organisation-wide activities of creating and using knowledge to enhance competitive advantage. It consists of three sub-constructs: commitment to learning; open-mindedness; and shared vision	10
Total quality management	TQM is the management philosophy that seeks continuous improvement in the quality of performance of all processes, products and services of an organisation	4
Lean production	Lean production combines the features of TQM and teamwork into a system of work organisation that allows organisations to run their operations with a minimum of resources	6
Teamwork autonomy	Counts over five attributes of team autonomy and flexibility	5
Teamwork employed	Percentage of employees in formally designed teams	1

**Table A7 Training-related practices: Variable definitions and items**

<b>Variables</b>	<b>Description</b>	<b>No.</b>
Training for skill objectives	Counts over four training skill objectives: skills needed to move to different jobs; quality standard; extend skills; improve skills	4
Training for specific soft skills	Counts over training for six soft skills: team-working, communication, leadership, customer/service liaison; problem-solving; deadlines	6
Training for specific hard skills	Counts over training for four hard skills: computing; operation of new equipment; health and safety; quality control	4
Induction activities	Hours for a new employee	1
Experienced workers: given time off for training	Percentage of workers given time off normal duties to undertake training over past 12 months	1
Experienced workers: days of training	Number of days of training for experienced workers over past 12 months	1
Formally trained to do other jobs	Percentage formally trained to do jobs other than their own	1
Employees have received nationally recognised training	Percentage of employees who have received recognised training based on training package qualifications	1

**Table A8 Human resources practices: Variable definitions and items**

<b>Variables</b>	<b>Description</b>
Recruitment: internal focus	Vacancies filled by only using or giving preference to internal applicants
Recruitment: attribute-based	Counts over four attributes used for recruiting: skills; qualifications; experience; motivation
Personality or attitude test for recruitment	Any type of personality and/or attitude test when filling vacancies
Flexible working-time arrangements	Counts over six arrangements: work from home; reduce hours; increase hours; job share; flexitime; change shifts; compressed hours
Reduced working hours: at least some employees	All or some employees have the option of reduced working hours
Flexitime: at least some employees	All or some employees have the option of flexitime
Family-friendly working arrangements	Counts over five arrangements: school term-time only; workplace linked nursery; help with child care; help with older adult care; leave for carers of older adults
Career planning	The clarity and usage of a career planning system
Compensation	The extent to which compensation is linked to performance
Job design	The extent to which employees have discretion over, can control the pace of, and are involved in decisions about their work
Employees do jobs other than their own at least once a week	Percentage of employees who actually do other jobs
Formal survey of employees	Organisation or third party conducted a survey during the past two years
Formal survey results communicated in writing	Results of survey made available in writing to those who took part
Appraisal frequency: half-yearly or less	Formal appraisals counted every half-year or more frequently
Formal appraisal: non-managerial employees	Percentage of non-managerial employees appraised
Appraisal results in evaluation of training needs	Does appraisal result in an evaluation of training needs?
Appraisal linked to pay	Is pay linked to the outcome of performance appraisal?

**Table A9 Organisational/market characteristics: Variable definitions and items**

<b>Variables</b>	<b>Description</b>	<b>No.</b>
Market turbulence	The extent to which the composition and preferences of an organisation's customers tended to change over time	2
Competitive intensity	Measures the behaviour, resources, and ability of competitors to differentiate	2
Technological turbulence	The extent to which technology in an industry was in a state of flux	4
Growth stage in life cycle	Identified growth as stage of organisational life cycle from the options: start-up; growth maturity; and decline	1
Organisational innovativeness	The innovation of the organisation from both the market and strategy perspectives	2
Unionisation	Percentage of employees unionised	1

# Appendix B: Survey questionnaire

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## GENERAL INSTRUCTIONS

The questions in this survey relate to skill retention and utilisation and management practices in your organisation. For this survey *organisation is defined* as the workplace area for which you are responsible for administrating human resource management policies. Please answer the questions as they relate to all employees (full-time, part-time and casual) in your organisation. Please use your actual perception and not your desired perception of practices in your organisation when answering these questions. While some questions may appear to be similar, they are required for a complete assessment of relevant issues.

The questionnaire consists of five sections: 1) Nature of Organisation 2) Skill Retention and Utilisation 3) Management Practices and Philosophies, 4) Human Resources Practices and 5) Business Environment.

Please attempt to answer all questions. Note, questions appear on both sides of the pages of this questionnaire. The survey adheres to strict respondent anonymity as no unique identifying organisation information is requested from the survey. The survey takes about 30 minutes to complete.

Please mail the completed survey in the return envelope by no later than 10 days of receipt. If you have any questions about the content of the survey or require a clarification of any questions please contact Professor Andy Smith on (02) 69332521 or at [asmith@csu.edu.au](mailto:asmith@csu.edu.au)

## Skill Retention and Skill Utilisation and Management Practices in Australia

Charles Sturt University's Ethics in Human Research Committee has approved this study.

I understand that if I have any complaints or concerns about this research I can contact:

**Executive Officer**

**Ethics in Human Research Committee**

**Academic Secretariat**

**Charles Sturt University**

**Private Mail Bag 29**

**Bathurst NSW 2795**

Phone: (02) 6338 4628

Fax: (02) 6338 4194

The return of the questionnaire is reasonably taken as an indication of voluntary consent to participate.

## Section 1: Nature of Organisation

1. **Approximately**, how many employees does your **entire** organisation have in Australia? NO1

2. **Approximately**, what percentage of your employees are unionised? NO2

3. **Approximately**, what percentage of employees falls into the following classifications?

*Managers, professionals and technicians* NO3

*(e.g., senior/middle managers, ICT professionals, engineering technicians)*

*Skilled trade workers (e.g., electricians, plumbers)* NO4

*Intermediate skills (e.g., clerical, sales and service workers)* NO5

*Elementary skills (e.g., labourers, machine operators)* NO6

4. **Approximately**, what percentage of employees fall into the following classifications?

*Full-time* NO7

*Permanent Part-time* NO8

*Casual* NO9

5. **Approximately**, what percentage of employees fall into the following classifications?

*Female* NO10

*Male* NO11

6. Which description best describes your organisation's stage of development *(please tick one box)* NO12

start-up  growth  maturity  decline  don't know

7. Which description best describes your primary industry type? *(please tick one box)* NO13

Agriculture, forestry and fishing  Mining  Construction

Manufacturing  Wholesale trade  Retail trade

Finance, insurance and real estate  Services  Public administration

Transportation, communications, electric, gas and sanitary services

Other,  specify:

8. Which following description best describes your organisation's ownership structure? *(please tick one box)* NO14

Australian national  Australian based multinational

Foreign based multinational

9. Is your organisation *(please tick one box)* NO15:

privately owned  publicly listed  other  (specify) \_\_\_\_\_

10. What is your job title: NO16

## Section 2: Skill Retention and Utilisation

For each of the following skill categories please indicate in percentage terms, based on the past three years, the approximate **annual** level of **employee turnover**. *(please insert NA if skill categories are not employed)*

<i>Managers, professionals and technicians</i> <i>(e.g., senior/ middle managers, ICT professionals, engineering technicians)</i>	<i>SK1</i>
<i>Skilled trade workers (e.g., electricians, plumbers)</i>	<i>SK2</i>
<i>Intermediate skills (e.g., clerical, sales and service workers)</i>	<i>SK3</i>
<i>Elementary skills (e.g., labourers, machine operators)</i>	<i>SK4</i>

Using the following response scale, place an appropriate number in the blank space to the right of each statement.

**2.** For each of the following skill categories, based on the past three years, please indicate the extent to which the **skills** employees have are **utilised** in your organisation. *(please insert NA if skill categories are not employed)*

Not At							Fully
All Utilised							Utilised
1	2	3	4	5	6	7	
<i>Managers, professionals and technicians</i> <i>(e.g., senior/ middle managers, ICT professionals, engineering technicians)</i>							<i>SK5</i>
<i>Skilled trade workers (e.g., electricians, plumbers)</i>							<i>SK6</i>
<i>Intermediate skills (e.g., clerical, sales and service workers)</i>							<i>SK7</i>
<i>Elementary skills (e.g., labourers, machine operators)</i>							<i>SK8</i>

Using the following response scale, place an appropriate number in the blank space to the right of each statement.

**3.** The following statements pertain to issues relating to **employee** skill retention and utilisation in your organisation.

Strongly							Strongly
Disagree							Agree
1	2	3	4	5	6	7	
Our available skill set will permit us to achieve our long-term objectives.							<i>SK9</i>
We lose skilled employees more than the industry average.							<i>SK10</i>
We know what skills our workers have.							<i>SK11</i>
Retaining skills is not seen as a problem in our organisation.							<i>SK12</i>
The available skill set in our organisation is sufficient to achieve our long-term objectives.							<i>SK13</i>
Utilising our skills is not seen as a problem in our organisation.							<i>SK14</i>

Organisational goal achievement is not hindered by the lack of skill use.	SK15
We do better at retaining skilled employees than other organisations in this region.	SK16
We utilize our skills adequately to achieve our long-term goals.	SK17
Strongly Disagree	Strongly Agree
1                      2                      3                      4                      5                      6                      7	
Our organisation uses all our available skills.	SK18
We have continuous access to all the skills we need.	SK19
Our employees use their skills to their fullest extent.	SK20
Managers in our organisation have a full understanding of the skills possessed by workers.	SK21
The range of skills we retain suits our long-term objectives.	SK22
We maintain information records on the skill set of employees.	SK23

4. Rank the top three strategies your organisation directly uses to retain skilled employees?  
*(please place a number in the box using, 1 for most used, 2 for second most used, 3 for third most used)*

higher pay	SK24	<input type="checkbox"/>
improved working conditions	SK25	<input type="checkbox"/>
better career progression opportunities	SK26	<input type="checkbox"/>
improved fringe benefits (e.g., cars, computers, etc)	SK27	<input type="checkbox"/>
engendering a 'happier' workplace culture	SK28	<input type="checkbox"/>
providing other non-monetary rewards	SK29	<input type="checkbox"/>
other	SK30	<input type="checkbox"/>
(specify): _____		
other	SK31	<input type="checkbox"/>
(specify): _____		
other	SK32	<input type="checkbox"/>
(specify): _____		

### Section 3: Management Practices and Philosophies

1. The following statements pertain to current management practices/philosophies in your organisation. Using the following response scale, place the most appropriate number in the blank space to the right of each statement.

Strongly							Strongly
Disagree							Agree
1	2	3	4	5	6	7	

Managers basically agree that our organisation's ability to learn is the key to our competitive advantage. MP1

Learning in my organisation is seen as a key commodity necessary to guarantee organisational survival. MP2

Employees in this organisation realise that the way they perceive the marketplace must be continually questioned. MP3

Everyone in this organisation understands their role in quality. MP4

Information on productivity is readily available to employees. MP5

We rarely collectively question our biases about the way we interpret customer information. MP6

Continuous improvement is a key element in our approach to quality. MP7

There is a commonality of purpose in my organisation. MP8

Information on productivity is readily available to employees. MP9

There is total agreement on our organisational vision across all levels, functions, and divisions. MP10

Employees view themselves as partners in charting the direction of the organisation. MP11

Information on quality performance is readily available to employees. MP12

All major department heads within our organisation accept their responsibility for quality. MP13

Our suppliers are actively involved in our new product development process. MP14

Quality is our number one criterion in selecting suppliers. MP15

The sense around this organisation is that employee learning is an investment, not an expense. MP16

Our suppliers are certified, or qualified, for quality. MP17

We run this organisation as lean as possible in terms of staffing. MP18

Our employees routinely carry out a wide variety of tasks. MP19

All employees are committed to the goals of this organisation. MP20

The basic values of this organisation include learning as a key improvement. MP21

Senior managers display visible and effective leadership on quality in this organisation.	MP22					
We emphasise prevention rather than inspection in our approach to quality.	MP23					
We reflect critically on the shared assumptions we have made about our customers.	MP24					
Employees take responsibility for making improvements in their jobs.	MP25					
Every employee knows who his or her customer is and ensures that they get a quality product/service.	MP26					
Strongly Disagree	Strongly Agree					
1	2	3	4	5	6	7
We rely on a small number of high quality suppliers.	MP27					
Managers provide personal leadership for quality products and quality improvement.	MP28					
We have a formal program in this organisation for the improvement of quality.	MP29					

2. **Approximately**, what percentage of employees in your workplace is organised into formally designed teams? MP30

3. Which, if any, of the following states apply to the way that team-working operates at your workplace (*please tick your response*)

Team members depend on each other's work to be able to do their job. MP31

Yes  No

Tasks or roles rotate among the members of the team. MP32

Yes  No

Team members are able to appoint their own team leaders. MP33

Yes  No

Team members jointly decide how work is to be done. MP34

Yes  No

Teams are given specific responsibility for specific products or services. MP35

Yes  No

## Section 4: Human Resource Practices

1. The following statements pertain to the role of human resource managers in your organisation. Using the following response scale, place the most appropriate number in the blank space to the right of each statement.

	Strongly						Strongly
	Disagree						Agree
	1	2	3	4	5	6	7
	Individuals in this organisation have clear career paths.						HR1
	The compensation for all employees is directly linked to performance.						HR2
	Employees in our organisation have more than one potential position for promotion.						HR3
	Our organisation prefers an internal employee whenever a vacancy exists.						HR4
	Job performance is an important factor in determining the incentive compensation of employees.						HR5
	In our organisation, salaries we pay are comparable to the market.						HR6
	Our organisation plans for the career development of employees.						HR7
	In our organisation, compensation is decided on the basis of the ability of the employee.						HR8

2. Which of the following statements best describes your approach to filling vacancies at your workplace?

(please tick one box only)	HR9
Internal applicants are the only source, no external recruitment.	<input type="checkbox"/>
Internal applicants are given preference, other things being equal, over external applicants.	<input type="checkbox"/>
Applications from internal and external applicants are treated equally.	<input type="checkbox"/>
External applicants are given preference, other things being equal, over internal applicants.	<input type="checkbox"/>
External applicants are the only source, no internal recruitment.	<input type="checkbox"/>

3. Which of the following factors are important when recruiting new employees?

(please tick boxes for all important factors)								
References	HR10	<input type="checkbox"/>	Availability	HR11	<input type="checkbox"/>	Recommended	HR12	<input type="checkbox"/>
Skills	HR13	<input type="checkbox"/>	Age	HR14	<input type="checkbox"/>	Qualifications	HR15	<input type="checkbox"/>
Experience	HR16	<input type="checkbox"/>	Motivation	HR17	<input type="checkbox"/>			
Other	HR18	<input type="checkbox"/>	(please specify: _____)					

4. When filling vacancies at your workplace, do you conduct any type of personality or attitude test?

(please tick one box only)		HR19	
Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

5. How many days and/or hours are spent on induction activities for a new employee? (if no induction insert 0)

HR20 \_\_\_\_\_ days \_\_\_\_\_ hours

6. **Approximately**, what percentage of experienced employees (who have been employed for at least 12 months) have been given time off from their normal daily work duties to undertake training over the past 12 months? HR21

7. **Approximately**, how many days of training did experienced employees undertake over the past 12 months? HR22

8. Does the training have any of the following objectives? (please tick boxes for all objectives covered)

- |  |      |                          |
|--|------|--------------------------|
| provide the skills needed for employees to move to different jobs        | HR23 | <input type="checkbox"/> |
| obtain a quality standard  | HR24 | <input type="checkbox"/> |
| extend the range of skills used by employees in their current jobs       | HR25 | <input type="checkbox"/> |
| improve the skills already used by employees in their current jobs       | HR26 | <input type="checkbox"/> |
| increase employees' understanding of, or commitment to, the organisation | HR27 | <input type="checkbox"/> |
| other (specify: _____)   | HR28 | <input type="checkbox"/> |

9. Which of the following areas does training cover? (please tick boxes for all the areas covered)

- |                            |      |                          |                                      |      |                          |
|----------------------------|------|--------------------------|--------------------------------------|------|--------------------------|
| computing skills           | HR29 | <input type="checkbox"/> | teamworking                          | HR30 | <input type="checkbox"/> |
| communication skills       | HR31 | <input type="checkbox"/> | leadership skills                    | HR32 | <input type="checkbox"/> |
| operation of new equipment | HR33 | <input type="checkbox"/> | customer/service liaison             | HR34 | <input type="checkbox"/> |
| health and safety          | HR35 | <input type="checkbox"/> | problem-solving methods              | HR36 | <input type="checkbox"/> |
| equal opportunities        | HR37 | <input type="checkbox"/> | reliability and working to deadlines | HR38 | <input type="checkbox"/> |
| quality control procedures | HR39 | <input type="checkbox"/> |                                      |      |                          |
| other                      | HR40 | <input type="checkbox"/> | (specify: _____)                     |      |                          |

10. **Approximately**, what percentage of employees are formally trained to be able to do jobs other than their own? HR41

11. **Approximately**, what percentage of employees actually do jobs other than their own at least once a week? HR42

12. **Approximately**, what percentage of employees have received nationally recognised training (based on Training Package qualifications)? HR43

Using the following response scale, place an appropriate number in the blank space to the right of each statement.

13. To what extent would you say individual employees have:

- |            |   |                 |   |              |
|------------|---|-----------------|---|--------------|
| Not At All |   | Moderate Extent |   | Great Extent |
| 1          | 2 | 3               | 4 | 5            |
|            |   |                 |   | 6            |

variety in their work? HR44

discretion over how they work? HR45

control over the pace at which they work? HR46

involvement in decisions over how their work is organised? HR47

14. Has your organisation or a third party conducted a formal survey of your employees' views or opinions during the past two years? (please tick one box only) HR48

Yes  No  (if **No** go to question 16)

15. Were the results of the employee survey made available in written form to those employees who took part? (please tick one box only) HR49

Yes  No

16. In which of the following occupational skill groups are there employees that have their performance formally appraised? (please tick boxes for all groups which are appraised)

Managers, professionals and technicians HR50  Skilled trade workers HR51

Intermediate skills HR52  Elementary skills HR53

17. **Approximately**, what percentage of non-managerial employees at this workplace have their performance formally appraised? HR54

18. How frequently are appraisals conducted? (please tick a box for your response) HR55

Quarterly  Half-yearly  Annually  Every two years  No fixed Pattern

Other  (specify \_\_\_\_\_)

19. Does performance appraisal result in an evaluation of training needs? (please tick one box only) HR56

Yes  No

20. Is individual employees' pay linked to the outcome of the performance appraisal? (please tick one box only) HR57

Yes  No

21. Do you have any of the following working time arrangements at your workplace?

(please tick boxes for all existing arrangements)

Working at or from home in normal working hours HR58

The ability to reduce working hours (e.g., switching from full-time to part-time) HR59

Ability to increase working hours (e.g., switching from part-time to full-time) HR60

Job sharing schemes (sharing a full-time job with another employee) HR61

Flexitime (where an employee has no set start or finish time, but has an agreement to work a set number of hours per week or month) HR62

Ability to change shift patterns HR63

Working compressed hours (e.g., a 9 day fortnight) HR64

None of the above HR65

22. Do all employees have the option of reducing their working hours, or is it restricted to some employees only? (please tick one box) HR66

All have the option     Some employees only     None at all

23. Do all employees have the option to work flexitime or is it restricted to some employees only? (please tick one box) HR67

All have the option     Some employees only     None at all

24. Are any employees in your organisation entitled to any of the following? (please tick boxes for all available entitlements)

Working only during school term-time HR68

Workplace nursery or nursery linked with workplace HR69

Financial help with child-care HR70

Financial help with the care of older adults HR71

A specific period of leave for carers of older adults HR72

None of the above HR73

### Section 5: Business Environment

1. Use the seven point scale below to indicate your perception of the BUSINESS ENVIRONMENT in which your organisation operates with regard to your most important market.

---

Strongly							Strongly
Disagree							Agree
1	2	3	4	5	6	7	

In our kind of business, customers' product preferences change quite a bit over time. BE1

We are witnessing demand for our products and services from customers who never bought them before. BE2

The technology in our industry is changing rapidly. BE3

Our competitors are relatively weak. BE4

New customers tend to have product-related needs that are different from those of our existing customers. BE5

A large number of new product ideas have been made possible through technological breakthroughs in our industry. BE6

Competition in our industry is cut-throat. BE7

Our customers tend to look for new products and services all the time. BE8

Anything that one competitor can offer, others can match readily. BE9

Price competition is the hallmark of our industry.	BE10
We cater for many of the same customers that we use to in the past.	BE11
Technological changes provide big opportunities in our industry.	BE12
There are many 'promotion wars' in our industry.	BE13
Technological developments in our industry are rather minor.	BE14
One hears of a new competitor almost every day.	BE15

Using the following response scale, place an appropriate number in the blank space to the right of each statement.

2. In a new product and service introduction, how often is your organisation:

Never						Always
1	2	3	4	5	6	7

First to market with new products or services.	BE16
Later entrant in established but still growing markets.	BE17
Entrant in mature, stable markets.	BE18
Entrant in declining markets.	BE19
At the cutting edge of technological innovation.	BE20

Any further suggestions on what strategies organisations can pursue to improve skill retention and skill utilisation?

**Please provide an estimate of the time taken to complete this survey:** \_\_\_\_\_ minutes

If you would like a copy of the completed report please tick the box below and complete your email contact details (or enclose your business card).

Please send me a copy of a summary of the completed report:

**Contact Details (optional):**

If you want to obtain a copy of the report please provide contact details, your responses will not be tracked and anonymity is still assured even if you provide these details.

Name: \_\_\_\_\_

Email: \_\_\_\_\_

**THANK YOU FOR YOUR COOPERATION**

# Appendix C: Training and human resource practices

**Table C1 Training practices: All employees and key industries**

	All	Key industries		
		Manufacturing	Wholesale and retail	Services
Experienced workers: given time off for training (%)	44	31 <sup>a</sup>	30 <sup>b</sup>	55 <sup>ab</sup>
Formally trained to do other jobs (%)	26	30	24	22
Employees have received nationally recognised training (%)	29	29	23	31
Training for skill objectives (scale 0–4)*	2.68	2.56	2.64	2.79
Training for specific soft skills (scale 0–6)*	2.48	2.00 <sup>a</sup>	2.34	2.77 <sup>a</sup>
Training for specific hard skills (scale 0–4)*	1.64	1.79	1.66	1.62
Induction activities (hours)	22.3	27.0	24.3	19.8
Experienced workers: days of training (days)	16.6	16.5	18.2	15.4

Notes: \* Indicates the average score in the specified range. Precise definitions provided in appendix A.  
a and b denote significant (5% level) pair differences within key industries or employee groups.

**Table C2 Training practices: Employer size and skilled trade workers**

	Employer size			Skilled trade workers	
	Small	Medium	Large	Employed	Not employed
Experienced workers: given time off for training (%)	32 <sup>a</sup>	39 <sup>b</sup>	53 <sup>ab</sup>	43	45
Formally trained to do other jobs (%)	34	25	24	27	24
Employees have received nationally recognised training (%)	28	28	31	30	28
Training for skill objectives (scale 0–4)*	2.33 <sup>a</sup>	2.63	2.83 <sup>a</sup>	2.69	2.67
Training for specific soft skills (scale 0–6)*	1.07 <sup>ab</sup>	2.10 <sup>ac</sup>	3.28 <sup>bc</sup>	2.39	2.62
Training for specific hard skills (scale 0–4)*	1.43	1.56	1.80	1.73	1.51
Induction activities (hours)	28.7	17.3	27.3	21.5	23.5
Experienced workers: days of training (days)	6.51	22.5	11.7	17.9	14.6

Notes: \* Indicates the average score in the specified range. Precise definitions provided in appendix A.  
a, b and c denote significant (5% level) pair differences within key industries or employee groups.

**Table C3 Human resource management practices: All employees and key industries**

	All	Key industries		
		Manufacturing	Wholesale and retail	Services
Recruitment: internal focus (%)	52	48	56	58
Personality or attitude test for recruitment (%)	38	40	37	35
Reduced working hours: at least some employees (%)	75	68 <sup>a</sup>	70	85 <sup>a</sup>
Flexitime: at least some employees (%)	53	51	52	55
Employees do jobs other than their own at least once a week (%)	18	19	25 <sup>a</sup>	12 <sup>a</sup>
Formal survey of employees (%)	49	39	37	55
Formal survey results communicated in writing (%)	75	65	75	80
Appraisal frequency: half-yearly or less (%)	29	22	26	35
Formal appraisal: non-managerial employees (%)	67	53 <sup>a</sup>	56 <sup>b</sup>	81 <sup>ab</sup>
Appraisal results in evaluation of training needs (%)	85	83	76 <sup>a</sup>	91 <sup>a</sup>
Appraisal linked to pay (%)	58	55	54	56
Recruitment: attribute-based (scale 0–4)*	3.10	3.01	2.93	3.30
Flexible working time arrangements (scale 0–6)*	3.09	2.68 <sup>a</sup>	2.54 <sup>b</sup>	3.80 <sup>ab</sup>
Family-friendly working arrangements (scale 0–5)*	0.41	0.29	0.32	0.47
Career planning (scale 1–7)*	4.30	4.19	4.11	4.28
Compensation (scale 1–7)*	4.78	4.82	4.99	4.46
Job design (scale 1–7)*	4.30	4.12	4.38	4.24

Notes: \* Indicates the average score in the specified range. Precise definitions provided in appendix A.  
a and b denote significant (5% level) pair differences within key industries or employee groups.

**Table C4 Human resource management practices: Employer size and skilled trade workers**

	Employer size			Skilled trade workers	
	Small	Medium	Large	Employed	Not employed
Recruitment: internal focus (%)	53	51	52	53	50
Personality or attitude test for recruitment (%)	32	30 <sup>a</sup>	48 <sup>a</sup>	39	36
Reduced working hours: at least some employees (%)	53 <sup>ab</sup>	73 <sup>a</sup>	83 <sup>b</sup>	72	79
Flexitime: at least some employees (%)	39	52	59	54	52
Employees do jobs other than their own at least once a week (%)	32 <sup>ab</sup>	18 <sup>a</sup>	14 <sup>b</sup>	19	16
Formal survey of employees (%)	15 <sup>ab</sup>	43 <sup>ac</sup>	66 <sup>bc</sup>	44 <sup>a</sup>	55 <sup>a</sup>
Formal survey results communicated in writing (%)	40 <sup>a</sup>	71	83 <sup>a</sup>	72	78
Appraisal frequency: half-yearly or less (%)	27	26	35	24 <sup>a</sup>	38 <sup>a</sup>
Formal appraisal: non-managerial employees (%)	56	68	69	61 <sup>a</sup>	77 <sup>a</sup>
Appraisal results in evaluation of training needs (%)	76	83	90	83	88
Appraisal linked to pay (%)	43	61	58	57	59
Recruitment: attribute-based (scale 0–4)*	2.91	3.02	3.27	3.09	3.13
Flexible working-time arrangements (scale 0–6)*	2.15 <sup>a</sup>	2.58 <sup>b</sup>	4.00 <sup>ab</sup>	2.95	3.30
Family-friendly working arrangements (scale 0–5)*	0.17 <sup>a</sup>	0.31 <sup>b</sup>	0.60 <sup>ab</sup>	0.37	0.46
Career planning (scale 1–7)*	4.04	4.32	4.35	4.28	4.33
Compensation (scale 1–7)*	4.95	4.85	4.61	4.69	4.90
Job design (scale 1–7)*	4.65 <sup>a</sup>	4.46 <sup>b</sup>	4.01 <sup>ab</sup>	4.19 <sup>a</sup>	4.47 <sup>a</sup>

Notes: \* Indicates the average score in the specified range. Precise definitions provided in appendix A.  
a, b and c denote significant (5% level) pair differences within key industries or employee groups.

# Appendix D: Models of skill turnover and utilisation

**Table D1 Skill turnover models: Significant drivers**

<b>Managers, professionals, technicians turnover</b>		<b>Skilled trades turnover</b>		<b>Intermediate skills turnover</b>		<b>Elementary skills turnover</b>	
Driver	Direction	Driver	Direction	Driver	Direction	Driver	Direction
Nationally recognised training	–	Employees doing other jobs	+	Unionisation	–	Learning orientation	–
Teamwork	+	Unionisation	–	Private ownership	–	Agriculture and mining sector	+
Flexible working-time arrangements	–	Large organisations	+	Manufacturing sector	–	Unionisation	–
Private ownership	–	Learning orientation	–	Nationally recognised training	–	Formal appraisal	–
Learning orientation	–	Wholesale trade sector	+	Learning orientation	–	Not-for-profit and other ownership types	–
Unionisation	–			Appraisal frequency	–	Attribute recruitment	–
Services sector	+			Higher pay retention strategy	–		
Manufacturing sector	–			Flexible working-time arrangements	–		

Note: Drivers listed in order of statistical importance as determined by beta coefficients (see table D2).

**Table D2 Skill turnover models: Statistics**

Variable	Managers professionals, technicians turnover			Skilled trades turnover			Intermediate skills turnover			Elementary skills turnover		
	Coeff. (beta)	P value	Sig. level	Coeff. (beta)	P-value	Sig. level	Coeff. (beta)	P-value	Sig. level	Coeff. (beta)	P-value	Sig. level
<b>Management practices</b>												
Learning orientation	-2.321 (-0.126)	0.041	5% (-)	-2.217 (-0.135)	0.088	10% (-)	-3.052 (-0.151)	0.019	5% (-)	-4.733 (-0.190)	0.008	1% (-)
Teamwork employed	0.080 (0.172)	0.003	1% (+)									
<b>Human resources</b>												
Appraisals conducted half-yearly or less							-6.135 (-0.148)	0.010	1% (-)			
Formal performance appraisal										-0.081 (-0.137)	0.042	5% (-)
Employees have NRT package qualifications	-0.081 (-0.360)	0.022	5% (-)				-0.105 (-0.153)	0.011	5% (-)			
Recruitment attribute-based										-3.203 (-0.126)	0.044	5% (-)
Employees who do jobs other than their own at least once a week				0.175 (0.211)	0.004	1% (+)						
Flexible working-time arrangements	-1.342 (-0.157)	0.009	1% (-)				-1.035 (-0.106)	0.067	10% (-)			
Retention strategy: higher pay							-4.512 (-0.110)	0.076	10% (-)			
<b>Organisation/ Industry</b>												
Unionisation	-0.090 (-0.125)	0.049	5% (-)	-0.122 (-0.179)	0.011	5% (-)	-0.141 (-0.175)	0.006	1% (-)	-0.157 (-0.167)	0.012	5% (-)
Industry dummy (manufacturing)	-4.121 (-0.104)	0.075	10% (-)				-6.837 (-0.153)	0.007	1% (-)			
Industry dummy (services)	4.427 (0.113)	0.052	10% (+)									
Industry dummy (Agr. & Mining)										14.743 (0.178)	0.004	1% (+)
Industry dummy (wholesale trade)				7.488 (0.128)	0.062	10% (+)						
Employee size dummy (large over 199)				5.255 (0.147)	0.037	5% (+)						
Organisation ownership (privately owned)	-5.038 (-0.138)	0.020	5% (-)				-6.416 (-0.156)	0.012	5% (-)			

Variable	Managers professionals, technicians turnover			Skilled trades turnover			Intermediate skills turnover			Elementary skills turnover		
	Coeff. (beta)	P value	Sig. level	Coeff. (beta)	P-value	Sig. level	Coeff. (beta)	P-value	Sig. level	Coeff. (beta)	P-value	Sig. level
Organisation ownership (NFP, others)										-8.973 (-0.129)	0.051	10% (-)
N	307			197			298			222		
R2	0.161			0.117			0.167			0.170		
RMSEA	0.054			0.063			0.053			0.063		
CFI	0.949			0.949			0.956			0.943		

Note: NRT = nationally recognised training  
N = number of observations  
R2 = percentage of explained variation  
RMSEA = root mean square error of approximation  
CFI = comparative fit index

**Table D3 Extent of skill utilisation models: Significant drivers**

Managers, professionals, technicians utilisation		Skilled trades utilisation		Intermediate skills utilisation		Elementary skills utilisation	
Driver	Direction	Driver	Direction	Driver	Direction	Driver	Direction
Learning orientation	+	Nationally recognised training	+	Learning orientation	+	Services sector	-
Trained to do other jobs	-	Unionisation	+	Technological turbulence	-	Nationally recognised training	+
Technological turbulence	-	Learning orientation	+	Foreign-based multinationals	-	Finance sector	-
Manufacturing sector	+	Teamwork autonomy	-				
Retail trade sector	-	Agriculture and mining sector	+				
Formal employee surveys	+						

Note: Drivers listed in order of statistical importance as determined by beta coefficients (see table D4).

**Table D4 Extent of skill utilisation models: Statistics**

Variable	Managers professionals, technicians utilisation extent			Skilled trades utilisation extent			Intermediate skills utilisation extent			Elementary skills utilisation extent		
	Coeff. (beta)	P-value	Sig. level	Coeff. (beta)	P-value	Sig. level	Coeff. (beta)	P-value	Sig. level	Coeff. (Beta)	P-value	Sig. level
<b>Management practices</b>												
Learning orientation	0.361 (0.371)	0.000	1% (+)	0.231 (0.163)	0.044	5% (+)	0.329 (0.292)	0.000	1% (+)			
Team work autonomy				-0.193 (-0.129)	0.086	10% (-)						
<b>Human resources</b>												
Formally trained to do other jobs	-0.005 (-0.138)	0.015	5% (-)									
Employees have NRT package qualifications				0.010 (0.182)	0.012	5% (+)				0.007 (0.121)	0.079	10% (+)
Conducted a formal survey of employees' views	0.179 (0.098)	0.074	10% (+)									
<b>Market/product</b>												
Technological turbulence	-0.082 (-0.115)	0.075	10% (-)				-0.135 (-0.145)	0.029	5% (-)			
<b>Organisation/industry</b>												
Unionisation				0.010 (0.164)	0.018	5% (+)						
Industry dummy (manufacturing)	0.233 (0.111)	0.039	5% (+)									
Industry dummy (retail trade)	-0.399 (-0.108)	0.046	5% (-)									
Industry dummy (services)										-0.510 (-0.140)	0.033	5% (-)
Industry dummy (agr. & mining)				0.691 (0.127)	0.054	10% (+)						
Industry dummy (finance)										-1.025 (-0.115)	0.079	10% (-)
Organisation location (foreign-based multi-national)							-0.374 (-0.128)	0.021	5% (-)			
N	321			208			314			225		
R2	0.153			0.112			0.097			0.044		
RMSEA	0.059			0.075			0.061			0.030		
CFI	0.937			0.928			0.950			1.0		

Note: NRT = nationally recognised training  
 N = number of observations  
 R2 = percentage of explained variation  
 RMSEA = root mean square error of approximation  
 CFI = comparative fit index

# Appendix E: Models of skill retention and utilisation (alignment with long-term goals)

**Table E1 Retention and utilisation long-term goal models**

Variable	Retention long-term			Utilisation long-term		
	Coeff. (beta)	P-value	Sig. level	Coeff. (beta)	P-value	Sig. level
<b>Management practices</b>						
Learning orientation	0.753 (0.695)	0.000	1% (+)	0.894 (0.840)	0.000	1% (+)
<b>Human resources</b>						
Appraisal linked to training	0.292 (0.102)	0.054	10% (+)			
Training for skill objectives	-0.141 (-0.140)	0.002	1% (-)			
Training for soft issues				-0.077 (-0.144)	0.011	5% (-)
Recruitment attribute-based	0.111 (0.102)	0.053	10% (+)			
<b>Market/product</b>						
Growth (life cycle stage)	-0.327 (-0.161)	0.002	1% (-)	-0.195 (-0.098)	0.056	10% (-)
Technological turbulence	-0.149 (-0.189)	0.002	1% (-)	-0.134 (-0.173)	0.004	1% (-)
<b>Organisation/industry</b>						
Industry dummy (public admin.)				-0.522 (-0.105)	0.038	5% (-)
Industry dummy (retail trade)	0.427 (0.105)	0.040	5% (+)			
Employee size dummy (small 1-19)				-0.318 (-0.097)	0.068	10% (-)
Employee size dummy (medium 20-199)	0.216 (0.106)	0.036	5% (+)			
Organisation ownership (privately owned)				-0.204 (-0.095)	0.075	10% (-)
N	328			328		
R2	0.477			0.570		
RMSEA	0.049			0.052		
CFI	0.945			0.940		

Note: N = number of observations  
R2 = percentage of explained variation  
RMSEA = root mean square error of approximation  
CFI = comparative fit index



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