Quality of work environment and quitting intention: A dilemma

RAYMOND MARKEY[*], KATHERINE RAVENSWOOD[**] and DON J. WEBBER[***]

Abstract

This study investigates the impact of the quality of the work environment (QWE) upon employees' quitting intentions. A substantial body of research has analysed job satisfaction and a range of other single factors as antecedents of quitting. We examine the totality of the QWE as a determinant of quitting intention, based on a small survey of New Zealand employees. The majority intending to quit perceived their QWE as poor. The results also indicated that employees were more likely to leave if they are not a parent, do not receive sufficient important information, are stressed, and experience reduced job satisfaction, but the impact of these factors is far greater in workplaces with a good QWE. This exploratory analysis suggests that the factors shaping perceptions of QWE as a whole are an important focus of policy to shape employees' quitting intentions, and is highly suggestive of an area for further research.

Keywords: job satisfaction, labour turnover, quality of work environment, quitting intentions, work stress

Introduction

This study investigates the impact on employees' quitting intentions of the quality of the work environment (QWE). It finds, as expected, that the probability of quitting is greater when the workplace is perceived to be a bad place to work. Building on this general observation, the study then investigates what aspects of the working environment characterise "good workplaces", and which aspects contribute most to quitting intentions.

This research is important because it develops the concept of multiple, connected workplace practices and its influence on quitting behaviour. There is a growing literature on the influence of the QWE on turnover, and on quitting in particular. The role that certain attributes of the QWE have on influencing employees' quitting behaviour has received increasing attention in the academic literature (see Boxall, Macky & Rasmussen, 2003; Cottini, Kato & Nielsen,, 2009; Delfgauw, 2007; Hom, Roberson & Ellis, 2008; Scott, Bishop & Chen, 2003; Simons & Jankowski, 2008; Taplin & Winterton, 2007). However, this literature has focussed largely on individual employee or job attributes rather than on the broader context of the work environment as a whole. Levels of stress and information about important decisions and changes, along with changes in the level of job satisfaction, are all embedded in the literature as important contributory factors behind the quitting decision. Our empirical results illustrate that these factors are important *only* if the QWE is perceived to be good; if the QWE is perceived to be bad then they appear to have no significant influence. This particular finding runs counter to concepts and norms established to this date, and suggests further research is necessary.

[*] Centre for Workforce Futures, Macquarie University, NSW 2109 Australia Ph: +61 2 9850 7444
Email: ray.markey@mq.edu.au
[**] Department of Management, Auckland University of Technology, New Zealand
[***] Department of Economics, University of West of England, UK

The remainder of this paper is organised as follows. The next section outlines the existing research defining QWE, and how this relates to a significant body of literature on employees' quitting intentions. The following sections describe the data set and outline the methodology employed. Subsequently, the results obtained are presented and discussed and the article concludes with an assessment of the broader significance of these results.

Quality of the work environment: what is a good workplace?

The central concern of the QWE perspective is the wellbeing of employees. In contrast to the literature on quitting, QWE does *not* focus on individual employee or job characteristics (Boxall et al., 2003; Cottini et al., 2009; Delfgauw, 2007; Hom et al., 2008; Scott, Gravelle, Simoens, Bojke & Sibbald, 2006; Simons & Jankowski, 2008; Taplin & Winterton, 2007) but, instead, is a concept that encompasses the physical aspects, psycho-social and organisational surroundings of work (Busck, Knudsen & Lind, 2010; Sell & Cleal, 2011). The QWE is a central concern of employees and employers that has often been linked with productivity as well as with the wellbeing of employees, notably in the High Performance Workplace (HPWP) approach to human resource management (Godard, 2004; Harley, Allen & Sargent, 2007; Macky & Boxall, 2007; 2008; Boxall & Macky 2009). These connections have been a strong tradition in Scandinavian and socio-technical literature (Emery & Thorsrud, 1976; Gustavsen & Hunnius, 1981).

The QWE concept has its origins in Scandinavia where, since the 1970s "work environment" largely replaced the narrower concept of "occupational health and safety," which was associated mainly with physical risks and hazards at work. Specifically, QWE encompasses the concept of the "psycho-social work environment," which denotes how job demands and social structures and interactions in the organisation influence the psychological wellbeing of employees, thus, allowing a broad understanding of how people are affected by their employment, including experience of job satisfaction and stress (Hvid & Hasle, 2003). Measures often used to capture QWE are those that indicate aspects of employee participation in the workplace, such as how much control employees have over their work, and include flexibility in how and when tasks are carried out (Wood & Wall, 2007; Gustaffson & Szebehely, 2009; Sell & Cleal, 2011), whether employees feel appreciated by management (Boxall et al., 2003; Gustaffson & Szebely, 2009) and the amount of information about decisions in the workplace that concern employees (Sell & Cleal, 2011). Psycho-social elements of the work environment also include conflicts, threats or violence at the workplace (ibid) and workload and the levels of stress experienced (ibid; Busck et al., 2010).

Antecedents of the quitting decision

There is a substantial literature that aims to understand and predict at what point an employee decides to quit an organisation. This research has strongly linked concepts of job satisfaction and commitment with quitting intentions (Smith, Oczkowski & Smith, 2011). March and Simon (1993) relate an employee's desire to participate in an organisation's activities with their desire to leave an organisation, connecting concepts of commitment with turnover. Lee, Mitchell, Sablynski, Burton & Holtom (2004) link quitting intentions with the degree of "embeddedness" of an employee in an organisation; in other words, the strength and brittleness of connections and roles an employee has with other people and activities within and outside of an organisation.

March and Simon (1993) establish some propositions that explain employees' decisions to "withdraw" from organisations. These were based on a framework that supposes employees will leave if they perceive that leaving is desirable when there are other satisfactory alternatives. An

employee's level of job satisfaction (or dissatisfaction) relate directly to the "desirability" to leave. According to March and Simon (1993), one factor that influences an employee's job satisfaction is the interaction between requirements at work and in other roles, now commonly referred to as either work-life balance or work-life conflict. In addition to work and other role conflict, length of service is proposed to be an influence on quitting decisions and is associated with increased specialisation in skill and knowledge, which diminish available alternatives (March & Simon, 1993).

Boxall et al.'s (2003) meta-analysis summarises some of the key findings in the literature and indicates that the degree of job security, job satisfaction, autonomy and responsibility, how much employees felt appreciated by their employers, and how their employers cared for their wellbeing all impact on quitting intentions. While job satisfaction has been largely referred to, as resulting from workplace and personal attributes, many of the measures of job satisfaction incorporate aspects that reflect the quality of the work environment. For example, the Warr-Cooke scale of job satisfaction includes measures, such as the ability to choose a method of work, the amount of responsibility, recognition for work done and the variety in work (Scott et al., 2006).

Recently, scholars have broadened their perspective of turnover to include bundles of HRM practices and their effects on job satisfaction, commitment and turnover (Alfes, Shantz, Truss & Soane, 2013; Guchait & Cho, 2010; Smith et al., 2011). For example, Alfes et al. (2013) discuss the "engaged" employee and links this with turnover intentions. They draw on social exchange theory to show that employees will be more engaged when their work is meaningful, when they have connections with others and when they feel valued and trusted by their employer. Alfes et al., (2013) find that engaged employees are more likely to stay with an organisation but engaged employees who perceive they have low organisational support were less likely to stay with the organisation.

Employee participation is also linked both with increased job satisfaction and decreased turnover. For example, a work environment that allows participation in decision making has been shown to increase job satisfaction (Scott et al., 2003), and greater involvement in care planning for nurses' assistants has been linked with decreased turnover (Simons & Jankowksi, 2008). Conversely, lack of opportunities for influence in the organisation and a lack of communication with management have been associated with increased quitting intentions (Simons & Jankowski, 2008). However, employee participation may have differing effects on the intention to quit. For instance, Landau (2009) found that positive outcomes from voicing dissatisfaction *decreased* the intention to quit, whereas a negative outcome or no change in outcomes of voicing dissatisfaction *increased* intentions to quit. Indeed, participation, in terms of strong information sharing, has been found to reduce the negative effect of physical hazards on quitting behaviour (Cottini et al., 2009). The extent to which employees believe that their organisation values their contribution and care about wellbeing also affect the intention to quit (Perryer, Jordan, Firn & Travaglione, 2010)

Where broader workplace conditions have been considered, there have been connections found between general appreciation of employees and concern for their wellbeing (Mohamed, Taylor & Hassan, 2006), job satisfaction (incorporating aspects of hours of work, physical conditions and influence on method of work) and quitting behaviour (Boxall et al., 2003; Delfgauw, 2007; Scott et al., 2006). For example, van der Aa, Bloemer & Henseler (2012) found that higher perceived job quality reduced employee turnover in customer contact centres. Elsewhere, adverse conditions (harm, hazard, uncertainty, emotional distress, lack of promotion and discrimination) have been shown to have variable impacts on quitting (Bockerman & Ilmakunnas, 2009; Cottini et al., 2009). Lack of training and promotion opportunities have a negative impact on satisfaction according to Dickey, Watson & Zangelidis (2009).

These established antecedents of quitting behaviour could be categorised into participation, physical working conditions and psycho-social conditions. In their positive employee beneficial form, these antecedents indicate a "good" workplace. Conversely, when reversed to their negative employee adverse state, these same antecedents indicate a "bad" workplace. Although these antecedents correspond to aspects of QWE, most studies do not consider them collectively and tend to focus on individual or job attributes rather than QWE or organisational determinants (Reiche, 2009). Another important observation is that the established antecedents of quitting behaviour are mainly based on employee *perceptions* of QWE, because of the need to identify employee motivations and the importance of the psycho-social component of QWE, whereby perceptions create the reality of job satisfaction, feeling appreciated by management, etc. It is conceivable, however, that the "reality" of aspects of QWE, particularly in relation to physical working conditions, may be at variance with employee perceptions because of the impact of a range of other variables.

Why quit even if QWE is perceived as good?

Why might employees who perceive they have a good quality of the work environment have intentions to quit? There is little in the literature to suggest reasons for this. Some studies indicate a "shine" factor, particularly in terms of recruitment of minority groups into the workplace: "while effective at bringing people into the organization, [these recruitment policies] may ironically contribute to high early turnover if they raise expectations for a positive diversity climate that is not fulfilled" (McKay & Avery, 2005, cited in Hom et al., 2008: 25). These studies suggest that any changes to QWE perceptions have greater impacts on quitting intentions when workplaces are perceived to be good relative to when workplaces are perceived to be bad. This is somewhat corroborated by studies which indicate that HPWP approaches and some types of participation can increase turnover when employees perceive workplace climates "in which compensation is merit based, goals are clear, and relationships between management and employees are fostered" to be paternalistic (Simons & Jankowski, 2008: 8).

The literature review above initially highlights a range of single factors that influence intentions to quit, often associated with changing levels of job satisfaction. Parts of the literature also emphasises that the totality of the QWE is an important factor in shaping quitting decisions. However, it is less clear whether single factors are important influences on the quitting decision in themselves, irrespective of whether the workplace is perceived to be a good working environment. It could be that, as much of the literature assumes, single factors or groups of factors are the main determinants of the quitting decision and that the QWE as a whole is less important. Alternatively, the totality of the QWE is the main issue and single factors are simply reflections of a particular level of QWE. This is an important issue as it questions whether the QWE is a necessary or a sufficient area of attention for managers interested in the quitting decisions of their workers.

The remainder of this study starts to make inroads into this gap in the literature. It draws from a survey of employees to identify whether the importance of employee-level factors vary depending on whether they perceive their working environment to be good. Although the number of respondents in the survey is not huge (*N*=118), the key contributions of this paper are to highlight this gap in the literature and to begin to populate a new path for research that is designed to investigate further the quitting intentions of employees.

Method

We focus on three research questions:

1. What characterises a "good workplace environment" for employees?
2. What impact does the overall QWE have on employees" quitting intentions?
3. Do specific components of the QWE have a greater impact on quitting?

Data for this research were collected via an anonymous employee survey, aimed at investigating the interrelationships between employee participation, the QWE, productivity, and quitting intentions. The specific variables used in this study are presented in Table 1. The research design for the overall project was a multi-method multiple case study approach targeting two case organisations in each of the following four dominant industries in New Zealand: education, health, hotels and food manufacturing.

Table 1: Variable description and Summary Statistics

Variable	Description	Mean	Min	Max
Quit job	Dummy variable: 1 = Agree with statement 'I often think of leaving my job'; 0 = otherwise	0.364	0	1
Good place	Dummy variable: 1 = Agree with statement that your workplace 'is a good place to work'; 0 = otherwise	0.720	0	1
Parent	Dummy variable: 1 = have children; 0 = otherwise	0.636	0	1
Info lacking	Dummy variable: 1 = Agree / Strongly agree with 'I get information on important decisions, changes and future plans in due time'; 0 = otherwise	0.144	0	1
Satisfaction increased	Dummy variable: 1 = Satisfaction with job increased in last 12 months; 0 = otherwise	0.288	0	1
Satisfaction decreased	Dummy variable: 1 = Satisfaction with job decreased in last 12 months; 0 = otherwise	0.246	0	1
Threatened	Dummy variable: 1 = Having ever felt threatened at work; 0 = otherwise	0.297	0	1
Stressed	Dummy variable: 1 = Always / Often feeling stressed; 0 = otherwise	0.322	0	1
Not stressed	Dummy variable: 1 = Rarely / Never feeling stressed; 0 = otherwise	0.254	0	1
Appreciated	Dummy variable: 1 = Agree / Strongly agree that 'my work is appreciated by management'; 0 = otherwise	0.729	0	1
Not appreciated	Dummy variable: 1 = Disagree / Strongly disagree that 'my work is appreciated by management'; 0 = otherwise	0.144	0	1

Note: N = 118. Respondents who provided the answer 'not sure' were omitted from the analyses.

Out of a total of 240 distributed survey questionnaires across eight workplaces nested within these four industries, a total of 133 questionnaires were returned; corresponding to a response rate of 55 per cent. Due to omitted responses to questions that are employed in this empirical work, the total number of usable questionnaires here is 118. Hom, Caranikas-Walter, Prussia & Griffith (1992) point to small sample size as an issue in establishing key findings across multiple studies in their meta-analysis. However, we characterise our study as an exploratory analysis that points to new approaches and findings, suggestive of areas for further research.

The use of a survey, of course, comes with some inherent bias in that the results come from self-reported data. Our survey is comprised of (non-managerial) employees only, and a suggestion for future research is to verify perceptions of the work environment with comparable data gathered from managerial positions. While our study is exploratory, a strength of the data set is that it includes

respondents from four different industries, and we identified strong similarities across them. This aids generalisability, especially should future research corroborate our innovative findings.

The survey asked respondents three types of questions. First, they were asked if they considered their workplace to be "a good place to work." Second, they were asked how frequently they thought about leaving their workplace. Third, they were asked a set of questions about their QWE, incorporating the physical work environment, psycho-social work environment, and overall job satisfaction. The physical work environment was represented by a survey question that asked respondents if they were satisfied with the safety and comfort of their working conditions. The psycho-social aspect of the work environment was proxied by questions on workload and stress, whether the employee thought they were appreciated by management, whether they received information on important decisions, changes and future plans in due time, what degree of influence they had over their job, and whether they felt threatened at work. Regarding the final aspect of the QWE, overall job satisfaction, respondents were asked whether their level of job satisfaction had increased or decreased recently. Demographic information on the respondents was also collected. This included data on their age, gender, and parental status. The length of service for the worker in both the organisation and industry were also gathered.

Table 2 presents a cross-tabulation of QWE with quitting intention. More specifically, it shows the extent of a relationship between the responses to questions about whether they had thought about leaving their job and whether they perceive their work environment to be either good or bad. Seventy-two per cent of respondents perceived that they work in a good environment and 64 per cent had not thought about leaving their job. There are relatively few respondents who had not thought about leaving their job but did perceive that they worked in a bad working environment (seven per cent); similarly, those individuals who reported that they worked in a good environment and that they had thought about leaving their job only accounted for 15 per cent of respondents. These descriptive data give the first indication of a possible statistical relationship between perceptions of the work environment and quitting intention.

Table 2: Relationship between Quitting Intention and Good or Bad QWE

	Good QWE?			
		No	Yes	Total
Intention to quit?	No	8 6.78%	67 56.78%	75 63.56%
	Yes	23 21.19%	18 15.25%	43 36.44%
	Total	33 27.97%	85 72.03%	118 100%

Theoretically, it is possible that the link between the perceived quality of the work environment and whether the employee thinks about leaving their job may be a sequential process. Figure 1 presents a tree diagram that presents the data along this line of thought. The first issue is whether the employee perceives that the quality of the work environment is good. It can be seen that 72 per cent of the respondents perceive that they work in a good environment; out of this 72 per cent sub-sample, 78 per cent of them have *not* thought about leaving their job. This branch of the tree ends with nearly 57 per cent of the overall sample; the end probabilities correspond directly with those presented in Table 2.

Figure 1: Sequential Process of Perceived QWE and Quitting Intentions

Is it a good place to work (Q46)?	Do you often think of leaving your job (Q47)?	Final probabilities

- Yes = 72.03 % → A
  - Yes = 21.17 % → C 15.25 %
  - No = 78.82 % → D 6.78 %
- No = 27.97 % → B
  - Yes = 75.76 % → E 21.19 %
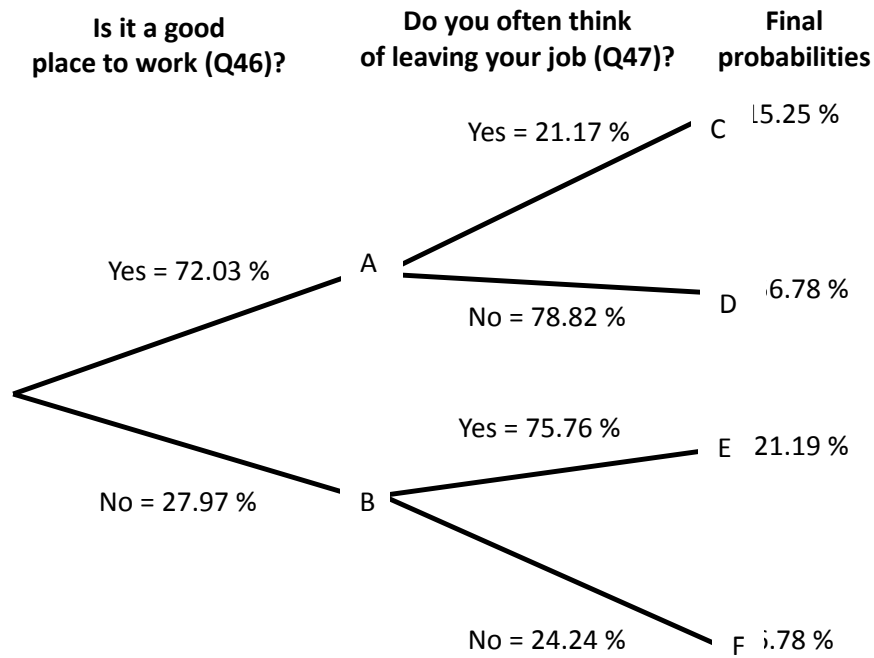 - No = 24.24 % → F 5.78 %

Figure 1 also illustrates that, out of the 28 per cent of respondents who perceive that they work in a bad working environment, nearly 76 per cent of them have thought about leaving their job. These clear asymmetries are worthy of further investigation and, as such, these two sequential dichotomous issues are the focus of the econometric analysis below. Of interest are the determinants of these two dichotomous issues.

Descriptive statistics about the independent variables used in the upcoming econometric analysis are presented in Table 1. It illustrates that 64 per cent of the respondents have children; only 14 per cent of workers in the final sample agreed with the statement that they get information on important decisions, changes and future plans in due time; 32 per cent are stressed at work; 25 per cent have experienced a reduction in their job satisfaction during the past 12 months; and 14 per cent believe that their work is not appreciated by their management.

Table 3: Perceived QWE and Quitting Intentions: Correlation coefficients of independent variables

	Quit job	Good place	Satisfaction increased	Satisfaction decreased	Parent	Info lacking	Threatened	Appreciated	Not appreciated	Stressed	Not stressed
Quit job	1.000	–	–	–	–	–	–	–	–	–	–
Good place	-0.509***	1.000	–	–	–	–	–	–	–	–	–
Satisfaction increased	-0.248***	0.230**	1.000	–	–	–	–	–	–	–	–
Satisfaction decreased	0.508***	-0.434***	-0.363***	1.000	–	–	–	–	–	–	–
Parent	-0.232**	0.117	-0.101	-0.099	1.000	–	–	–	–	–	–
Info lacking	0.442***	-0.497***	-0.261***	0.495***	-0.091	1.000	–	–	–	–	–
Threatened	0.241***	-0.339***	-0.044	0.233**	-0.202**	0.103	1.000	–	–	–	–
Appreciated	-0.410***	0.597***	0.220**	-0.449***	0.093	-0.618***	-0.105	1.000	–	–	–
Not appreciated	0.241***	-0.605***	-0.261***	0.495***	-0.040	0.656***	0.262***	-0.673***	1.000	–	–
Stressed	0.420***	-0.460***	-0.078	0.365***	-0.307***	0.337***	0.307***	-0.314***	0.285***	1.000	–
Not stressed	-0.199**	0.364***	0.187**	-0.288***	0.078	-0.240	-0.294***	0.269***	-0.240***	-0.402***	1.000

Notes: ***, ** and * signify statistical significance at the 1%, 5% and 10% confidence level, respectively.

Table 3 presents the correlation coefficients for these variables, and they are in line with *a priori* expectations. For instance, often thinking about leaving a job is positively correlated with a recent decrease in job satisfaction, a feeling of lacking information on important decisions, and feeling threatened, stressed and not appreciated by management. Unsurprisingly, the perception that the quality of the work environment is good is positively correlated with being appreciated, not being stressed and experiencing a recent increase in job satisfaction.

Econometric approach

We adopt the formal model for estimating quitting probabilities according to Greene (2003). An important issue in any stochastic modelling process is to identify what influences the dependent variable. In our case, we have two dependent, albeit potentially sequential, variables to model. Let y_{1i} be a latent variable that denotes the probability that a worker is thinking about quitting, which is dependent on a range of motivators, X_{1i}. Also let y_{2i} be a latent variable that denotes the probability that the worker perceives that they work in a good workplace environment, where this is also dependent upon a range of factors, X_{2i}. The model is represented as follows:

$$y_{1i} = b_1 X_{1i} + e_{1i}$$
$$y_{2i} = b_2 X_{2i} + e_{2i}$$

where the values for y_{1i} are observable and related to the following binary dependent variables, on the basis of the following conditions:

$Quit_i = 1, \text{if } y_{1i} > 0$ $\qquad\qquad Quit_i = 0, \text{if } y_{1i} \pounds 0$
and
$Good\ Place_i = 1, \text{if } y_{2i} > 0$ $\qquad Good\ Place_i = 0, \text{if } y_{2i} \pounds 0$

where $Quit_i = 1$ denotes that the worker is thinking about quitting their job, and $Good\ Place_i = 1$ denotes that the worker feels that they work in a good working environment. The errors (e_{1i}, e_{2i}) are assumed to have the standard bivariate normal distribution, with $E(e_{1i}) = 0 = E(e_{2i})$, $V(e_{1i}) = 1 = V(e_{2i})$ and $Cov(e_{1i}, e_{2i}) = r$. Thus the worker's quitting probability can be written as:

$$P(Quit)$$
$$= P(Quit_i = 1, Good\ Place_i = 1)$$
$$= P(X_{1i} < x_{1i}, X_{2i} < x_{2i})$$
$$= \int_{-\yen}^{x_{2i}} \int_{-\yen}^{x_{1i}} f2(z_{1i}, z_{2i}; r) dz_{1i} dz_{2i}$$
$$= F(b_1 X_{1i}, b_2 X_{2i}; r)$$

where F denotes the bivariate standard normal distribution function with correlation coefficient r. The bivariate probit model has full observability if $Quit_i$ and $Good\ Place_i$ are both observed in terms of all their four possible combinations (i.e. "$Quit_i = 0, Good\ Place_i = 1$", "$Quit_i = 1$, $Good\ Place_i = 0$", "$Quit_i = 0, Good\ Place_i = 1$" and "$Quit_i = 0\ Good\ Place_i = 0$",); this is the case

in our study and full observability naturally leads to the most efficient estimates (Ashford & Sowden, 1970; Zellner & Lee, 1965).

Results

The results of seemingly unrelated bivariate probit estimations are presented in Table 4 and represent the most parsimonious model. The econometric estimation controlled for possible differences across industries through the application of a clustering algorithm to allow for greater similarity between workers in the same industry and greater differences between workers in different industries.

Table 4: Quitting Intentions and Perceived QWE: Coefficient estimates in biprobit model

	(1) **Quit**		**(2)** **QWE**	
Constant	-0.668	(0.313)**	0.719	(0.318)*
Parent	-0.477	(0.175)***	–	–
Info lacking	1.403	(0.675)**	–	–
Satisfaction increased	-0.279	(0.172)	–	–
Satisfaction remains the same	*Control variable*		–	–
Satisfaction decreased	0.931	(0.388)**	–	–
Threatened	0.253	(0.246)	-0.737	(0.389)*
Stressed	0.687	(0.277)**	-0.661	(0.168)***
Neither stressed nor not stressed	–	–	*Control variable*	
Not stressed	–	–	6.972	(0.216)***
Appreciated	–	–	0.793	(0.365)**
Neither appreciated nor not appreciated	–	–	*Control variable*	
Not appreciated	–	–	-1.933	(0.331)***
N	118			
Log pseudo likelihood	-79.908			
Rho	-0.789 (0.086)***			

Notes: ***, ** and * represent statistical confidence at the 1%, 5% and 10% levels. Rho suggests strong negative correlation between regressions (chi^2(1)=22.091, p<0.000).

Table 4 presents two columns of results which correspond to the biprobit estimation. The first column corresponds to the dichotomous (i.e. yes/no) response to the statement that "I often think of leaving my job." These results are in line with *a priori* expectations that are ingrained in the literature: those respondents who report that they are stressed at work and have experienced a recent reduction in their level of job satisfaction are more likely to think about leaving their job. However, those respondents who are parents are less likely to think about leaving their job, as are those who have recently experienced an increase in their level of job satisfaction.

The second column of results corresponds to the dichotomous response to the statement that they perceive that their workplace "is a good place to work". These results are also in line with *a priori* expectations which were discussed above: perceiving that the workplace is a good place to work is positively influenced by being appreciated by management and not being stressed, and negatively influenced by being threatened or stressed at work and by not being appreciated by management.

Although there is nothing particularly new or surprising about these results, the important thing to note from Table 4 is that there is strong negative correlation between these two sets of regressions, as illustrated through the Rho coefficient and its respective statistical significance. Given the proposed sequential nature of these two issues, it is worth pursuing this line of thought and attempting to identify whether the (direct or indirect) influence of the variables on the quitting regression vary depending on whether the quality of the work environment is perceived to be good. Accordingly, the marginal effects of the variables under the conditions that the QWE variable is equal to 1 and 0 (zero) are presented in Table 5.

Table 5: Determinants of Quitting Intentions and Perceived QWE: Marginal effects

	(1) Quit given QWE = 1		**(2)** Quit given QWE = 0	
Parent	-0.184	(0.071)***	-0.005	(0.011)
Info lacking	0.515	(0.193)***	0.007	(0.015)
Satisfaction increased	-0.104	(0.063)*	-0.005	(0.011)
Satisfaction decreased	0.361	(0.142)**	0.008	(0.015)
Threatened	0.082	(0.098)	-0.005	(0.016)
Stressed	0.254	(0.104)**	0.002	(0.008)
Not stressed	0.166	(0.036)***	0.199	(108.06)

Notes: ***, ** and * represent statistical confidence at the 1%, 5% and 10% levels.

Table 5 displays the regression estimates of the determinants of quitting intentions having controlled for the determinants of the quality of the work environment; this is tantamount to comparing routes A to C with B to E on Figure 1. Most importantly, and the main result of this paper, these *conditional* marginal effects of the variables influencing the probability of quitting do vary substantially depending on whether the respondent perceives that they work in a good working environment or not. This means that the factors that contribute to thinking about leaving the job are sensitive to employees' overall assessment of the quality of their work environment. High stress levels, lack of information on important decisions, and decreases in job satisfaction have a statistically significant impact on employees' intention to quit in workplaces perceived as being a good workplace environment. Importantly, and the crux of this paper, these issues are *not* statistically significant in influencing employees' intention to quit if employees perceive that they work in a bad work environment, which is most likely to be the case if they are stressed, threatened and not appreciated by management.

Rather than simply reporting on the statistical significance of the variables' marginal effects, it is important to emphasise the differences in magnitudes of the marginal effects. Several issues are worth emphasising. First, the influence of being stressed on the thought of leaving is substantially greater in a good workplace than in a bad workplace; it increases the probability of quitting by 25.4 per cent if employees work in a good workplace, compared with merely 0.02 per cent in a bad workplace. This strongly suggests that managers in workplaces with good QWE should reduce stress levels to reduce quitting behaviour.

Interestingly, *not* being stressed has similar effects on the thought of leaving in good and bad workplaces. The effect of not being stressed on the probability of quitting is 20 per cent larger in a bad workplace; it increases the probability of thinking about quitting by 16.6 per cent if employees

work in a good workplace, compared with 19.9 per cent in a bad workplace. (These figures suggest that workers want some stress or challenge at work.)

Second, the effect of not receiving information about important decisions on the thought of quitting is 76 times larger if employees are in a good workplace. It increases the probability that the worker will think about quitting by 51.5 per cent if employees work in a good workplace, compared with 0.6 per cent in a bad workplace.

Third, the influence of changes in job satisfaction on the thought of leaving is 48 times greater in a good workplace for reductions, and 21 times greater for increases. Reductions in the level of job satisfaction increase the probability of thinking about quitting by 36.1 per cent if employees work in a good workplace, compared with 0.8 per cent in a bad workplace. The effect of an increase in the level of job satisfaction on the thought of quitting is 21 times smaller if employees perceive they work in a bad working environment; it decreases the probability of thinking about quitting by 10.4 per cent if employees work in a good working environment, compared with 0.5 per cent in a bad working environment. Satisfaction, therefore, is important but not the only influence on quitting behaviour.

Finally, the effect of being a parent on the probability of thinking about quitting is 33 times larger if employees are in a good workplace. Being a parent is associated with a decrease in the probability of thinking about quitting by 18 per cent if employees work in a good (bad) workplace, compared with 0.5 per cent in a bad workplace. Hence, being a parent in a good working environments means employees are very unlikely to quit.

Additional drivers of quitting intentions

The results presented above hold even once we have controlled for a range of socioeconomic variables including age, gender, carer, job status, training, length of time in the industry, organisation and current job, and whether the respondent wanted to have more influence at their workplace. These pseudo-stability test results are not included for brevity.

The data set also included six further questions that relate to QWE, and these variables were used to conduct sensitivity analyses (see Table A1). Their inclusions in the model had no significant impacts on the key results. First, three questions relating to influence on work organisation failed to elicit statistically significant responses and did not affect the qualitative inference of the other results. Second, feeling really tired from work did not affect the probability of thinking about quitting. Third, working a significant degree of overtime lowered the probability of thinking about quitting; this was statistically significant and changed slightly the marginal effects of other variables. This counter-intuitive result could be explained as employees feeling that they are more valued if they work more overtime, in which case, this variable captures a similar issue as the feeling appreciated variable and inclusion of this extra variable may be confounding the model. Fourth, there was a, though, very small statistically significant marginal effect of satisfaction with the safety and comfort of working conditions on the probability of thinking about quitting (0.009, p=0.07). On inspection, this variable had the smallest marginal effect and its inclusion did not appear to bias the observed marginal effects of the other variables on the probability of thinking about quitting. Analysis of a larger data set is encouraged to corroborate these findings.

Conclusion

This exploratory research shows three important findings. Firstly, it confirms the importance of perceptions of the quality of the work environment in the quitting decision, particularly since some more objective measures were not statistically significant as drivers (e.g. overtime, training). Employees are significantly less likely to intend to quit their job if they perceive their working environment to be good. The majority of employees who thought of leaving their job perceived their workplace to not be a good place to work. Good quality of the work environment was indicated by low stress levels, feeling appreciated by management and not feeling threatened. This is consistent with what is suggested by separate sources in the literature (Bockerman & Ilmakunnas, 2009; Boxall et al., 2003; Cottini et al., 2009; Gustaffson & Szebely, 2009). Secondly, the research confirmed that an employee is more likely to want to leave if they are not a parent, believe that they do not receive enough important information in time, are stressed and experience a reduction in the level of job satisfaction.

Thirdly, the impact of these factors on the desire to quit differs in magnitude depending on whether the QWE is rated as being good or bad. In workplaces with a good QWE, the impact of high stress levels, lack of information on important decisions, and decreases in satisfaction are much greater on employees' intention to quit. This finding is interesting, and there are few explanations for this phenomenon in the extant literature because of the paucity of research on quitting decisions within the framework of the QWE.

The results reported here could be compared to another study showing that employees who come to a workplace because of a reputation of a "good employer" may be disappointed when they discover practice differs from policy or reputation (Hom et al., 2008). However, that study relates to turnover in the first year of tenure, and our results suggest that length of tenure/service in the organisation has no effect on the intention to quit. Furthermore, the study by Hom et al. (2008) does not account for the impact of a *lack* of information on the quitting intentions of employees in a good workplace. Landau's (2009) explanation of the impact of the *outcomes* of employee voice provides a stronger basis for our results, by linking employees' expectations and experience. In this way, Landau potentially explains why a workplace perceived as good might be more impacted by decreases in job satisfaction, stress and lack of information from management, thus, contributing to dissatisfaction and increased quitting intentions. We might call this a disappointment effect, whereby the high expectations produced amongst employees by a workplace with good QWE leads to greater disappointment because of decreases in job satisfaction, stress and lack of information from management, and hence, to increased quitting intentions.

Conversely, the results indicate that if the QWE is considered bad by employees, then high levels of stress, information on important decisions and job satisfaction decreases have less of an effect on probability that the respondent will think about leaving. Low stress levels decrease the probability of quitting bad workplaces only slightly more than in good workplaces. Elsewhere, it has been suggested that employees feel resigned to staying and perceive that they have few other opportunities in a poor quality work environment (Taplin & Winterton, 2007). This could imply that in a workplace where employees already feel they are not appreciated by management suffer stress and feel threatened at work, there is a concurrent sense of resignation and disempowerment manifested in lesser reaction to stress, negative changes in the QWE and lack of information about changes and other important issues. In other words, there is no dissonance, or disappointment effect as there would be with a good QWE.

This paper contributes to the literature in a number of areas. First, it has corroborated earlier evidence that an employee is more likely to feel that they work in a good place if they are

appreciated, not threatened and not stressed (Bockerman & Ilmakunnas, 2009; Boxall et al., 2003; Cottini et al., 2009; Gustafsson & Szebely, 2009). Secondly, it confirms that perceptions of a bad work environment have a negative impact on quitting behaviour. More importantly, it has shown that the effects on quitting of some key factors that are associated with the QWE are greater in a workplace with good QWE. The factors with greater impact in workplaces with good QWE are high levels of stress, decreased job satisfaction and not receiving information about important decisions. On the other hand, the impact of not being stressed reduces the likelihood of quitting in all workplaces.

Consequently, if the employee perceives that they work in a good work environment, then a business can dissuade them from thinking about quitting their job by ensuring that their level of job satisfaction does not decrease, by continually providing the employee with information about important decisions, changes and future plans in due time, and by ensuring that the employee is not overly stressed with work issues. Organisations that wish to retain their quality workforce should adopt a two-stage approach. They should focus initially on achieving a good QWE without high stress levels and with perceptions of appreciation by management and a lack of threats at work. These prior interventions are essential to reduce later quitting intentions and should be implemented before expending effort on adjusting factors that contribute to job satisfaction and increasing the provision of information to employees of important decision making processes. Retaining low levels of stress remain important in the second stage.

Larger samples are required to fully test the relationships between variables indicated here, and a panel of data could substantiate causation. Ideally, matching employee perceptions of QWE against objective measures of QWE on the basis of paired organisation/employee surveys or case studies would test the relationships between these variables further. However, this study is highly suggestive of a new approach to research over the issue of quitting behaviour and highlights the need for further research into "good" *and* "bad" workplaces, and their differential impact on quitting intentions.

References

Alfes, K., Shants, A.D., Truss, C., and Soane, E.C. (2013), The link between perceived human resource management practices, engagement and employee behaviour: a moderated mediation model. *The International Journal of Human Resources Management,* 24(2): 330-51.

Ashford, J.R., Snowden, R.R. (1970), Multivariate Probit Analysis. *Biometrics*, 26(3): 535-46.

Bockerman, P., Ilmakunnas, P. (2009), Job disamenities, job satisfaction, quit intentions, and actual separations: Putting the pieces together. *Industrial Relations,* 48(1): 73-96.

Boxall, P., Macky, K., and Rasmussen, E. (2003), Labour turnover and retention in New Zealand: the causes of consequences of leaving and staying with employers. *Asia Pacific Journal of Human Resources,* 41(2): 196-214.

Boxall, P., and Macky, K. (2009), Research and theory on high-performance work systems: Progressing the high-involvement stream. *Human Resource Management Journal*, 19(1): 3-23.

Busck, O., Knudsen, H., and Lind, J. (2010), The transformation of employee participation: Consequences for the work environment. *Economic and Industrial Democracy*, 31(3): 285-307.

Cottini, E., Kato, T., and Nielsen, N.W. (2009), *Adverse workplace condition, high-involvement work practices and labor turnover: evidence from Danish linked employer-employee data* (Discussion Paper no.4587), Bonn, Germany, The Institute for the Study of Labor (IZA).

Delgaauw, J. (2007), Where to go? Workers' reasons to quiet and intra- vs interindustry job mobility. *Applied Economics,* 39(16): 2057-66.

Dickey, H., Watson, V., and Zangelidis, A. (2009), Job satisfaction and quit intentions of offshore workers in the UK North Sea oil and gas industry (MPRA Paper no.18666), Retrieved from http://mpra.ub.uni-muenchen.de/18666

Emery, F.E., and Thorsrud, E. (1976), *Democracy at work*, Leiden, Nijhoff.

Godard, J. (2004), A critical assessment of the high-performance paradigm. *British Journal of Industrial Relations,* 42(2): 349-78.

Greene, W.H. (2003), *Econometric Analysis* (5th ed.), London, Prentice Hall.

Guchati, P., and Cho, S. (2010), The impact of human resource management practices on intention to leave of employees in the service industry in India: the mediating role of organizational commitment. *The International Journal of Human Resource Management,* 21(8): 1228-47.

Gustafsson, R.A., and Szebehely, M. (2009), Outsourcing of elder care services in Sweden: effects on work environment and political legitimacy. In King, D. and Meagher, G. (eds.), *Paid Care in Australia. Politics, profits practices,* Sydney, Sydney University Press, pp.81-112.

Gustavsen, B., and Hunnius, G., (1981), *New patterns of work reform. The case of Norway,* Oslo, Oslo University Press.

Harley, B., Allen, B.C., and Sargent, L.D. (2007), High performance work systems and employee experience of work in the service sector: The case of aged care. *British Journal of Industrial Relations,* 45(3): 607-33.

Hom, P.W., Caranikas-Walker, F., Prussia, G.E., and Griffith, R.W. (1992), A meta-analytical structural equations analysis of a model of employee turnover. *Journal of Applied Psychology*, 77(6): 890-909.

Hom, P., Roberson, P., and Ellis, A.D. (2008), Challenging conventional wisdom about who quits: revelations from corporate America. *Journal of Applied Pyschology,* 93(1): 1-34.

Hvid, H., and Hasle, P. (2003), *Human development and working life*, Aldershot, Ashgate Publishing Limited.

Landau, J. (2009), When employee voice is met by deaf ears. *SAM Advanced Management Journal,* 74(1): 4-12.

Lee, T.W., Mitchell, T.R., Sablynski, C.J., Burton, J.P., and Holtom, B.C. (2004), The effects of job embeddedness on organizational citizenship, job performance, volitional absences and voluntary turnover. *The Academy of Management Journal,* 47(5): 711-12.

Macky, K., and Boxall, P. (2007), The relationship between high-performance work practices and employee attitudes: An investigation of additive and interaction effects. *The International Journal of Human Resource Management,* 18(4): 537-67.

Macky, K., and Boxall, P. (2008), High-involvement work processes, work intensification and employee wellbeing: A study of New Zealand worker experiences. *Asia Pacific Journal of Human Resources,* 46(1): 38-55.

March, J.G., and Simon, H.A. (1993), *Organizations* (2nd ed.), Cambridge MA, Blackwell.

Mohamed, G., Taylor, S.G., and Hassan, A. (2006), Affective commitment and intent to quit: The impact of work and non-work related issues. *Journal of Managerial Issues,* 18(4): 512-29.

Perryer, C., Jordan, C., Firns, I., and Travaglione. (2010), Predicting turnover intentions. The interactive effects of organizational commitment and perceived organisational support. *Management Research Review,* 33(9): 911-23.

Reiche, S.B. (2009), To quit or not to quit: organizational determinants of voluntary turnover in MNC subsidiaries in Singapore. *The International Journal of Human Resource Management,* 20(6): 1362-80.

Scott, A., Gravelle, H., Simoens, S., Bojke, C., and Sibbald, B. (2006), Job satisfaction and quitting intentions: A structural model of British general practitioners. *British Journal of Industrial Relations,* 44(3): 519-40.

Scott, D., Bishop, J.W., and Chen, X. (2003), An examination of the relationship of employee involvement with job satisfaction, employee cooperation, and intention to quit in U.S. invested enterprise in China. *The International Journal of Organizational Analysis,* 11(1): 3-19.

Sell, L., and Cleal, B. (2011), Job satisfaction, work environment, and rewards: Motivational theory revisited. *Labour,* 52(1): 1-23.

Simons, K.V., and Jankowski, T.B. (2008), Factors influencing nursing home social workers' intentions to quit employment. *Administration in Social Work,* 32(1): 5-21.

Smith, A., Oczkowski, E., and Smith, C.S. (2011), To have and to hold: modelling the drivers of employee turnover and skill retention in Australian organisations. *The International Journal of Human Resource Management*, 22(2): 395-416.

Taplin, I.M., and Winterton, J. (2007), The importance of management style in labour retention. *International Journal of Sociology and Social Policy,* 29(1/2): 5-18.

van der Aa, Z., Bloemer, J., and Henseler, J., (2012), Reducing employee turnover through customer contact center job quality. *The International Journal of Human Resource Management,* 23(18): 3925-41.

Wood, S.J., and Wall, T.D. (2007), Work enrichment and employee voice in human resource management-performance studies. *The International Journal of Human Resource Management,* 18(7): 1335-72.

Zellner, A., and Lee, T.H. (1965), Joint Estimation of Relationships Involving Discrete Random Variables, *Econometrica*, 33(2): 382-94.

Appendix: Table A1: Specific Questions Asked of Respondents

General QWE and quitting intention
Do you agree with the statement that your workplace "is a good place to work"?
Do you agree with the statement "I often think of leaving my job"?

Specific Quality of The Work Environment Questions
Do you have more work to do than you can accomplish in one shift?
How often have you felt stressed?
My work is appreciated by management
I get information on important decisions, changes and future plans in due time
Have you ever felt threatened at work?
Has your satisfaction with your job changed during the past 12 months?

Additional Drivers
Do you have significant influence on how much work you have to do?
I have significant influence on how my work is done
I should have more influence at my place of work
How often have you felt really tired from work?
Are you required to work overtime?
Are you satisfied with the safety and comfort of your working conditions?