

MAKING THE MOST OF WORK RESOURCES:  
THE MODERATING EFFECT OF REGULATORY  
FOCUS ON RESILIENCE DEVELOPMENT

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## Abstract

The ever changing, volatile business world calls for resilient organisations and resilient employees. While past research suggests the need to identify factors that contribute to employee resilience development, there is limited empirical research that clarifies these factors. Drawing from Conservation of Resources (COR) theory, the purpose of the present study was to examine the relationship between social- and feedback-related resources, and resilient employee behaviours, and to explore the moderating role of regulatory foci (prevention and promotion) in this relationship. A survey was conducted among 162 participants from four organisations. Moderated multiple regressions, considering 3-way interactions, were conducted to test the theoretical assumptions. Findings from this study suggest that: 1) individuals with a high promotion and high prevention focus display higher levels of employee resilience, irrespective of resource levels, 2) the resilience of employees with a low promotion and low prevention profile is impacted by resource availability, and 3) mismatch in regulatory foci (i.e., individuals exhibiting high levels of one regulatory focus and low levels of the other) accounts for unique relationships between resources and resilient behaviours. This is the first study to examine the interaction between promotion and prevention, and to assess the prevalence and role of regulatory foci in workplace factors.

## Introduction

The modern working environment has become increasingly turbulent. Some of today's business leaders describe it as a "VUCA" environment, that which is volatile, uncertain, complex, and ambiguous (White, 2013). No longer are organisations expected only to compete locally, but the ever-growing globalization creates new challenges and demands daily (Praveen, 2015). Political, economic, and environmental events send shock waves that impact organisations, whether it is the Global Economic Crisis, Brexit, or the contamination of New Zealand's infant formula in China. Research suggests that resilient organisations are better able to succeed in this dynamic and uncertain environment, as they exhibit adaptability and flexibility, anticipate threats and create change, and have strong leadership and an engaged workforce (Lee, Vargo, & Seville, 2013; Nilakant et al., 2016). While it is easy to view each organisation as one cog in the VUCA world, it is important to remember that organisations are made up of employees, and that these employees' contributions ultimately drive business success (Schaufeli, Ouweneel & Le Blanc, 2013). Recent research suggests that employee capabilities (e.g., human and social capital) are essential to the organisation's ability to successfully navigate adversity and exhibit resilience (Kuntz, Näswall & Malinen, 2016; Nilakant et al., 2016). Despite the importance of resilient employees to a resilient organisation, there is surprisingly little empirical research exploring how employees develop and demonstrate resilience in an organisational setting, and how organisations can encourage resilient behaviours. A growing body of research describes employee resilience as a suite of adaptable, learning, and networking behaviours, and proposes that specific organisational practices and contextual factors comprise workplace resources that enable an employee to display resilient behaviours (e.g., Kuntz et al.,

2016; Bardoel et al., 2014)). In particular, a learning-oriented, supportive, and collaborative organisational environment will be beneficial for developing resilient behaviours within employees. To this end, the present study seeks to understand the relationship between organisational factors associated with developmental and supportive resources, and employee resilience.

Individuals differ in their response to and utilisation of resources (Gallagher, 2012) and it is therefore implausible to assume that all employees will respond similarly to workplace resources (Gonzalez & Tacorante, 2004; Xanthopoulos, Bakker, Demerouti, & Schaufeli, 2007; Gallagher, 2012). This suggests that the provision of support and other resources alone may be insufficient to elicit resilient employee behaviours. Despite recent calls for the investigation of individual differences and psychological processes underpinning resource management in organisational settings (e.g., Ployhart & Hale, 2014), empirical research examining the role of these mechanisms on the relationship between resource availability and workplace behaviour is scarce. Self-Regulatory Focus (SRF) is one underlying psychological mechanism that explains individual stance toward resources and resource utilisation (Higgins, 1997), suggesting that some individuals place greater emphasis on maximizing positive outcomes (i.e., promotion focus), while others focus on minimizing negative outcomes (prevention focus) (Brenninkmeijer, Demerouti, le Blanc, & van Emmerik, 2010). Though barely researched in an occupational context (Petrou & Demerouti, 2015), self-regulatory focus may elucidate linkages between perceived availability of specific workplace resources and resilient behaviours. Drawing on Conservation of Resources (COR) theory, the present study explores the moderating role of promotion and prevention self-regulatory focus on the relationship

between workplace resources, namely social support and performance feedback, and resilient employee behaviours.

### **Employee Resilience**

A recent meta-analysis found as many as 104 different working definitions for individual resilience (Meredith et al, 2011). The key theme across contemporary views is that to be considered resilient, following a significant adverse event individual must restore equilibrium, adapt, grow, or show positive change (Britt et al., 2016).

The traditional view of resilience depicts it as a personality characteristic or a trait (Wagnild & Young, 1993). Early research was based on clinical studies of children who were thriving despite their ‘traumatic’ upbringing. Wagnild & Young suggest that while some people may be dispositionally more resilient than others, resilience was still susceptible to some development in the formative years. Since then, many constructs have been associated with resilience, such as optimism (Peterson, 2000), wellbeing (Robertson et al., 2015), and mental health (Bonanno, 2012), and resilience is often conceptualised as proxy for these characteristics. For example, an individual who works in a stressful job may be seen as “resilient” if they are able to avoid burnout (Edward, 2005). Thus, resilience has been measured in literature as a positive outcome signalled by health and wellbeing indicators.

Further research on employee resilience sought to understand how resilience is manifested in workplace behaviours. The term “resilient behaviours” is increasingly mentioned in of recent literature, especially nursing, health, and youth research (eg., Edward & Hercelinskyj, 2007; Warelow & Edward, 2007; Labandal & Mikulic, 2008; Ousey & Edward, 2014; White & Bennie, 2015). However, it was

difficult to find a definition of exactly what constitutes resilient behaviours in each of these settings. For example, a paper in the British Journal of Nursing aimed to describe how knowledge of resilient behaviours could reduce burnout in nurses (Edward & Hercelinskyj, 2007). While this may be a promising approach, reflective practice was the only tool proposed for “working with a nurse’s strengths towards resilience” (pg. 241), and a clear outline of these resilient behaviours was not offered. Another study of mental health nurses suggested that nurses must engage in resilient behaviours in order to become resilient, and that resilient behaviours can be learned and fostered by the organisational environment (Warelow & Edward, 2007). This statement rings to the same tune as the present study; however, the lack of a description of resilient behaviours once again highlights the lack of construct specificity. There has been, until very recently, a large gap in the resilience literature detailing how resilience is manifested in the workplace in terms of observable behaviours.

Recent research has proposed a behavioural perspective on employee resilience, proposing that it can be developed if the appropriate resources and environment are provided by the organisation, and represent a preparedness factor that enables organisations to cope with uncertainty and change (Kuntz et al., 2016; Lee et al., 2013). The researchers suggest focusing attention on a proactive approach to building resilience that ensures both continuous employee development, and the ability to survive and thrive through adversity (Kuntz et al., 2016).

Employee resilience is herein conceptualised as “*an employee capability, facilitated and supported by the organisation, to utilize resources to continually adapt and flourish at work, even when faced with challenging circumstances*” (Näswall et al., 2015, pg. 4). This definition of employee resilience stems from the premise that a)

employee resilience can be demonstrated in both stable and uncertain conditions; b) resilience capabilities that are developed under stable conditions will influence the manifestation of resilient behaviours in times of stability and adversity, and c) that the onus of developing resilient employees is shared between employees and the organisation (Kuntz et al., 2016; Robertson, Cooper, Sarkar, & Curran, 2015). Employee resilience is studied here as a behavioural construct, comprising support-seeking, learning, and crisis resolution, among other adaptive behaviours.

Given the importance of resilience to organisations, it is not surprising that there are many training programmes targeting resilience development among workers. HardiTraining (Khoshaba & Maddi, 2001), PsyCap (Luthans et al., 2008; Luthans, Avey, Avolio, & Peterson, 2010), and Comprehensive Soldier Fitness (CFI) (Seligman & Fowler, 2011) are examples of such resilience programmes. While the aim of these programmes is to develop resilience, they are often focused on positive health and wellbeing outcomes (Britt et al., 2016). Though these secondary interventions of health and wellbeing oriented initiatives represent valuable means to achieving a resilient workforce, they are limited in impact and effectiveness if workplace characteristics (e.g., resources, leadership) are not first addressed to enable resilient behaviours. That is, the secondary intervention will be more beneficial if the right resources are first in place for the employees to utilise.

Developing resilient behaviours involves a relationship between individual characteristics and the external environment (Edward & Warelow, 2005). While there seem to be many individual factors that enable resilience development such as optimism, intelligence, humor (Tuasie & Dyer, 2004), education, wide-ranging interests (Rabkin et al., 1993), goal orientation, and flexible coping (Polk, 1997), the organisational factors that enable resilience development have largely been left out of

empirical research. Recent research suggests that an open, learning oriented, supportive, and collaborative environment with reflective learning and formal consultation may allow resilience to develop (Chang et al., 2002; Kuntz et al., 2016; Nilakant et al., 2016; Yost, 2016). Hence, viewing employee resilience as a behavioural construct, while considering individual differences that influence resource utilization, may help organisations determine whether and how their practices and the provision of resources enable the enactment of resilient behaviours. The provision of workplace resources, including social support, and performance feedback, will meet the requirements of an environment that enables employees to develop and enact resilient behaviours. The current study proposes that Conservation of Resources Theory (COR) can be drawn on to illustrate the relationship between workplace resources, individual characteristics, and employee resilience.

### **A COR Theory Perspective on Resources and Employee Resilience**

Hobfoll's (1989) conservation of resources theory offers an explanatory model of individuals' behavioural responses to stressful situations. COR theory explains individual motivation to maintain existing resources, but also to develop and acquire new ones (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). Individuals are motivated to invest in workplace resources to protect against resource loss or to gain resources, proactively preparing against potential loss, or diversifying the range (Chen, Westman, & Hobfoll, 2015). Yet, a resource (personal, social, physical) is only considered as such to the extent that individuals value it, and view it as enabling goal attainment (Halbesleben et al., 2014). In this regard, COR theory supports the notion that there are intrapersonal factors influencing how individuals view resources (e.g., self-regulatory focus), and the extent to which they utilise resources (e.g., employee resilience). COR theory underscores the key role of organisations in

signaling how the resources available contribute to goal achievement, which impacts on effort towards acquisition and maintenance of specific resources (Halbesleben et al., 2014). Overall, the motivational underpinnings of COR theory suggest not only the need to understand the psychological mechanisms and contextual factors that drive resource conservation and acquisition, but also the importance of measuring behaviours that indicate resource availability and utilisation.

Resilient organisations focus on maintaining and growing operational and supportive resources for their employees (Chen et al., 2015). This can be achieved, for example, by ensuring the availability of resources that enable employees to utilise their strengths at work. The enactment of resilient behaviours, which are employee-led and either signal or result in the development of work-relevant strengths, represents a behavioural indicator of the extent to which organisations support resource utilisation (Van Woerkom, Bakker, & Nishii, 2016). The resources included in the study will be social support and performance feedback.

Social support is a social resource that refers to the perceived level of support received from supervisors and coworkers (Chiu, Yeh, & Huang, 2015). The relationship between social support and resilience has been studied in various fields of human science. Social support has been found to help elderly people develop resilience and empowerment (Metze, Kwekkeboom, & Abma, 2015), and to have a positive impact on resilience in physiotherapy students (Biro, Veres-Balajti, & Kosa, 2016). In occupational settings, social support has been linked to a variety of positive work outcomes, such as performance, work engagement and organisational commitment (Bakker & Demerouti, 2007; Bakker & Demerouti, 2008), and has been thought of as a buffer between work demands and outcomes (Haines, Hurlbert, & Zimmer, 1991). Social support may promote resilient behaviours. As suggested in

COR theory, employees with a greater pool of social support have more resources to invest (Halbesleben, et al., 2014). Therefore, these employees should display more resilient behaviours such as investing more in social relationships that enable resource acquisition by building a supportive network in which employees can rely on and leverage in order to address challenges (Nilakant et al., 2016). Further, social support is likely to create an open, collaborative environment and enable positive relationships with peers and supervisors, in which employees feel empowered to seek feedback and assistance, and motivated to share knowledge and other resources, thus promoting the desired environment to develop resilient behaviours. Therefore, the following relationship is hypothesized:

*Hypothesis 1a: Workplace social support will be positively associated with resilient behaviours.*

Performance feedback may come in the form of feedback from the job itself or feedback from an agent such as a supervisor. It refers to the degree to which constructive appraisal of performance is given to the employee so they can assess the effectiveness of their performance and use the appraisal to improve or further develop skills (Bienstock., et al, 2007; Hackman & Oldham, 1975). Bakker & Demerouti (2007) propose that performance feedback is a resource that moderates the influence of work demands on outcomes such as increasing job satisfaction and performance, and decreasing turnover. Performance feedback may be important for predicting the future loss or gain of resources. Poor performance is perceived to lead to fewer resources while good performance is perceived to lead to more resources (Wang, 2007). Constructive feedback signals to the employee that the organisation values a learning and development approach, and promotes these behaviours (Halbesleben, et al., 2014). Therefore, the current study proposes that sound feedback on performance

will encourage employees to engage in resource acquisition behaviours, such as ongoing evaluation and improvement of their own performance, utilising error as a platform for learning, and being practised in responding effectively to feedback, thereby meeting the learning-oriented requirements for resilience development (Kuntz et al., 2016). The following is hypothesized:

*Hypothesis 1b: Performance feedback will be positively associated with resilient behaviours.*

### **Workplace resources and employee resilience: The role of self-regulatory focus**

The current study proposes that self-regulatory focus (SRF) is one of the psychological processes that influence the relationship between workplace resources and employee resilience. Higgins (1997) first introduced the concept of regulatory focus as an explanation of the underlying process of Freud's (1950) pleasure-pain motivation process. Higgins posits that the motivation to seek pleasure and avoid pain is much more complex than prior research assumed. The theory of SRF emerged as an explanatory approach to the motivation to satisfy the most elementary of Maslow's (1943) Hierarchy of Needs: nurturance (e.g. nourishment) and security (e.g. protection). Higgins argues that the motivation to obtain nurturance and security are two distinct motivational processes and draw on separate regulatory foci, stating, "nurturance-related regulation involves a *promotion focus*, whereas security-related regulation involves a *prevention focus*" (pg. 1281). SRF theory is consistent with COR in that a promotion focus satisfies the need or ability to invest resources to gain more resources and a prevention focus satisfies the need to reduce losses by conserving existing resources.

These two foci, or a combination of these foci, are likely to account for different relationships between resources and employee resilience. Promotion-focused

employees seek opportunities for growth and development with the aim of achieving their ideal self. The main driver of a promotion-focused individual is their desire to maximize positive outcomes (Brenninkmeijer et al., 2010). Promotion focus is a proactive approach to resource generation and utilization, which is an essential aspect of employee resilience. Employees exploring new ways of working through learning from past performance, or approaching managers for feedback and support are examples of proactive behaviours in utilizing resources.

In contrast, an employee with a prevention focus may be more aware of, and anticipate negative consequences, and may therefore act to manage crises and learn from mistakes in order to avoid negative consequences in future (Brenninkmeijer et al., 2010). From a COR standpoint, in times when resources are under threat a prevention focused individual may become especially concerned with protecting existing resources and establishing security (Hobfoll, 1989). Further, prevention focused employees may reduce perceived “risky” behaviour such as investing resources in growth or social endeavors because there is no assurance of resource accrual (Koopman, et al., 2016). While the prevention-focused individual may view and utilise resources differently from a promotion-focused individual, it is likely that they both capitalize on existing resources and engage in resilient behaviours. The following paragraphs describe contemporary views on regulatory foci, and how these perspectives may explain the relationship between workplace resources and behaviours.

SRF theory assumes that regulatory focus is a stable, trait-like feature (Higgins, 1997). However, when placed in different situations, individuals may shift regulatory foci, rendering it a state like feature (Higgins, 2005). An employee who typically exhibits prevention focus may be able to adopt a promotion focus to obtain

specific goals at work (Petrou & Demerouti, 2015), or adapt foci to situations. For example, an entrepreneur may adopt a promotion focus during the creative process and a prevention focus when evaluating those ideas (Brockner, Higgins, & Low, 2004). It is easy to think of prevention and promotion as separate ends of a spectrum, however, it is essential to understand that promotion and prevention are orthogonal foci (Brenninkmeijer, 2010, pg. 717). It follows that employees can strategically adopt a particular focus in order to meet the objectives or reduce the demands of a role whilst at work (Petrou & Demerouti, 2015). The limited research available suggests that a person will only have one focus at one point in time. However, it may be possible for an individual to have a combination of foci present at the same time. The current study seeks to understand whether and how the two regulatory foci interact with resources to predict employee resilience.

Employees with a high prevention focus are concerned with reducing demands and avoiding loss, suggesting they may be more focused on maintaining the status quo than on recognizing and seizing opportunities for growth and development. That is, consistent with the resource loss tenet of COR, prevention focused employees may reduce growth endeavors such as expanding their network and instead work to utilise their existing network more effectively. However, the limited research available is conflicting in this regard. For example, some studies suggest that prevention-focused individuals may be less motivated to act upon discretion-oriented resources such as autonomy (Petrou & Demerouti, 2015), and others show that autonomy may be utilized by individuals with a prevention focus as a means to satisfy their need for security, as this resource is often accompanied by a sense of control (Brenninkmeijer et al., 2010; Metze, Kwekkeboom, & Abma, 2015). Further, recent research suggests that employees with a prevention focus rely on feedback and support to proactively

engage in behaviours that reduce the likelihood of negative outcomes at work (Petrou & Demerouti, 2015).

Employees with a promotion focus typically emphasize growth and development, and may recognize and utilize resources to this end (Petrou & Demerouti, 2015). The moderating role of promotion focus on the relationship between job resources (e.g. social support, autonomy, feedback) and work outcomes (e.g. job satisfaction, burnout, performance) has been researched thoroughly (Bakker & Demerouti, 2007; Bakker & Demerouti, 2008; Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Petrou & Demerouti, 2015). Social support may be an important resource for promotion-focused individuals, as it provides an opportunity for the employee to expand and leverage networks, share other resources, and open growth-oriented discussions, all of which comprise resilient behaviours. Similarly, promotion focused employees may seek feedback situations with supervisors in order to measure success and goal attainment. They may use feedback from the job as a way to autonomously set or change development targets. However, whether or not promotion-focused employees are better at recognizing and utilizing resources than prevention-focused individuals, is not clear in the literature. In essence, regulatory foci may be associated with a) differing views on resources and outcomes and also differing likelihood of acting on the resources available (i.e., to exhibit resilient behaviours), or b) differing views on resources and outcomes, but similar likelihood of acting on the resources available. As the interaction between workplace resources, regulatory focus, and resilient behaviours has yet to be explored empirically, the following research question is posed:

*Research question: In what way do resources, prevention focus and promotion focus interact to predict employee resilience?*

## Method

### Participants and Procedure

A total of 283 participants from four organisations were invited to participate in the present study. Of these, 162 participants completed the survey, for a response rate of 57%. Organisation 1 was a small software consulting company consisting of 13 employees (8 participated). Organisation 2 had 30 employees and is in the insurance industry (17 participated). The third organisation had 200+ employees in the hospitality industry, however, only back of house staff were contacted (40 participated). Organisation 4 was a large software development company also consisting of 200+ employees (97 participated). The participants were 51 females (31%), 98 males, and 13 who did not respond to gender. The ages ranged from 19 to 71 years ( $M=39.14$ ,  $SD=10.98$ ).

An organisational representative for each organisation sent an email to employees containing an information sheet and a link to the online survey via Qualtrics. The information stated that participation was voluntary and that they could exit at end point during the questionnaire (see Appendix A). As incentive for completing the survey, participants were able to enter a prize draw to win one of four \$200 vouchers. Participants were able to complete the survey at any time and were given a two-week period to do so. Participants began the survey by clicking the link. The survey took approximately 15 minutes to complete and included all measures mentioned below and biographic data including age, gender, and tenure. The study was revised and approved by the Human Ethics Committee at the University of Canterbury.

## Measures

The questionnaire included 4 scales and a total of 39 items. All items were measured using a 5-point Likert-type scale where higher scores represent more agreement with the construct. For the full survey, see Appendix B

*Social Support* was assessed with an eight-item scale by Caplan et al. (1975), which assesses employee's perceptions of social support from their supervisor and co-workers. A sample item assessing social support includes "How much can each of these people be relied on when things get tough at work? (A) Your immediate supervisor (B) Other people at work." Responses were rated from "not at all" to "very much". The reliability coefficient for the supervisor support subscale ranges from .86 to .91, and the coefficient for the co-worker support subscale is .79 (Repeti & Cosmas, 1991).

*Performance feedback* was measured using four items from two feedback subscales from the Job Diagnostic survey (Hackman & Oldham, 1975). Two items assessed the extent to which feedback was received from the job itself. A sample item is "Just doing the work required by the job provides many chances for me to figure out how well I am doing." The two remaining items covered feedback from supervisor. A sample item is "Supervisors often let me know how well they think I am performing the job." All items were rated on how accurate the statement was ranging from "very inaccurate" to "very accurate." The feedback subscales have alpha values ranging from .65 to .81 (Taber & Taylor, 1990).

*Regulatory focus* was assessed using the 18-item Work Regulatory Focus Scale developed by Neubert et al. (2008). Each promotion and prevention subscale was measured with 9 items each. A sample promotion item includes "I focus on accomplishing job tasks that will further my advancement." A sample prevention item

includes “I do everything I can to avoid loss at work.” The participant was asked to rate the statement on how true it was on a scale ranging from “not at all true of me” to “very true of me.” The promotion subscale has an internal consistency of .81 and the prevention subscale has an internal consistency of .83 (Akhtar & Lee, 2014).

*Employee resilience* was assessed with the 9-item EmpRes scale (Naswall et al., 2015). A sample item includes “I re-evaluate my performance and continually improve the way I do my work.” The response scale was based on how often the participant engaged with the behaviour, ranging from “never” to “always.” The reliability for the scale ranges from .89 to .91 (Hodliffe, 2014; Näswall et al., 2015).

## **Results**

All statistical analyses and procedures were conducted using SPSS version 21 for Macintosh operating systems.

### **Measures Adequacy**

Exploratory factor analyses were performed for all the scales in the questionnaire. Missing values were treated using mean scores for each scale (Higgins, 2011). A factor analysis was conducted in SPSS using principal axis factoring extraction with a direct oblimin rotation method. The criteria for factor inclusion were Eigenvalues greater than one (Kaiser, 1960), and item factor loadings greater than .40 (Klein, 2009). KMO and Bartlett’s Test for Sphericity were significant ( $X^2(162) > 7$ ,  $p < .01$ ) for employee resilience, prevention and promotion scales, signally sampling adequacy for factor analysis. The KMO for performance feedback and social support were low although “not unacceptable” (pg. 154) given the low number of items involved (Black & Porter, 1994).

The social support scale loaded, as expected, on two factors; one pertaining to social support from the supervisor (SSS) and the other pertaining to social support

from others SSO. SSS explained 36.57% of variance compared with SSO which explained 21.81% of variance. The SSS scale had a Cronbach's coefficient alpha of .90, and the SSO had a coefficient alpha of .77. The factor analysis table for social support can be found in Appendix C, Table 3.

The performance feedback scale also behaved as expected, resulting in two distinct factors. The first being feedback from the job itself (PFJ) and the second being feedback from a supervisor (PFS), explaining 33.46% of variance and 15.86% of variance, respectively. The Cronbach's coefficient alphas for the PFJ and PFS were .66 and .62, respectively. Although these coefficients are "modest" (Nunnally & Bernstein, 1994), the value of alpha is partially dependent on the number of items (Gliem & Gliem, 2003). See Appendix C, Table 4.

The EFA for the employee resilience scale (EmpRes) resulted in two factors with Eigenvalues greater than one. The two underlying factors were significantly correlated  $r=.40$ ,  $p=.001$ . The second factor explained 11.23% of the variance compared with 37.37% for the first factor. These facts, when taken together with the contemporary view that Kaiser's criterion tend to over extract factors (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Field, 2013; Patil, Singh, Mishra, & Todd Donovan, 2008), support the decision to rerun the factor analysis with a stipulated single factor. All items had a factor loading above .40, and were therefore kept for further analysis (See Appendix C, Table 5).

The factor analysis for the prevention subscale (PEV) resulted in three factors with an Eigenvalue greater than 1. Items 2,3, and 4 were removed resulted in a single factor simple structure. The final factor analysis tables for the PEV subscale can be found in Appendix C, Table 6. The original PEV subscale (Akhtar & Lee, 2014) discussed prevention as having different elements that built the one factor of

prevention focus. The three elements were “loses”, “security,” and “oughts.” “Oughts” are based on fulfilling predetermined responsibilities while loses and security are based on reducing negative consequences. All items removed belonged to the “oughts’ element of the prevention focus.

The promotion focus (POM) factor analysis resulted in two underlying factors. However these factors were correlated  $r=.57$ . Further examination of the scree plot (Cattell, 1978; Yong & Pearce, 2013) show the point of inflexion rested at factor number two, and the variance explained by the second factor was only 10.26%, compare with 51.67% for the first factor. Given the tendency for over extraction explained earlier, the factor analysis was repeated with a stipulated simple structure. Factor loadings for all items met the .40 cut off. All items remained for further analysis (See Appendix C, Table 7).

### **Descriptive statistics**

Following the EFAs, indices were created for each measure by calculating the average ratings of each scale. The descriptive statistics for all variables, including means, standard deviation, bivariate correlations, and coefficient alphas for each measure are displayed in Table 1. EmpRes was positively related to all predictor variables excluding SSS. Furthermore, EmpRes also had positive relationships with both POM and PEV, indicating that high levels of both regulatory foci were associated with resilient behaviours. EmpRes had significant positive relationships with all predictors except for social support from the supervisor (see Table. 1).

Table 1. Zero-order correlations among study variables

Variables	Mean	SD	1	2	3	4	5	6	7	8
1 Age	39.58	11.1								
2 EmpRes	3.95	.58	-.22*	(.83)						
3 POM	3.59	.85	-.53**	.42**	(.90)					
4 PEV	3.74	.79	-.22*	.20*	.21*	(.85)				
5 SSO	4.06	1.03	-.23*	.24**	.10	-.02	(.76)			
6 SSS	4.10	.67	.07	.10	-.02	-.11	0.15	(.90)		
7 PFJ	4.04	.82	.19*	.27**	.02	.19*	-.04	.16	(.66)	
8 PFS	3.60	1.05	-.17	.20*	.14	-.02	.40**	.28**	.23**	(.62)

*Note:* N=162 Age =122, EmpRes & POM= 142, PEV=143, SSO, SSS, PFJ, PFS=141. EmpRes=Employee resilience; POM= promotion focus; PEV = prevention focus; SSO= support from others; SSS= support form supervisor; PFJ= job performance feedback; PFS= supervisor performance feedback. Coefficient alphas are shown in parentheses.

\* Correlation is significant at the 0.05 level (2-tailed). \*\* Correlation is significant at the 0.01 level (2-tailed).

## Hypothesis Testing

Moderated multiple regressions were conducted to test the hypotheses and the research question. Resources and regulatory foci were centred on their means, and multiplying the mean-centred predictor variables created the interaction terms. Both two-way and three-way interaction terms were computed. The main effects variables and the interaction terms were entered in the following orders: (1) regulatory foci and one resource (e.g. POM, PEV, SSO); (2) two-way interactions of two regulatory foci, and two-way interactions of each regulatory focus and one resource (e.g. POM\*PEV, POM\*SSO, PEV\*SSO); (3) three-way interaction of two regulatory foci and one resource (e.g. POM\*PEV\*SSO) (Zhou, 2014; Spector, 2014).

## Main effects

Table 2 shows the results of the regression analyses that were conducted to examine the influence of job resources and regulatory focus on employee resilience. In line with the hypotheses, employees who experience more SSO, or more promotion focus, reported higher EmpRes, SSO ( $\beta = .09, p < .05$ ) and PFJ ( $\beta = .15, p < .05$ ). In addition, employees with a promotion focus also engaged in more frequent resilient behaviours ( $\beta = .27, p < .01$ ). PEV and PFS were also positively and significantly associated with employee resilience, though this relationship was not significant considering the main effects ( $\beta = .10, p < .06$  and  $\beta = .07, p < .09$ , respectively). Thus, Hypothesis 1a was supported for SSO, but not for SSS. Hypothesis 1b was also supported, with PFJ and EmpRes, and PFS almost reaching a significant relationship in the expected direction.

Table 2. Regression results for three way interaction in predicting employee resilience

Step	Predictors	EmpRes		95% confidence interval of $\beta$	
		$\beta$	$\Delta R^2/R^2$	Lower	Upper
1	POM	.27**		.16	.38
	PEV	.10		-.01	.21
	SSO	.09*	.24	.00	.18
2	POM*PEV	.03		-.09	.16
	PEV*SSO	-.08		-.19	.03
	POM*SSO	-.09	.03	-.20	.03
3	POM*PEV*SSO	.08	.01	-.03	.20
	<b>Total R<sup>2</sup></b>		<b>.28</b>		
1	POM	.26**		.15	.37
	PEV	.10		-.02	.21
	SSS	.08	.21	-.06	.23
2	POM*PEV	.04		-.08	.17
	PEV*SSS	.02		-.17	.21
	POM*SSS	-.09	.01	-.26	.08
3	POM*PEV*SSS	.00	.00	-.19	.20
	<b>Total R<sup>2</sup></b>		<b>.22</b>		
1	POM	.25**		.142	.35
	PEV	.08		-.03	.18
	PFJ	.15*	.26	.04	.25
2	POM*PEV	.05		-.08	.17
	PEV*PFJ	-.01		-.13	.12
	POM*PFJ	-.12*	.02	-.25	-.00
3	POM*PEV*PFJ	.16*	.04	.04	.29
	<b>Total R<sup>2</sup></b>		<b>.31</b>		
1	POM	.29**		.18	.39
	PEV	.08		-.03	.19
	PFS	.07	.22	-.01	.16
2	POM*PEV	.07		-.06	.19
	PEV*PFS	-.12*		-.22	-.02
	POM*PFS	.00	.05	-.10	.10
3	POM*PEV*PFS	.11*	.02	.00	.21
	<b>Total R<sup>2</sup></b>		<b>.29</b>		

Note: N=162. EmpRES=Employee resilience; POM= promotion focus; PEV = prevention focus; SSO= support from others; SSS= support form supervisor; PFJ= job performance feedback; PFS= supervisor performance feedback. \*p<0.05, \*\* p< 0.01.

### Two-way Interactions

As shown in Table 2, POM moderated the relationship PFJ and EmpRes ( $B=-.12, p<.05$ ). At low levels of PFJ, individuals with high POM focus exhibited significantly higher EmpRes than individuals with a low POM focus. This is displayed in Figure 1.

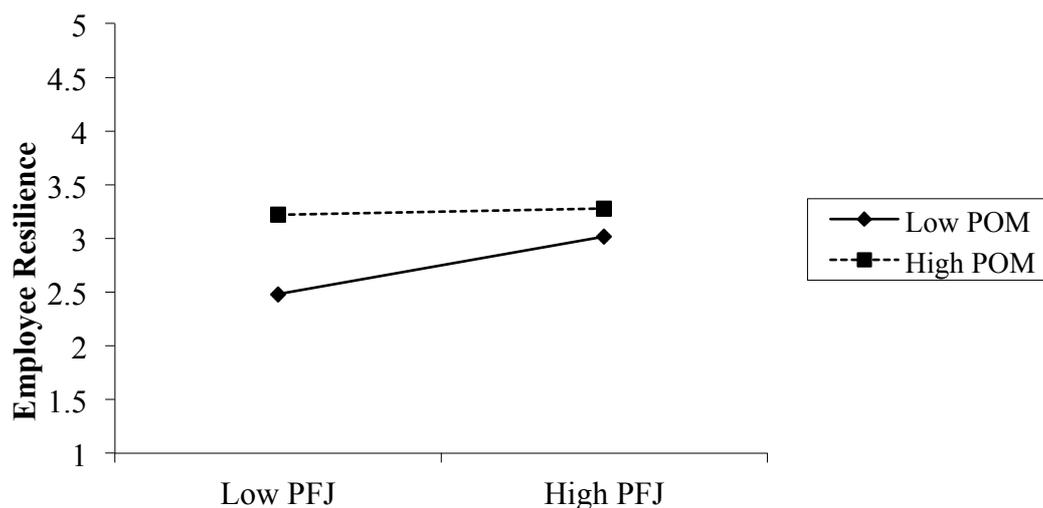


Figure 1. Interaction between performance feedback from the job and promotion focus predicting employee resilience.

Further, PEV focus was also found to moderate the relationship between PFS and EmpRes ( $B=-.12, p<.05$ ). At low levels of PFS, individuals with a high PEV focus reported higher levels of EmpRes than individuals with a low PEV focus. In contrast, at high levels of PFS, individuals with a low PEV focus reported higher levels of EmpRes than individuals with a high PEV focus. The relationship between supervisor feedback and resilient behaviours as moderated by prevention focus is displayed in Figure 2.

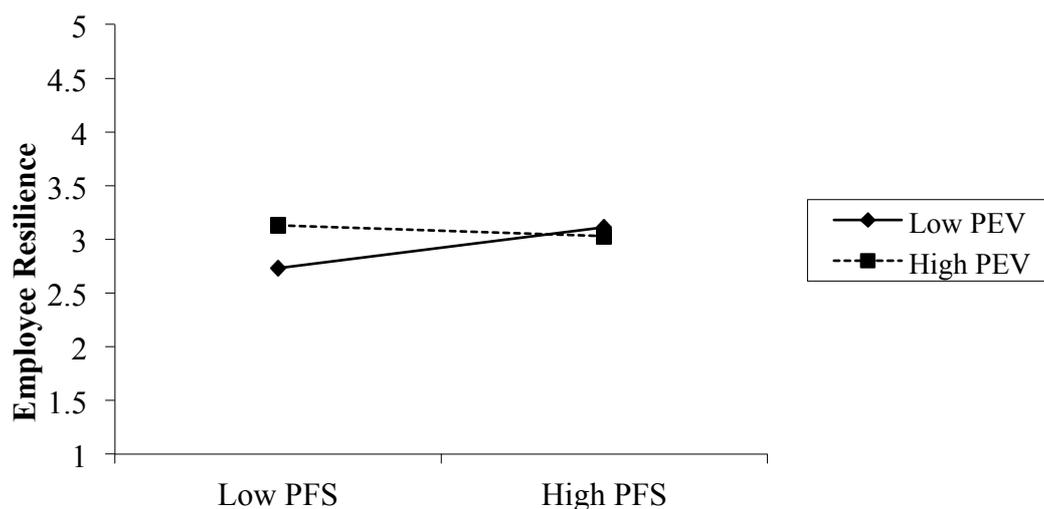


Figure 2. Interaction between performance feedback from the supervisor and prevention focus predicting employee resilience.

### Three-way Interactions

Following the procedures of Dawson and Richter (2006), significant three-way interactions were plotted using unstandardized regression coefficients. As displayed in Table 2, the three-way interactions were significant for the POM focus, PEV focus, PFJ and PFS, relationship, but not for the relationships between regulatory focus and support. POM, PEV and PFJ interacted to predict employee resilience ( $\beta=.16$ ,  $p<.05$ ); POM, PEV and PFS interacted to predict employee resilience ( $\beta=.11$ ,  $p<.05$ ). The interaction of POM, PEV, and SSS and the interaction of POM, PEV, and SSO did not significantly predict resilient behaviours. A slope difference test was conducted as suggested by Dawson and Richter (2006), however, no significant slope differences resulted from the two three-way interactions. Dawson and Richter state that there is two potential reasons for a significant three way interaction not resulting in slope differences, (1) restricted test power, and (2) the significance of the three-way interaction is more complex than the combination of a

pair of slopes. Although there may be limitations under sample size, significant two and three way interactions were identified. The present data set has limitations with power due to sample size and there is likely to be a complex interaction combination of more than one pair of slopes. Thus it is acceptable for there to be no significant slope differences. A cluster analysis was conducted to determine the possibilities of four regulatory focus profiles. The cluster analysis confirmed the presence of five regulatory profiles in the data set. The five profiles were: 1) High prevention-high promotion, 2) high prevention-low promotion, 3) high promotion-low prevention, 4) low prevention-low promotion, and 5) no focus, thus explaining the complex interaction between slopes as suggested by Dawson and Richter. The full methodology of the cluster analysis can be found in Appendix D.

#### *Job feedback, regulatory focus, and employee resilience*

The patterns for feedback from the job are shown in Figure 3. Employees with a high POM-low PEV combination displayed higher levels of EmpRes than other regulatory focus combinations. In contrast, individuals with a high POM- low PEV profile exhibit higher levels of EmpRes at low levels of PFJ than at high levels of PFJ. Further, employees with a low POM-low PEV profile present higher levels of EmpRes when there is high PFJ compared to when there is low PFJ. Finally, individuals with a low POM-low PEV profile display higher levels of EmpRes at high levels of PFJ than at low levels of PFJ. Employee resilience is higher for most profiles at high levels of feedback from the job, indicating that job feedback may be an essential workplace characteristic that should be present in order for employees to be able to display resilience.

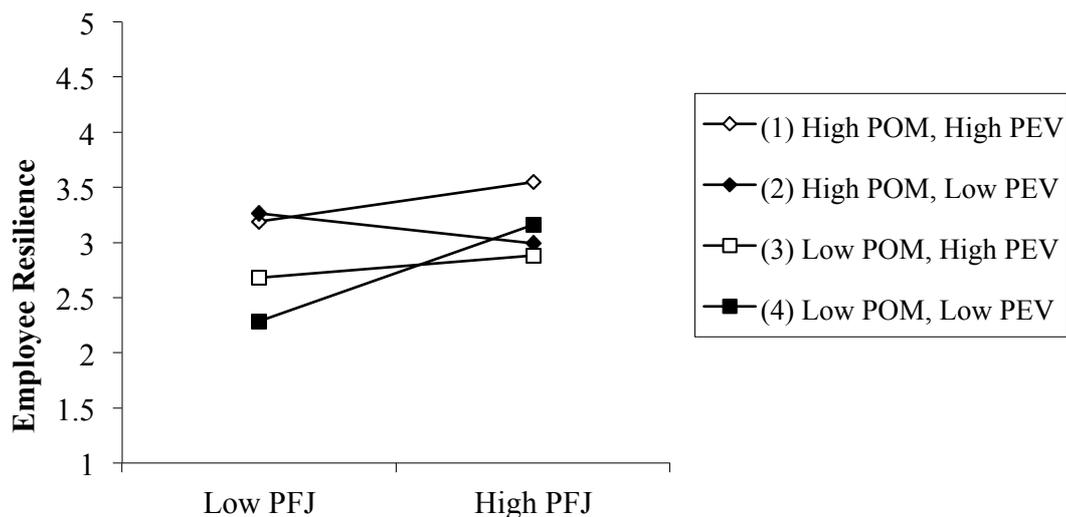


Figure 3. Interaction between job feedback, promotion focus and prevention focus predicting resilient behaviours.

#### *Supervisor feedback, regulatory focus, and employee resilience*

Patterns for the interaction between PFS, POM-PEV focus, and EmpRes are shown in Figure 4. Similar to PFJ, employees with a High POM-High PEV combination are likely to display more EmpRes at any level of PFS compared with all other regulatory focus combinations. Individuals with a High POM-Low PEV combination also report higher levels of EmpRes at all levels of PFS than both Low POM-High PEV and Low POM-Low PEV. Individuals with a Low POM-Low PEV profile exhibit higher levels of EmpRes at higher levels of PFS than at low levels of PFS. In contrast, employees with a Low POM-High PEV profile display lower EmpRes at high levels of PFS than at low levels of PFS. These findings indicate that having a high promotion focus may be more beneficial for helping employees display resilience.

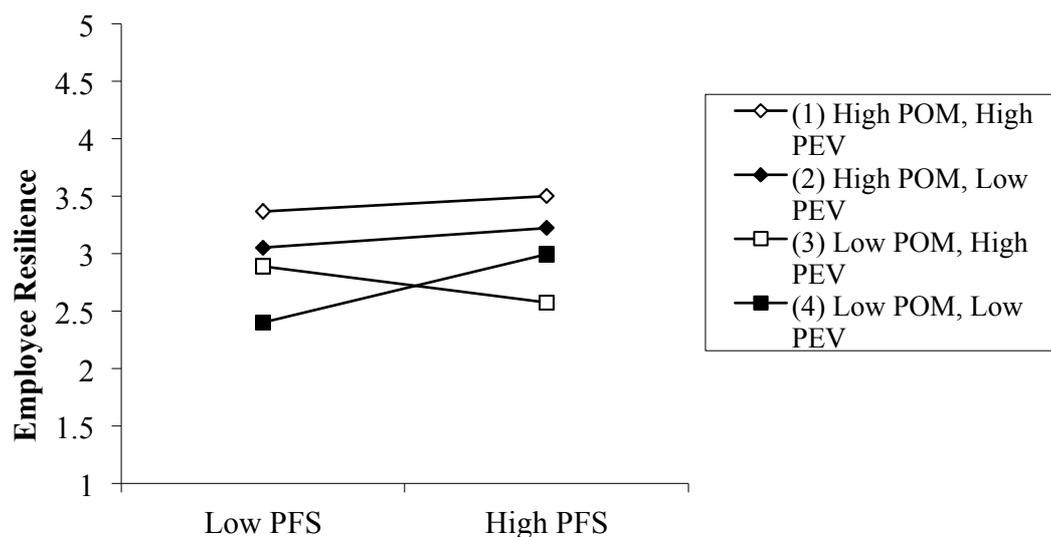


Figure 4. Interaction between supervisor feedback, promotion focus and prevention focus predicting resilient behaviours.

## Discussion

Given the increasingly globalised and VUCA business environment, the need for resilient organisations is now more important than ever. Resilient organisations are made up of resilient employees who drive the success of the organisation (Schaufeli et al., 2013). Employee resilience, seen as a suite of adaptive and learning oriented behaviours (Kuntz et al., 2016), is becoming essential for an organisation's ability to not only successfully navigate uncertainty, but also to thrive in stable conditions. However, while researchers acknowledge this link between resilient employees and resilient organisations, there is limited empirical research exploring the psychological and contextual factors that account for resilience development in organisational settings, and how organisations can facilitate resilient behaviours.

The primary aims of the present study were to 1) understand how workplace characteristics (e.g., resources) relate to employee resilience, and 2) explore the role

of regulatory focus as a psychological mechanism that explains how employees perceive and utilise resources (i.e., display employee resilience).

In line with COR theory, it was predicted that a higher level of resources would enable an employee to engage with more resilient behaviours and that both prevention and promotion focused individuals would utilise resources and display resilient behaviours, even if the underlying motivation was indeed different. However, the degree to which regulatory focus would moderate the resource-resilience relationship is not well established in literature, therefore the questions was posed as to how resources, prevention and promotion interacted to predict employee resilience.

### **Main Findings**

The extant research suggests that employee resilience can be facilitated by the organisation by providing enablers such as feedback and social support (Kuntz et al., 2016; Nilikant et al., 2016; Yost, 2016; Chang et al., 2002). Results showed that support from others and support from a supervisor, were positively correlated to employee resilience, in support of hypothesis 1a, but when regulatory foci were added to the regression, these relationships were attenuated.

There were similar results for performance feedback. As hypothesized, feedback from the job and feedback from the supervisor were positively and significantly associated with employee resilience, but again, the addition of regulatory foci attenuated these relationships.

Interestingly, for both types of performance feedback, employees with a low focus (either promotion or prevention) displayed higher levels of resilience at high levels of feedback compared with low levels of feedback, indicating that feedback

may be an important resource for individuals with low promotion and prevention focus. This relationship was highlighted further in the three-way interaction.

While research suggests that it is possible to adopt a situation-responsive regulatory focus (Petrou & Demerouti, 2015), there was no empirical evidence to date suggesting that an employee may simultaneously exhibit prevention and promotion foci. The cluster analysis provides evidence that regulatory foci are orthogonal, and that different regulatory profiles are prevalent. Further, the findings also showed that these regulatory profiles relate differently to workplace resources and employee resilience. To understand how these profiles interact with resources to predict employee resilience, three-way interactions were conducted. The findings suggest that: 1) individuals with a high promotion and high prevention focus display higher levels of employee resilience irrespective of feedback levels, 2) the resilience of employees with a low promotion and low prevention profile is impacted by resource availability, namely feedback from the job and supervisor, and 3) mismatch in regulatory foci (i.e., individuals exhibiting high levels of one regulatory focus and low levels of the other) accounts for unique relationships between resources and resilient behaviours. These relationships will be discussed in the sections below in relation to specific regulatory profiles, and the extant research.

### **Regulatory profiles: Implications for research and practice**

#### *High promotion-high prevention profile*

Individuals with a high promotion and high prevention profile display higher levels of employee resilience irrespective of feedback levels from both the job and the supervisor. This suggests that while past research has highlighted resources and their availability as precursors to positive workplace outcomes, including resilience

(Bakker & Demerouti, 2007; Bakker & Demerouti, 2008; Bakker et al., 2007; Petrou & Demerouti, 2015; Brenninkmeijer et al., 2010; Metze et al, 2015), regulatory focus represents an important psychological resource that should be considered when appraising resource-behaviour linkages.

Further, this finding adds to our understanding of regulatory foci, indicating that the combination of high promotion and high prevention focus may be associated with the enactment of resilient behaviours. It is not surprising that the coupling of high promotion and high prevention within one person would lead to a higher ability to display employee resilience than any other profile. Employee resilience requires engagement in behaviours that are both growth and learning oriented, and also crisis management behaviours (Kuntz et al., 2016). The promotion focus is associated with the motivation to engage in behaviours such as finding new ways of doing things and network leveraging, while the prevention focus is related to the motivation to engage in risk prevention and management. This is in line with COR theory in that the growth oriented behaviours facilitated by a promotion focus pertain to resources generation, and the crisis management behaviours facilitated by the prevention focus mitigate resource loss (Halbesleben et al., 2014).

Further, the findings show that at low levels of job feedback, high promotion and high prevention individuals may still be motivated to display employee resilience, as they are driven by both growth and security motives, even when the resources available are scarce (Hobfoll, 1989; Brenninkmeijer et al., 2010). The results of this study suggest that, to the extent that regulatory foci can be espoused and developed at work, organisations may stand to gain from encouraging both promotion and prevention orientations. This high promotion and prevention profile can be especially

helpful in ensuring resilient behaviours in contexts of resource depletion (e.g., low staffing, changes in management, disasters).

*Low promotion-low prevention profile*

The resilience of employees with a low promotion and low prevention profile appears to be especially susceptible to resource availability, namely feedback. At low levels of feedback from both job and supervisor, employees with the low promotion and low prevention profile displayed the lowest levels of employee resilience compared to all other regulatory profiles. While there is limited empirical evidence highlighting the implications of low regulatory focus, this finding is altogether not surprising. One lacking in any form of motivation (prevention or promotion) is unlikely to engage in the largely proactive resilient behaviours, especially when the external resources that encourage these behaviours are low. This regulatory profile may account for a view of the organisation whereby perceived lack of investment in resources on the part of the organisation is taken as a sign that there is no reason to engage in behaviours above those prescribed by the role (Bakker et al., 2007). This is in line with COR theory and may explain why high levels of feedback are matched with resilient behaviours. When an employee is not inherently motivated to generate or protect resources, it is the availability of external resources that will prompt behaviours aimed at broadening and developing their resource pool (Halbesleben et al., 2014).

*High promotion-low prevention and low promotion-high prevention profiles*

At lower levels of feedback from the job, individuals with a high promotion and low prevention profile show higher levels of employee resilience than individuals with a low promotion and high prevention profile. At higher levels of feedback, there are no differences in employee resilience between the two profile groups. It is

difficult to build reasoning behind this finding, as there is little to no empirical research that a) examines the impact of low levels of regulatory focus on work-related variables, and b) considers regulatory profiles. A tentative explanation can be offered. When external resources are scarce, a high promotion focus, even with low prevention, may elicit more positive results with regards to employee resilience, given the proactive stance that underlies promotion focus. In essence, while the high promotion and prevention profile is associated with higher levels of employee resilience irrespective of resource availability, a promotion focus holds advantages over the prevention focus in resource-depleted environments when the outcome of interest is resilience.

### **Limitations and Directions for Future Research**

Though the present study offers a number of contributions to research and practice, it also holds several limitations that must be addressed. First, the study relied on self-report measures. There are a number of issues that should be addressed with self-report data, especially the potential for socially desirable responding (Van de Mortel, 2008). Social desirability refers to that the potential for participants to respond in a manner that presents them in a more favourable image (Van de Mortel, 2008). This can occur when the participant believe the information the report is more socially acceptable behaviours (e.g., resilient behaviours). Socially desirable responding urges caution in the interpretation of findings.

Secondly, there were some issues with the measurement of variables, mainly resources. As highlighted by the findings, it may have been beneficial to measure the value an individual places on a resource as well as resource availability. Individuals place different values on different resources (Winkel et al., 2011). Not only do

individuals utilise resources differently, as was a focus of the present study, but they also value resources differently (Diener et al., 1999). It would be interesting to understand how the value placed on a resource *and* resource availability relate to regulatory profiles and employee resilience. Moreover, the present study did not attempt to measure fluctuations in resources. The cross-sectional nature of the study does not allow for the appraisal of resource trajectories and their influence on levels of resilience over time. Resources fluctuate along trajectories or gain and loss cycles (Halbesleben, 2014), the level of resources may vary depending on where in a project or goal attainment cycle an employee is. Similarly, there is some suggestion that organisational context can elicit a regulatory focus, that is regulatory focus may fluctuate over time along with the resource cycle (Johnson et al, 2015). Future studies may attempt to examine dynamic resources, regulatory profiles and employee resilience longitudinally.

The sample size of the current study may present as a limitation given the number of interaction terms investigated. A larger sample may have decreased the possibility of Beta error (failing to detect effects) (Bartlett, Kotrlik, Higgins, 2001). As there is no previous research aimed to understand the interaction of prevention and promotion foci, the findings would need to be replicated in a larger organisational setting (i.e. larger sample).

## **Conclusion**

The present study sought to understand how employee resilience – conceptualised a suite of adaptive and proactive behaviours (Kuntz, et al., 2016) – can be facilitated by organisations, i.e. allocation of resources. The study also sought to understand how individual differences in regulatory focus (prevention and promotion)

motivate individuals to engage in resource utilisation behaviours (employee resilience). The study found that different combinations of regulatory focus moderate the relationship between resources and employee resilience, for example, individuals with a high prevention-high promotion focus combinations display greater resilience at any level of resource while in contrast individuals with a low prevention-low promotion foci combination display a greater change in resilience at a high level of resources. The findings of the study add to the current literature in many ways 1) the combinations of regulatory foci is novel and has not been addressed in previous research, 2) the expansion of employee resilience literature to include workplace characteristics as important resources that facilitate resilience development. The findings also have several practical implications, mainly in their ability to help organisations effectively allocate resources (social support and feedback) and encourage utilization so the greatest change in employee outcomes can occur. Overall, for employees to develop resilience, both organisational and individual factors must be taken into account. That is, the organisation must provide resources and the employee (motivated by regulatory focus) must utilise resources to display adaptive, learning oriented, and resource generating behaviours, signalled as employee resilience.

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## Appendix A – Participant information sheet

Department of Psychology  
Email: [philippa.connell@pg.canterbury.ac.nz](mailto:philippa.connell@pg.canterbury.ac.nz)  
16/05/2016



### Information Sheet for Participants

My name is Philippa Connell and I am a Masters of Science student at the University of Canterbury. I am conducting research on **how features of your job influence workplace behaviours and general wellbeing**.

If you choose to take part in this study, your involvement in this project will be a short on-line survey that will take 15 minutes to complete.

Participation is voluntary and you have the right to withdraw at any stage. Simply close the survey.

The results of the project may be published (a dissertation is a public document and will be available through the UC library), but you may be assured of the complete confidentiality of the data gathered on this investigation: neither you nor your organisation will be identified. Furthermore, any report made to the organisation will only contain generalised results and you will not be identifiable to them. Only my supervisor, Joana Kuntz, and myself will have access to the raw data. Raw data will be stored on password-protected computers at the Department of Psychology, University of Canterbury.

This project is being carried out as a requirement for a Master's of Science in Applied Psychology by Philippa Connell under the supervision of Joana Kuntz, who can be contacted at [joana.kuntz@canterbury.ac.nz](mailto:joana.kuntz@canterbury.ac.nz). She will be pleased to discuss any concerns you may have about participation in the project.

This project has been reviewed and approved by the University of Canterbury Human Ethics Committee, and participants should address any complaints to The Chair, Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch ([human-ethics@canterbury.ac.nz](mailto:human-ethics@canterbury.ac.nz)).

If you agree to participate in this survey, consent will be established by your completion and submission of the survey.

Philippa Connell

## Appendix B – Full Survey

### Biodata

- 1) Which best describes your role
  - a. Management
  - b. Non management
- 2) What year were you born?
- 3) Gender
- 4) How long have you been working in your company?

### Social Support

- 1) How much does each of these people go out of there way to do things that make your work life easier for you
  - a. Your immediate supervisor
  - b. Other people at work
- 2) To what extent is it easy to talk with each of the following people?
  - a. Your immediate supervisor
  - b. Other people at work
- 3) How much can each of these people be relied on when things get tough at work?
  - a. Your immediate supervisor
  - b. Other people at work
- 4) How much is each of the following people willing to listen to your personal problems?
  - a. Your immediate supervisor
  - b. Other people at work

### Performance Feedback

- 1) To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide you clues about how well you are doing - aside from any “feedback” from co-workers or supervisors may provide?
- 2) Just doing the work required by the job provides many chances for me to figure out how well I am doing.
- 3) After I finish a job, I know whether I performed well.
- 4) To what extent do managers or co-workers let you know how well you are doing on your job?
- 5) Supervisors often let me know how well they think I am performing the job.
- 6) The supervisors and co-workers on this job almost never give me any “feedback” about how will I am doing in my work. (this item is reverse scored).

### Regulatory Focus

#### *Prevention Focus*

- 1) I concentrate on completing my work tasks correctly to increase my job security.
- 2) At work I focus my attention on completing my assigned responsibilities.
- 3) Fulfilling my work duties is very important to me.
- 4) At work, I strive to live up to the responsibilities and duties given to me by others.
- 5) At work, I am often focused on accomplishing tasks that will support my need for security.
- 6) I do everything I can to avoid loss at work.
- 7) Job security is an important factor for me in any job search.
- 8) I focus my attention on avoiding failure at work.
- 9) I am very careful to avoid exposing myself to potential losses at work.

#### *Promotion Focus*

- 10) I take chances at work to maximize my goals for advancement.
- 11) I tend to take risks at work in order to achieve success.
- 12) If I had an opportunity to participate in a high- risk, high-reward project, I would definitely take it.
- 13) If my job did not allow for advancement, I would likely find a new one.
- 14) A chance to grow is an important factor for me when looking for a job.
- 15) I focus on accomplishing job tasks that will further my advancement.
- 16) I spend a great deal of time envisioning how to fulfill my aspirations.
- 17) My work priorities are impacted by a clear picture of what I aspire to be.
- 18) At work, I am motivated by my hopes and aspirations.

### Employee Resilience Scale

- 1) I effectively collaborate with others to handle unexpected challenges at work
- 2) I successfully manage a high workload for long periods of time
- 3) I resolve crises competently at work
- 4) I learn from my mistakes at work and improve the way I do my job
- 5) I re-evaluate my performance and continually improve the way I do my work
- 6) I effectively respond to feedback at work, even criticism
- 7) I seek assistance to work when I need specific resources
- 8) I approach managers when I need their support
- 9) I use change at work as an opportunity for growth.

## Appendix C – Factor Analysis Tables 1-5

Table 3. Factor loadings and communalities for the social support scale.

		Factor		h <sup>2</sup>
		1	2	
1	<b>How much can each of these people be relied on when things get tough at work?</b>			
S	Your immediate supervisor	<b>0.85</b>	-0.03	0.71
O	Other people at work	0.00	<b>0.69</b>	0.47
2	<b>How easy is it to talk with each of the following people?</b>			
S	Your immediate supervisor	<b>0.84</b>	-0.10	0.69
O	Other people at work	-0.08	<b>0.59</b>	0.34
3	<b>How much does each of these people go out of there way to do things that make your work life easier for you?</b>			
S	Your immediate supervisor	<b>0.84</b>	0.05	0.71
O	Other people at work	0.02	<b>0.79</b>	0.63
4	<b>How much is each of the following people willing to listen to your personal problems?</b>			
S	Your immediate supervisor	<b>0.82</b>	0.10	0.70
O	Other people at work	0.09	<b>0.63</b>	0.42
Eigenvalue		2.93	1.75	
Percent of variance (after extraction)		36.57	21.81	
Principal axis factoring, oblimin rotation				

Table 4. Factor loadings and communalities for the performance feedback scale

		Factor		h <sup>2</sup>
		1	2	
1	Just doing the work required by the job provides many chances for me to figure out how well I am doing.	<b>0.76</b>	-0.07	0.54
2	After I finish a job, I know whether I performed well.	<b>0.65</b>	0.10	0.47
3	Supervisors often let me know how well they think i am performing the job	0.18	<b>0.63</b>	0.49
4	Supervisors and co-workers almost never give me any feedback about how well I am doing in my work	-0.10	<b>0.71</b>	0.47
Eigenvalue		1.34	0.63	
Percent of variance (after extraction)		33.44	15.86	
Principal axis factoring, oblimin rotation				

Table 5. Factor loadings and communalities for the Employee Resilience Scale

		Factor	
		1	h <sup>2</sup>
1	I effectively collaborate with others to handle unexpected challenges at work	0.55	0.38
2	I successfully manage a high workload for long periods of time	0.40	0.37
3	I resolve crises competently at work	0.48	0.41
4	I learn from my mistakes at work and improve the way I do my job	0.72	0.48
5	I re-evaluate my performance and continually improve the way I do my work	0.76	0.51
6	I effectively respond to feedback at work, even criticism	0.59	0.36
7	I seek assistance at work when I need specific resources	0.55	0.43
8	I approach managers when I need their support	0.63	0.49
9	I use change at work as an opportunity for growth	0.65	0.40
Eigenvalue		<b>3.27</b>	
Per cent of variance (after extraction)		<b>36.38</b>	
Principal axis factoring, oblimin rotation			

Table 6. Factor loadings and communalities for the prevention scale

		Factor	
		1	h <sup>2</sup>
1	I concentrate on completing my work tasks correctly to increase my job security	0.63	0.39
5	At work, I am often focused on accomplishing tasks that will support my need for security	0.72	0.52
6	I do everything I can to avoid loss at work.	0.75	0.56
7	Job security is an important factor for me in any job search	0.64	0.41
8	I focus my attention on avoiding failure at work.	0.65	0.42
9	I am very careful to avoid exposing myself to potential losses at work.	0.79	0.63
Eigenvalue		2.93	
Percent of variance (after extraction)		48.76	
Principal axis factoring, oblimin rotation			

Table 7. Factor loadings and communalities for the promotion scale

		Factor	
		1	h <sup>2</sup>
1	I take chances at work to maximize my goals for advancement.	0.72	0.58
2	I tend to take risks at work in order to achieve success.	0.56	0.58
3	If I had an opportunity to participate in a high- risk, high-reward project, I would definitely take it.	0.59	0.50
4	If my job did not allow for advancement, I would likely find a new one.	0.72	0.60
5	A chance to grow is an important factor for me when looking for a job.	0.72	0.63
6	I focus on accomplishing job tasks that will further my advancement.	0.85	0.70
7	I spend a great deal of time envisioning how to fulfill my aspirations.	0.78	0.64
8	My work priorities are impacted by a clear picture of what I aspire to be.	0.73	0.66
9	At work, I am motivated by my hopes and aspirations.	0.68	0.51
Eigenvalue		<b>4.56</b>	
Per cent of variance (after extraction)		<b>50.62</b>	
Principal axis factoring, oblimin rotation			

## Appendix D - Cluster Analysis

To understand these possibilities of four regulatory focus combinations in the data set, a cluster analysis was conducted. Analysis began by clustering participants on their prevention and promotion scores to identify clusters of regulatory focus profiles. Both regulatory focus scores were standardised and then submitted in a two-step cluster analysis (Chiu et al., 2001). This two-step method first employed an algorithm, similar to that in k-means cluster analysis (Watsi, 2005), which partitions individual cases into a specified number of clusters, which maximise between-cluster differences and minimise within-cluster variance. Based on these results, the second step conducts a hierarchical agglomerative clustering method that combines cases to form homogenous clusters (Mooi & Sarstedt, 2010). The number of clusters requested was determined mainly by theoretical interpretation of the three-way interactions. Therefore, initially a 4-cluster solution was requested. However, the 4-cluster solution did not meet the criteria of theoretical understanding. A 5-cluster solution was requested which resulted in a fair measure of cluster quality (Mooi & Sarstedt, 2010) and meet theoretical understanding. A 6-cluster was also requested. The 5-cluster solution was selected for further analysis.

The 5-cluster solution appears in Figure 3, which displays the profiles of means on the regulatory focus scales. “High” and “low” were determined by cluster means being higher or lower than the  $M \pm SD$ . The first group (1) was characterised by low promotion–low prevention (LPOM-LPEV) ( $n=20$ ). The second cluster (2) was characterised by average responses to both regulatory foci (No Focus) ( $n=29$ ). The third cluster (3) consisted of high promotion –low prevention (HPOM-LPEV) ( $n=24$ ). The largest cluster (4) was characterised by high promotion and high prevention

(HPOM-HPEV) (n=46). The final group (5) was characterised by high prevention-low promotion (LPOM-HPEV) (n=23).

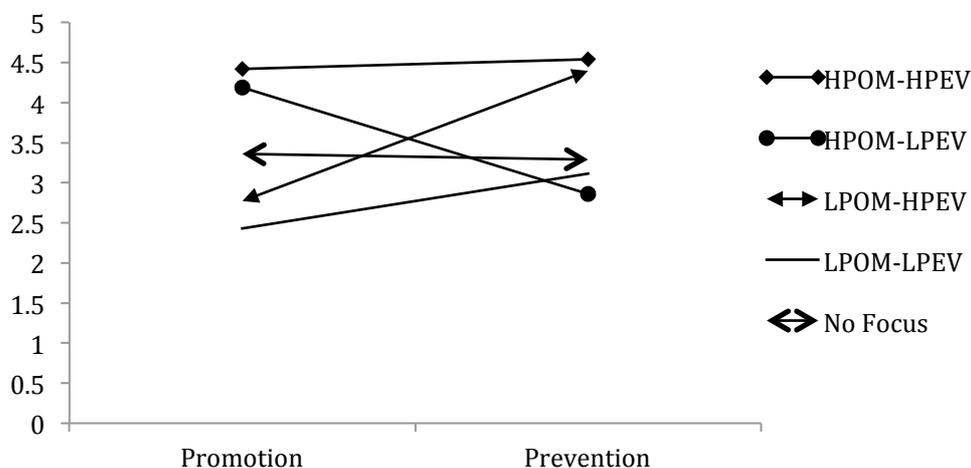


Figure 5. Profiles of regulatory focus.

To confirm that the regulatory focus profile groups differ in resilient behaviours, a univariate analysis of variance (ANOVA) was conducted. There was significant effect of the profile groups on resilient behaviours [ $F(1,4)=4.03, p<.05$ ]. Post hoc comparisons' using the Tukey HSD test was conducted to examine which clusters differed in their relationship with resilient behaviours. HPOM-HPEV ( $M=4.17, SD=.49$ ) was significantly different to LPOM-LPEV ( $M=3.71, SD=.77$ ), and No Focus ( $M=3.80, SD=.49$ ), and was nearing a significant difference with LPOM-HPEV ( $M=3.79, SD=.62$ ). There was no significant difference between HPOM-HPEV and HPOM-LPEV, indicating the complex combination of slopes explained by Dawson and Richter (2006).