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Can a Supportive Workplace Impact Employee Resilience in a High Pressure Performance Environment? An Investigation of the Chinese Banking Industry

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Resilience is one of the positive emotions that will enhance employees' ability to cope in adverse conditions, such as work intensification, organisational change, and work stress. Despite growing research interest in the employee resilience area, there is limited knowledge of the process through which critical social support at workplaces, such as supportive leadership and co-worker support, affects employees' ability to cope in challenging situations. This study, underpinned by the theory of conservation of resources and social cognitive theory, examines the role of supportive leadership and co-worker support in employee resilience, and how this may be moderated by work pressures in the context of the Chinese banking industry. Using a sample of 2,025 Chinese banking workers, we tested four hypotheses. Our findings demonstrate that supportive leadership and co-worker support are positively associated with employee resilience. High work pressure moderates the relationship between both supportive leadership and co-worker support and employee resilience, such that the relationship between these conditions is stronger when perceived performance pressure is high. Our study raises important implications for both the theoretical development of employee resilience and for management practices with respect to fostering employee resilience in organisations.

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INTRODUCTION

Resilience has been gaining attention in the organisational management field as a strategy to manage employee responses to work intensification, organisational change and work stress (e.g., Kossek & Perrigino, 2016; Robertson & Cooper, 2011; Shin, Taylor, & Seo, 2012). It is believed that employees who experience emotional well-being tend to "function better than employees who experienced emotional deficit" (Carmeli, Yitzhak-Halevy, & Weisberg, 2009). Resilience is one of the positive emotions that will enhance employees' ability to cope in adversity (Luthans, 2012; Wang, Cooke, & Huang, 2014). It can be defined as the "developable capacity to rebound or bounce back from adversity, conflict, failure, or even positive events, progress, and increased responsibility" (Luthans, 2002, p. 702).

Social cognitive theory poses that environmental events, personal factors and individual behaviours interact to affect individuals' ultimate actions (Bullough, Renko, & Myatt, 2014). Hence, social workplace environments and the actions of organisational participants (e.g., managers and employees) in response to environmental adversity such as high workloads play an important role in affecting individuals' perceived resilience (Bullough et al., 2014). In the light of this, positive psychologists advocate that supportive leadership and co-worker support are important job resources to enhance employees' well-being and productive organisational behaviour (e.g., Bakker & Demerouti, 2007; Hobfoll, 2011; Jackson, Schuler, & Jiang, 2014).

Recent literature demonstrates the protective effects that access to rich social networks has on maintaining good physical and psychological health (Ozbay et al., 2007), and that social support is a crucial resource for people to cope with their work/job pressures (e.g., Halbesleben, 2006; Wei, Liu, & Herndon, 2011; Zacher & Jimmieson, 2014). Social support is defined by Williams and Cooper (1998, p. 317) as "the amount of help one gets by discussing problems or situations with other people". Moreover, in the workplace context, supportive leadership and co-worker support are critical forms of social support for people in demanding jobs, such as frontline work in commercial banks (e.g., Yu & Frenkel, 2013).

Indeed, existing studies on work pressure found that support from leaders/superiors and co-workers mediates stress level, emotional exhaustion, motivation, and job satisfaction (e.g., Syrek, Apostel, & Antoni, 2013; Zacher & Jimmieson, 2014). Following Wendt, Euwema, & van Emmerik (2009, p. 359), supportive leadership is defined as a leadership style that is directed toward "displaying concern for subordinates' welfare and creating a friendly and psychologically supportive work environment". Co-workers' support involves worker behaviours such as helping each other, sharing knowledge, good working relationships, and building trust and reciprocity (Halbesleben & Wheeler, 2015).

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Despite its acknowledged importance, research on individual resilience in an organisational context remains limited (Kossek & Perrigino, 2016; Luthans, 2012; Shin et al., 2012). There is very little research on the relationship between supportive leadership and co-workers' social support and its effect on employee resilience, particularly in challenging environments such as high workloads (Bardoel, Pettit, De Cieri, & McMillan, 2014; Wang et al., 2014).

In their categorisation of variables in the stress process, focusing on workload as a source of pressure, Williams and Cooper (1998) proposed that workload is a source of stress which may be mediated by social support, which may in turn affect an individual's resilience level. Extant studies on work pressure have primarily used time pressure/workload as the mediator for individual psychological outcomes (e.g., Syrek et al., 2013; Vagg & Spielberger, 1998). Few studies have investigated how work pressure (workload and working time) and job demands may moderate the impact of job resources such as supportive leadership and co-worker support on employee resilience.

In this study, we examine the role of supportive leadership and co-worker support (job resources) on employee resilience, and how this may be moderated by work pressure in the context of the Chinese banking industry. We choose work pressure as a moderator because performance targets and pressure are imposed upon employees by the bank's upper chain of command, and cascade down to each level accordingly, on the one hand; and are imposed by increasingly demanding customers who have plenty of alternative banking options, on the other. Supportive leadership and co-worker support do not alleviate performance pressure, but will help employees to become more resilient when under high work pressure.

We mobilise conservation of resources (COR) theory (Hobfoll, 1989) to better understand the interactive effects of supportive leadership and co-worker support on employee resilience in the context of high work pressure. Hobfoll (2011, p. 117) documents the importance of resource caravans that exemplify organisations as creating ecologies that foster engagement and resilience, or "resource caravan passageways". The creation and development of such ecologies is critical in a fast-paced and competitive business environment such as banking, where there are constant threats of depletion of employee resources. COR theory is therefore particularly useful as an analytical framework to unpack the relationships between leadership, co-worker support, and employee resilience.

This study contributes to the applied psychology literature in two ways. First, it makes a theoretical contribution by examining how COR theory can be used to understand how supportive leadership and co-worker support enhance employee resilience in the context of stressful events such as high workload. We situate our paper by examining how, within the ecology

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of the workplace, individuals can utilise their workplace's social network to enhance their resilience resources in the face of high work demands. Secondly, few studies have examined the role of supportive leadership and co-worker support as job resources that may help improve employees' resilience (personal resources). Our study fills this gap. We argue that these are important job resources for employees, especially in the context of high performance pressure.

THEORETICAL FRAMEWORK AND HYPOTHESES

Job Resources

The COR model rests on the notion that "people strive to retain, protect, and build resources and that what is threatening them is the potential or actual loss of these valued resources" (Hobfoll, 1989, p. 513). Individuals generally seek pleasure and success, and therefore attempt to minimise the potential for loss. COR theory can be thought of as an integrative stress theory that considers both the environment and internal processes (Hobfoll, 2001). The fit between personal, social, economic, and environmental resources with external demands drives stress responses and associated outcomes. Individuals are motivated to acquire additional resources to compensate for the loss of fit between capacity and demand by seeking social support from colleagues and leaders (Hobfoll, 2001). COR theory therefore offers important explanatory power in understanding the role resources can play in mitigating the effects of stress.

The COR model has two basic assumptions: (1) individuals will invest their resources to mitigate stressful events and prevent themselves from experiencing undesirable outcomes; (2) individuals will invest resources to protect against future loss, recover lost resources and gain new resources (Salanova, Schaufeli, Xanthopoulou, & Bakker, 2010). Resources are important to combat loss or the potential of loss and its associated negative effects, including stress. Lee and Ashforth (1996) contend that important resources include social support from a number of different sources. For the current paper, these may include supportive leadership and peer (co-worker) support.

The COR model predicts that the external environment poses threats of depletion to an individual's resources. This depletion of resources may threaten their status, position, economic stability, or self-esteem (Hobfoll, 1989, 2001). According to Hobfoll (1989), individuals will employ resources in their *current* possession (e.g., resilience) or draw on resources available to them from their environment (e.g., leader and colleague support, and supportive human resource management (HRM) practices) to cope with their loss or threat of loss. Underlying this process is the importance of the accumulation

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and integration of resources to create "resource caravans" (Salanova et al., 2010) or resource banks. These resource caravans are critical to explaining the rationale of our hypothesised model.

Successful organisations offer organisational participants shared resources, and facilitate the internal transaction of resources to meet organisational challenges and strategic objectives. Hobfoll (2011, p. 118) suggests that "organizational support, stability, safety are all aspects of resource caravan creating and sustaining organizational ecologies. These ecologies can be seen to be creating passageways in which resources are supplied, protected, shared, fostered and pooled." At the core of resource-enriching organisational ecologies are strong worker-supervisor relationships and strong employee-colleague relationships (Hobfoll, 2011). This triggers the responsibility for resource caravan creation and investment in the maintenance and growth of social ecology. Caravan passageways for organisations are environmental conditions that support, foster, enrich, and protect the resources of individuals, sections or segments of workers, and the overall organisation; passageways create ecologies to sustain the existence of resource caravans (Hobfoll, 2011). The investment in and sharing of resources in organisations is critical, as individuals are responsible for one another and often work in teams in which success depends on group collaboration (Halbesleben & Wheeler, 2015). Carmeli and Gittel (2009) argue that high quality relationships, such as shared goals, shared knowledge, and mutual respect, can foster greater learning from failure, which is a critical aspect of building resources (e.g., employee resilience). This paper unpacks the process of how these resource caravan passageways operate through supportive leadership and co-workers' support to strengthen employee resilience in the face of high performance pressure. We argue that supportive leadership and co-worker support will positively predict employee resilience, particularly in an environment of performance pressure (e.g., high workloads and tight deadlines).

Employee Resilience as a Personal Resource

Resilience is conceptualised as an individual or personal resource or strength that enables individuals to cope with challenging circumstances, difficulties, failure, and potential opportunities (Avey, Luthans, & Jensen, 2009; Kossek & Perrigino, 2016). Resilience may assist an individual to recover and effectively "bounce back" from adversity or negative emotional experiences (Agnihotri, Trainor, Krush, & Krishnakumar, 2014). Avey et al. (2009) suggested that resilience is a key positive psychological resource that assists in negotiating turbulent and stressful workplaces. Agnihotri et al. (2014) added that employee resilience is important in a customer service

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work environment, as it may enable employees to be successful in meeting customer expectations, particularly in adverse circumstances.

Resilience has been extensively studied by organisational behaviour researchers (Luthans, 2002; Luthans, Avey, Avolio, Norman, & Combs, 2006; Luthans, Vogelgesang, & Lester, 2006). They generally focus on resilience as a personality trait or attribute, and a process through which individuals may grow and thrive. Moreover, some researchers have conceptualised resilience (among other psychological constructs) as psychological capital, which can be thought of as personal qualities (e.g., reserves of self-efficacy, optimism, hope, and resilience) that enable employees to cope with stressful workplace settings and events (Luthans, 2012; Seligman, 2011). Despite this valuable research, there is growing recognition that resilience can be viewed as a skill, and therefore can be developed and harnessed through certain HRM practices such as training and development (Albrecht et al., 2015; Demerouti, van Eeuwijk, Snelder, & Wild, 2011; Wang et al., 2014). Recent intervention studies have demonstrated that employees can develop their personal resources, including resilience, through training and development (Albrecht et al., 2015; Demerouti et al., 2011).

There is also a growing body of research that demonstrates the importance of developing resilience in adversity (Bullough et al., 2013; Williams & Shepard, 2016). For example, Khan, Soundararajan, Wood, and Ahammad's (2017) study found that employee resilience is critical in cross-border mergers and acquisitions, because these tend to be major organisational changes, which put pressure on existing organisational structures, cultures, and processes, and may impart a greater sense of insecurity.

Supportive Leadership and Co-worker Support as Job Resources

Resources do not exist in isolation from each other, but are interrelated, and aggregate to create a bank of resources to protect individuals from excessive demands or stressful events (Hobfoll, 2011). Salanova et al. (2010, p. 120) point out that "employees working in a resourceful environment are likely to reinforce their beliefs in their capabilities and resilience, to feel valued, and be optimistic about meeting their goals". Importantly, the COR model predicts that through learned resourcefulness, in the long run these resource caravans produce positive individual outcomes, including "better coping, adaptation and well-being" (Salanova et al., 2010, p. 120).

Empirical research has demonstrated the efficacy of the COR model, its use in explaining the stress-strain-coping-self-evaluation process (Halbesleben, 2006), and its application to the workplace (Hobfoll & Shirom, 2000). However, there has been no study that examines the predictive or interactive

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effects of different types of resources on employee resilience in the context of high work pressure (i.e., to unpack the processes within resource caravan passageways). In particular, there is a dearth of literature that examines the impact of leadership behaviours on employee resilience (Harland, Harrison, Jones, & Reiter-Palmon, 2005). This is despite substantial evidence that leadership may help reduce a subordinate's burnout and stress-related symptoms (e.g., Bass, 1990; Seltzer, Numerof, & Bass, 1989); leadership behaviour, although it is not the opposite of resilience, is conceptually and intuitively related to it (Harland et al., 2005).

Supportive leadership is an important resource in complex and challenging work environments, and in accordance with the COR model, individuals may seek to draw on workplace conditions to further enhance their personal resources, which may include resilience. Spreitzer, Lam, and Fritz (2010) suggest that leaders can support employees to feel energised and be in learning mode through promoting psychological safety at the workplace. These individuals may experience fewer emotions associated with failure, and put their conserved resources towards learning, which may contribute to higher levels of resilience. Bass (1990, p. 652), points out that leaders who develop and treat their employees as individuals, will seek to "convert crises into developmental challenges" (Bass, 1990, p. 652).

The COR model may explain the process through which individuals draw on leaders to support the development of learned resourcefulness and better ways of "coping, adaptation and well-being", which may be analogous to feelings of resilience (Salanova et al., 2010, p. 120). This can be further explained in terms of resource caravan passageways and the important role supportive leaders have in fostering ecologies that engage resources (Hobfoll, 2011). Hobfoll (2011) argues that an ecological approach that relies on resource caravan passageways can increase employee resources through the leaders' support, mentoring and sharing of information. We argue that supportive leaders can contribute to the resilience resources of employees through encouraging and supporting the development of high performance goals, providing support with technical and emotional challenges, and creating a climate where all opinions are valued (Bardoel et al., 2014). This supportive leadership approach may contribute to employee resources of enhanced determination, adaptability, proactivity, and problem solving (Wang et al., 2014). We therefore propose:

Hypothesis 1: Supportive leadership behaviour is positively related to employee resilience.

Similarly, there is a dearth of research that has examined the relationship between peer support and employee resilience. However, there is extensive

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research demonstrating that social support may reduce stress and burnout through promoting a positive sense of self and a view that an individual can effectively manage challenging and stressful situations (e.g., Hobfoll & Freedy, 1993). For example, Halbesleben (2006) reported, based on a meta-analysis of the social support and burnout literature, that social support from both supervisors and work colleagues was negatively associated with all three dimensions of burnout (i.e., emotional exhaustion, depersonalisation and personal accomplishment). The COR model may be useful in explaining the possible relationship between co-worker support and employee resilience. Social support may increase the pool of resources (through contributing to the resource-engaging ecologies and resource caravan passageways) at the disposal of an individual, which can be used to replace or reinforce other resources during stressful work events (Hobfoll, 1988) This may contribute to enhanced feelings of determination, adaptability, proactivity and problem solving (Wang et al., 2014). Strong co-worker relationships are important in contributing to the pool of resources available within an organisational ecology (Hobfoll, 2011). We argue that co-worker support is critical for individuals to maintain and develop their resource caravans, in that these resources are developed together and that their passageways create ecologies that sustain their existence (Hobfoll, 2011). Following this logic, we argue that social support and resilience are both part of the resource caravan and hence should be closely correlated.

There is research that touches upon the relationship between social support and various dimensions of employee resilience. For instance, excessive work demands are likely to produce strains, whereas resources such as social support may create a feeling of enhanced self-efficacy, security and belonging (Harland et al., 2005; Hobfoll & Freedy, 1993; Salanova et al., 2010). Van Yperen and Hagedoorn (2003) reported, based on a sample of over 500 nurses, that high levels of instrumental support (support from colleagues and supervisors) were associated with higher levels of intrinsic motivation. Employees may be inspired to learn and develop skills required to meet work demands. Social support has been equated with satisfying social relationships, which may support individual beliefs that they are "esteemed, valued and part of a network of communication and mutual obligation" (Buunk, 1990, p. 297). Lee and Ashforth (1996) reported that co-worker support was associated with a sense of competence through support, self-efficacy and self-appraisal. We thus propose:

Hypothesis 2: Co-worker support is positively related to employee resilience

There is substantial evidence that working in the financial service sector, such as insurance and banking, can be stressful and demanding, often

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requiring long working hours and the need to meet tight deadlines (e.g., Teuchmann, Totterdell, & Parker, 1999; Wang et al., 2014). Extant research has demonstrated that excessive job demands such as work pressure without appropriate job resources such as supervisor and colleague support are strongly associated with burnout (Bakker, Demerouti, & Verbeke, 2004) and myriad associated health complaints (Korunka, Kubicek, Schaufeli, & Hoonakker, 2009; Sweetman & Luthans, 2010). Leader and co-worker support can alter workers' perceptions and cognitions associated with workplace stressors (e.g., high workload) by mitigating their negative appraisal and health damaging effects (Kahn & Byosiere, 1992). Vagg and Spielberger's (1998) stressor indicators suggest that support from superiors and co-workers is important in alleviating stress levels. Similarly, Cole, Bruch, and Vogel (2006, p. 466) argued that "employees consider favourable treatment and support by their supervisor and, therefore the organization, as an indication that employees are cared for", signifying "to employees that material aid and emotional support are available when needed".

The presence of leader and co-worker support may reinforce employee motivation by providing employees with the appropriate personal (i.e., esteem, vision, determination, belonging) and job-related strategies, physical resources, skills, and workplace relationships that will enable them to effectively rise to the challenge of high workloads without potential negative effects such as burnout (Bakker et al., 2004). Despite these valuable studies, there is no specific research that examines the impact of supportive leadership and co-worker support on employee resilience in an environment of substantial performance pressure. We posit that this interaction may be explained using the COR model.

The COR model predicts that when employees experience work pressure (job demand), they will take steps to minimise the loss of their resources such as energy and self-esteem, and/or may seek greater resources to cope with the loss or threat of loss. In situations of high work pressure, employees may draw on resources in their *current* possession (e.g., resilience) and/or attempt to secure additional resources available to them from their environment (e.g., leader and co-worker support) (Hobfoll, 1989). As discussed above, the accumulation and integration of resources to build resource caravans to mitigate against potential or future loss (Salanova et al., 2010) may explain why individuals tend to draw on the support of their supervisors and colleagues when experiencing work pressure.

Given the evidence that some self-efficacious individuals can develop resilience during adversity (Bullough et al., 2013; Williams & Shepard, 2016), we argue that individuals can draw on additional resources to maintain and build current resource reservoirs. Resilience as a resource has been shown to be critical to fostering employee well-being and in-role performance (Luthans,

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2012). Bullough et al. (2013) argue that social workplace environments and the actions of organisational participants (e.g., managers and employees) in response to environmental adversities such as high workloads play an important role in affecting individual's perceived resilience. We therefore argue that individuals in a resource-engaging ecology will take advantage of opportunities to replenish their levels of resilience through greater reliance on supportive leaders and supportive co-workers.

Halbesleben and Wheeler (2015) argue that trust and reciprocity are critical to resource-engaging ecologies, in which team members invest resources in other group members. Investing in the resilience of co-workers (a personal resource) enables resilient individuals to reciprocate and provide future resources to team members in times of resource depletion, so that employee resilience can actually increase in the face of adversity (Hakanen, Peeters, & Perhoniemi, 2011; Halbesleben & Wheeler, 2015).

On the basis of COR theory, we hypothesise that performance pressure (e.g., high workload and tight deadlines) will moderate the relationships between co-workers and supportive leadership, such that the relationship between co-worker support, supportive leadership, and employee resilience, will be stronger when perceived performance pressure is high. As suggested above, this may be explained by the presence of an engaging resource ecology in which resource caravans promote the investment of job resources (e.g., co-workers' support and supportive leadership) into personal resources (e.g., employee resilience) to counteract the resource depletion. We propose the following hypotheses:

Hypothesis 3: Performance pressure (workload and working time) moderates the relationship between leadership and employee resilience, such that the relationship between supportive leadership and employee resilience is stronger when perceived performance pressure is high.

Hypothesis 4: Performance pressure (workload and working time) moderates the relationship between co-worker support and employee resilience, such that the relationship between co-worker support and employee resilience is stronger when perceived performance pressure is high (Figure 1).

METHOD

Sample and Procedure

Data used for this research was collected in 2013 from 14 banks located in Chengdu and Chongqing cities in south-western China. We chose these two cities for two reasons. First, they are highly populated, strategic regional

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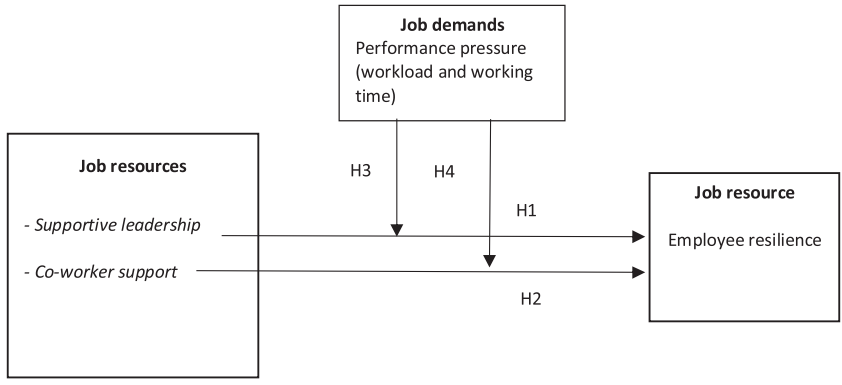


FIGURE 1. Conceptual framework for supportive leadership, co-worker support, performance pressure and employee resilience.

capitals for regional development with a strong financial sector. Second, compared to the relevant HRM research conducted in developed eastern cities, the western area has received less concern (Wang et al., 2014).

We chose the banking industry for study because it is a highly competitive industry, which requires employees to demonstrate a high level of resilience. While extant research on leadership in the Chinese context has covered industries such as hospitality (e.g., Wu, Tse, Fu, Kwan, & Liu, 2013), no leadership study has been conducted in the banking industry, where the workforce is relatively young and performance pressure is high, thus requiring a high level of resilience (Wang et al., 2014). Similarly, few studies have been carried out to examine the role of co-worker support as a job resource in the Chinese banking context. Given the intense competition within the largely state-owned Chinese banking industry and its critical role in Chinese economic development, the study of HRM practices, employees' psychological state, and performance in this sector are increasingly important (e.g., Yu & Frenkel, 2013; Zhao, Zhang, Zhao, & Poon, 2012). We focused on one industry only to avoid cross-industry variations, though we are aware of the limitations this generates.

Using the back-translation procedure, the questionnaire was designed in English first and translated into Chinese by the bilingual members of the team and two independent researchers (Brislin, 1970). After piloting and refining the questionnaire (see Wang et al., 2014 for detail), paper-based questionnaire copies were distributed to senior managers in 31 main branches. Each senior manager was given 100 questionnaires and was asked to distribute them to their employees, with a focus on frontline staff. We focused on frontline employees, as this cohort of banking staff deals with customers

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directly, and has a relatively high level of performance pressure. Finally, 2,040 questionnaires were received, with a response rate of 66 per cent, of which, 2,025 valid questionnaire copies without any missing data were used for data analysis (Table 1).

Measures

Supportive leadership was measured using a four-item scale adapted from previously validated measures by Arnold, Arad, Rhoades, and Drasgow (2000). Questions asked include, for example, whether "employees can openly voice their opinions and concerns without fear of retribution". We adapted Arnold et al.'s (2000) measure of empowerment leadership to reflect key aspects of supportive leadership, as developed by House (1996), including displaying concern for subordinates' welfare, and creating a psychologically supportive work environment. Our adapted measure emphasises high concern for employees through patient, encouraging, and supportive leadership behaviours. Further, we selected high leadership behavioural

TABLE 1
Demographic Profile of the Samples

Item	*Classification*	n	*Percentage*
Employee sample		2,025	100
Age	18–20	8	0.4
	21–24	643	31.8
	25–29	789	39.0
	30–34	270	13.3
	35–39	132	6.5
	40–44	100	4.9
	45–49	62	3.1
	50–54	17	0.8
	55–60	4	0.2
Gender	Female	1,155	57.0
	Male	870	43.0
Education	Diploma	630	31.1
	Bachelor degree	1,091	53.9
	Master's degree	245	12.1
	Others	59	2.9
No. of years working for the company	<3	963	47.5
	3–5	538	26.6
	6–10	247	12.2
	11–15	99	4.9
	>15	178	8.8

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performance standards as an item for the scale, because leading by example is critical in a highly competitive banking organisation, and sharing the workload in itself is a strong support to the employees that are under performance pressure. These aspects of supportive leadership overlap with House's (1996), and Wendt et al.'s (2009) conceptualisation of supportive leadership.

Supportive co-worker relationship was measured using a four-item scale adapted by Prieto and Santana (2012). Questions asked include, for example, whether "my colleagues and I help each other when we have problems". The supportive co-worker relationship measure used in our paper overlaps with other measures of supportive co-worker behaviours, such as helping each other, sharing knowledge, good working relationships, and building trust and reciprocity (Cutrona & Russell, 1987; Eisenberger, Huntington, Hutchison, & Sowa, 1986).

For this study, *performance pressure*, conceptualised as job demands, mainly includes workload and working time. According to Spector and Jex (1998, p. 358), "workload can be measured in terms of number of hours worked, level of production, or even the mental demands of the work being performed". A four-item scale was used (e.g., Teuchmann et al., 1999; Cousins et al., 2004). Questions included, for instance, whether "I am having difficulty in finishing my tasks within normal working hours".

Employee resilience A nine-dimension scale was adapted for this study, including: vision; determination; interaction; relationships; problem-solving; organisation; self-confidence; flexibility and adaptability; and proactivity (see Wang et al., 2014 for detail). A 5-point Likert scale was used for all ratings (1 = strongly disagree, 5 = strongly agree).

Validity and Reliability

Second-order confirmatory factor analysis was conducted to test the construct's validity. We found that, after deleting the two items B19 and B22 with very low loadings, the second-order CFA model fitted the data well: χ^2 (975) = 7044.65, RMSEA = 0.062, TLI = 0.94, CFI = 0.94, and RMSR = 0.036. The χ^2/df index is sensitive to sample size and therefore not suitable to assess the model fit in this study (Bagozzi, Yi, & Phillips, 1991). All the standardised first-order loadings were larger than 0.5 except for one item (B28) of vision with the loading of 0.46. We kept this item to ensure all the dimensions have more than three indicators. Almost all the second-order loadings were larger than 0.7, which supported a second-order structure.

All data were collected from the same respondents, which may have caused a common method bias from the common rater effects (Podsakoff, MacKenzie, & Podsakoff, 2012). To assess the extent to which common

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TABLE 2
Means, Standard Deviations, Reliabilities, and Correlations

	Variable	***M***	***SD***	*1*	*2*	*3*	*4*
1	Supportive leadership	3.56	0.74	**0.85**			
2	Co-worker support	3.77	0.66	0.59**	**0.83**		
3	Performance pressure	3.44	0.69	0.16**	0.18**	**0.71**	
4	Employee resilience	3.64	0.43	0.37**	0.40**	0.18**	**0.93**

Notes: N = 2,025. ** Correlation is significant at the 0.01 level (2-tailed).
Cronbach alpha coefficients appear in bold along the diagonal.

method bias mattered in the relational models, Harman's single-factor test was conducted (Podsakoff et al., 2012). Both EFA and CFA were adopted. EFA results showed that there were nine factors and the first factor only accounted for 25.8 per cent of variances. The CFA single-factor model was found to fit the data poorly: χ^2 (989) = 17004.55, RMSEA = 0.11, TLI = 0.81, CFI = 0.82, and RMSR = 0.061. The hypothesised five-factor model was significantly better than the single-factor model, $\triangle\chi^2$ (14) = 9959.9, $p < .001$. This indicated that the common method bias in this study was not a crucial problem (Podsakoff et al., 2012).

The above results provided evidence of the study's validity. Cronbach alpha coefficients for supportive leadership, co-worker support, performance pressure, and employee resilience are 0.85, 0.83, 0.71 and 0.93, respectively. Cronbach alpha coefficients are all greater than 0.70, which shows that the internal consistency reliability of the measurements was acceptable (see Table 2).

Method of Analysis

To estimate our hypothesised model, structural equation models of latent interactions were adopted in Mplus 7.4. The unconstrained approach, which does not require complicated non-linear constraints, was implemented to form the product indicators (Marsh, Wen, & Hau, 2004). Supportive leadership, organisational climate, and performance pressure, are all unidimensional constructs with four indicators each. With the same number of indicators, the matched-pair strategy is recommended (Marsh et al., 2004; Wu, Wen, Marsh, & Hau, 2013).

RESULTS

The descriptive statistics are reported in Table 2, with reliabilities and correlations among the main constructs. In general, the significant correlations between the dependent and independent variables offered basic support to the first three direct effect hypotheses.

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Structural Equation Models of Latent Interactions

Two structural equation models of latent interactions were used to test the hypothesised direct and moderation effects. Model 1 focused on Hypothesis 1, the direct effect of supportive leadership on employee resilience, and Hypothesis 3, its interaction with performance pressure. Model 2 focused on Hypothesis 2, the direct effect of co-worker support on employee resilience, and Hypothesis 4, its interaction with performance pressure. To construct the measurement model for the interaction, the matched-pair strategy was adopted to form the product indicators (Marsh et al., 2004; Wu et al., 2013). Based on the loadings results from CFA, the items were sorted by the loadings. The item with largest loading of supportive leadership and that of co-worker support multiplied the item with largest loading of performance pressure, respectively. The remaining items were also multiplied in matched pairs. Then we got four indicators of the interaction variables for each model.

Confirmatory factor analysis indicated that Model 1 fitted the data well (χ^2 (974) = 6708.979, RMSEA = 0.054, and RMSR = 0.052, see Table 3). Table 4 shows a strong positive relationship between supportive leadership

TABLE 3
Results of Confirmatory Factor Analysis of Models 1 and 2

Model	*Overall Model Chi-square Value*	*RMSEA*	*RMSR*
Model 1	χ^2 (974) = 6708.979	0.054	0.052
Model 2	χ^2 (974) = 6535.760	0.053	0.050

TABLE 4
Structural Model Estimates of Models 1 and 2

Relationships		*Model 1*	*Model 2*
Hypothesised direct relationships			
H1	SL to ER	0.382***	–
H2	SPR to ER	–	0.444***
Hypothesised interaction relationships			
H3	SLXPP to ER	0.092**	–
H4	SPRXPP to ER	–	0.100***

Note: SL denotes supportive leadership; ER denotes employee resilience; SPR denotes co-worker support; SLXPP denotes the interaction effect of supportive leadership by performance pressure; SPRXPP denotes the interaction effect of co-worker support by performance pressure.
** $p < .01$; *** $p < .001$.

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and employee resilience (β = .382, $p < .001$). Hence, Hypothesis 1 was supported. The interaction variable measured by the product indicators was significantly positively related to employee resilience (β = .092, $p < .01$). Hence, Hypothesis 3 was supported.

Model 2 also fitted the data well: χ^2 (974) = 6535.760, RMSEA = 0.053, and RMSR =0.050. Table 4 shows a strong positive relationship between co-worker support and employee resilience (β = .444, $p < .001$). Hence, Hypothesis 2 was supported. The interaction variable measured by the product indicators was significantly positively related to employee resilience (β = .100, $p < .001$). Hence, Hypothesis 4 was supported.

DISCUSSION AND CONCLUSIONS

This study examined the relationship between supportive leadership and co-worker support and employee resilience. We found that they are valuable job resources for employees in the context of high work pressure environments such as commercial banks in major cities in China, where banks compete with each other intensively. We discuss contributions, limitations and future research directions below.

Contributions

This study makes three contributions. First, it contributes to extant research on leadership and employee resilience by examining how they are related, a research angle that has not been undertaken before. It also contributes to existing knowledge on co-worker support and resilience by empirically testing the relationship between the two, which was proposed by Williams and Cooper (1998).

A second, and the main, contribution of the study is that, by combining supportive leadership and co-worker support to assess their effect on employee resilience, we extend COR theory by examining how supportive leadership and co-worker support as two job resources may be mobilised to enhance employees' personal resource—resilience. While the former comes from external sources, the latter is developed internally, especially when job resources from external sources (through resource caravans) are available. This study contributes to the literature by examining the process through which internal and external resources (from three sources—leaders, co-workers and the individual) interact to counter high work pressure. Our study lends support to the importance of resource-engaging ecologies and the process through which resource caravan passageways may operate in the context of adversity (Hobfoll, 2011). We also contribute to COR theory by providing some support that an ecology of resources (resilience), through resource caravan pathways (supportive leadership and co-worker support) are critical

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to overcoming the threat of resource loss, and that job resources may be important in supporting the maintenance and growth of personal resources (Halbesleben & Wheeler, 2015). By using a resource ecological perspective and conceptualising employee resilience as a resource, we show how resilience can be enhanced in the context of threats to the depletion of resilience resources.

The creation and development of resource-engaging ecologies is critical in a fast-paced and competitive business environment such as banking, where there are constant threats of depletion to employee resources. Moreover, our study provides empirical support for the notion that work pressure in the context of a resource-engaging ecology may actually be a force for the maintenance and even growth and development of employee resilience (Hakanen et al., 2011; Bullough et al., 2014). In fact, employees may be able to gain resources through resource caravan passageways even in the face of adversity (Bullough et al., 2014).

As a third contribution, the study extends our knowledge of leadership in the Chinese context by focusing on a specific form of leadership—supportive leadership as a form of social support for creating a supportive workplace climate. Extant research on leadership in the Chinese management context has moved from a focus on cultural influences in earlier studies (e.g., Ralston, Egri, Stewart, Terpstra, & Yu, 1999) to the potential impact of transformational leadership, authentic leadership, empowering leadership, and ethical leadership on employees' psychological outcomes (e.g., trust) and organisational behaviour (e.g., creativity) (e.g., Bai, Li, & Xi, 2012; Wang & Rode, 2010; Zhang & Bartol, 2010). This shift closely reflects the trend of current interests in leadership research in general. However, these studies are mainly preoccupied with identifying the type of leadership and conditions that will lead to enhanced organisational performance through employees' willingness to expend extra effort (e.g., creativity, citizenship behaviour).

What has been less well examined, in the Chinese setting, is how leadership as a form of day-to-day support can contribute to creating a supportive environment in high job demand situations to enhance employees' resilience so that they will not slip into a prevention-focused mode of working (Higgins, 1998). This is an important research gap, given the increasingly intensive work pace and declining job security at many workplaces in China, which may trigger people to adopt a prevention-focused approach to avoiding mistakes or failures that may lead to negative consequences. In the banking sector, this typically takes the form of reduction of bonuses and/or non-renewal of employment contracts. While supportive leadership is also experienced and applicable in other societal contexts, what we highlight here is the need for more research in this area in the Chinese context, and our study contributes to that.

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Management Implications

This study has important implications for managers. Primarily, it suggests that firms should develop a resource-engaging ecology to help improve employees' resilience, particularly for those in demanding jobs (Hobfoll, 2011). We argue that supportive leadership and co-worker support are critical job resources in such an ecology (Halbesleben & Wheeler, 2015). Managers need to give serious attention to how they build resource-engaging ecologies. At the core of building such ecologies and resource caravan pathways is the foundation of effective HRM practices that encourage leaders and workers to co-build resources. HRM practices that invest in management and workers (e.g., management development, training and development), provide engaging work (e.g., job designed to provide autonomy and challenge, information provision), positive social and physical environments (e.g., promotion of social interaction, collaboration and trust), and voice (e.g., extensive communication) may play an important role in building an ecology of resources that employees can draw on in times of resource depletion (Guest, 2017).

Given the paternalistic nature of Chinese society, which is often reflected in leadership style in organisations on the one hand, and the growingly individualistic preference of the younger generation of the Chinese workforce on the other, Chinese firms may wish to pay more attention to cultivating a leadership style that is perceived to be supportive to the employees. This may necessitate organisational investment in further leadership development and management practices that increase worker collegiality and a sense of organisational community, such as team-based work design and promotion of cooperation and trust. We would advocate training and development of various levels of management (e.g., senior, middle and first-line supervisors) within organisations to enhance supportive leadership skills. These include, for example, leadership skills that positively contribute to employee resilience, including building strong relationships with workers underpinned by trust, encouragement, leading by example, and enabling workers to improve their self-confidence and self-determination. To reinforce these managerial and supervisor behaviours, we would encourage organisations to develop appropriate HR infrastructure, such as congruent performance management and associated rewards (Ulrich, 2016). These implications are applicable not only to Chinese organisations, but also to those in other parts of the world that may need to improve leadership and workplace environment to enhance employee resilience and well-being.

Limitations and Future Research

This study has several potential limitations. First, it is a single source survey from employees without corroborating with managers' perceptions, which may

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give rise to the issue of potential common method variance (CMV) (Podsakoff et al., 2012) and cannot rule out the reverse causality. Harman's single-factor test was conducted to prove that CMV was not a crucial problem in this study. However, CMV bias cannot be ruled out when using a cross-sectional self-report study. Further studies should develop research designs that incorporate responses from both managers and employees across different time periods (e.g., dependent variable and independent variables collected at different time periods). This can offer stronger evidence for the strict causal effect relationship.

Secondly, the study is cross-sectional and based on one industry and in one region in China. It is unclear if the same results may be found at different times or in other industries and regions in China. Future research may adopt a longitudinal approach and extend the research to other industries and regions in China and beyond. Third, while our study suggests that supportive leadership and co-worker support are important job resources that may contribute to the development of employee resilience as a personal resource, so that employees may adopt a promotion-focused rather than a prevention-focused mode to cope with work pressure, we have not explicitly tested this suggestion. Future research may be designed to bring together two theories—COR (Hobfoll, 1989) and regulatory focus theory (Higgins, 1998)—to examine more broadly what organisational practices may be used to create/increase employees' job resources which will be beneficial to promotional-focused types of behaviour (e.g., proactive, positive, creative) from employees, that are in turn beneficial to enhancing organisational performance.

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