THE INFLUENCE OF PSYCHOLOGICAL OWNERSHIP AND SOCIAL SUPPORT ON ORGANIZATIONAL RESILIENCE: THE MEDIATING ROLE OF ORGANIZATIONAL IDENTITY

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Abstract. Faced with a complex and volatile environment, improving the resilience of organizations to resist various risks, enhancing the viability of enterprises, and ultimately achieving sustainable development capabilities has become a top priority for business managers. This study first explores the relationship between employee psychological ownership, organizational resilience, and social support by combining the relevant literature, constructing a theoretical research model, and proposing hypotheses. Through statistical analysis of 332 valid questionnaires, the results show that employee psychological ownership positively impacts organizational resilience. Also, social supports positively affect organizational resilience and organizational identity in employee psychological ownership, and social supports and organizational resilience both play an intermediary role.

Keywords: psychological ownership of employees, social support, organizational resilience, organizational identity, the impact of psychological ownership, the impact of social support, mediating role of organizational identity.

JEL Classification: M41, C83, L20.

Introduction

Organizational resilience (OR) refers to the ability of an organization to integrate various resources in a planned and orderly manner, quickly get rid of crises, and create opportunities to thrive in an uncertain world (Duchek, 2020; Yu & Xiaofei, 2014). As a key factor for companies to deal with complex environments and enhance their core competitiveness for sustainable development, it has attracted widespread attention from academics and business professionals. When faced with severe crises or challenges, companies with strong OR

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capabilities can reorganize resources and reconstruct their competitive advantages, thereby gaining new vitality and opportunities for development (Ouedraogo & Boyer, 2012). In addition, in fierce competition, companies with strong OR can surpass their competitors and thrive (Agha et al., 2012). With the rapid changes in the economic environment, competition among enterprises has become increasingly fierce. At the same time, enterprises may face various challenges and crises at any time. In this turbulent environment, some companies are stuck in a state of stagnation, struggling to survive until they disappear, while other companies can overcome difficulties to survive and rejuvenate; in this process, the strength of OR has played a key role here. At present, research on OR has yielded fruitful outcomes from studies on organizational structures, management processes methods, and strategic human resource management. However, OR reflects the comprehensive strength of a company. Improving OR is a high degree of recognition of the company's employees' psychological and behavioral aspects, involving psychology, sociology, and behavior.

Given the importance of OR to the company, in this study, we developed and validated a theoretical model for strengthening OR based on employee psychological ownership (EPO) and the social supports (SS) theory. The key issues of improving OR are investigated, which provides a reference for future academic research on OR. Investigating the impact of employee psychological factors on OR has great practical significance. The opportunities and restrictions of psychological factors may affect employees' willingness to conduct behaviors beneficial to the organization (Bailing et al., 2018). In addition, these behaviors are promoted by employees' psychological gains on organizational commitment and other support opportunities.

On the contrary, employees' reluctance to conduct these behaviors is due to psychological gains that limit organizational commitment and other support opportunities. Therefore, OR must take employees' psychology and behavior as the main body to exert its real power. OR can be improved and enhanced only with the psychological recognition of employees.

How do EPO and SS affect OR? What is the psychological mechanism between them? To the best of our knowledge, previous studies have not given any clear explanations of these questions. Besides exploring direct relationships between the variables, the mediation effect is also revealed here. These two main questions are considered here as the research question and the gap of this research. This study employs organizational identity (OI) to evaluate the influence path between EPO, SS, and OR from emotional cognition. OI reflects the emotional connection between employees and the organization (Hengbo et al., 2019). EPO and organizational support can promote employee OI (Hasan et al., 2019; Nekmahmud & Fekete-Farkas, 2020; Yi & Hui, 2016; Yumin & Guangping, 2016), which is an essential emotional mechanism that affects employees' performance and behavior (Klein et al., 2012). Therefore, different employee psychological ownership and SS levels will affect employees' OI and induce other behaviors, ultimately affecting OR. Based on these concepts, this study clarified the objective of this research to investigate the real influence of employees' psychological ownership and SS on OR. Here, the most notable is that the impact of OI is investigated as a mediating role. In some cases, the relationship between employee's psychological ownership and actual business SS to OR matter is why this study also specifies the reason for exploring the impact from an in-depth perspective.

The structure of this study is as follows: introduction, theories and hypothesis development, methods, and discussion sections. The drawbacks and the future directions are also presented at the end of the study.

1. Literature review and hypotheses development

1.1. Employee psychological ownership and organizational resilience

Pierce et al. (2001) first introduced psychological ownership to study the relationship between the employee stock ownership plans and employee work attitudes and behaviors. It is defined as a state of mind where the individual feels that s/he has (or partially owns) a target. The outcome is achieved by controlling targets to satisfy one's belonging needs (occupying space), self-efficacy (seeking efficacy), and self-identification. When the individual feels that s/he has a certain sense of ownership of a target, s/he will have a close bond with the target and generate positive evaluations. In an organization, employees meet their needs through communication and give back to the organization through a sense of ownership and responsibility (Al-Abbadi, 2018). When employees have the psychological rights of the organization, they will treat the organization as their home and treat themselves as the owner. They have the responsibility and obligation to invest more resources into the development of the organization. In addition, it can also strengthen employees' sense of work identity and organizational dependence, promote employees' innovative behaviors, and increase their performance. At the same time, it can also strengthen employees' sense of security during advocacy behaviors, prompting them to propose ideas for the organization's growth. In addition, compared with in-role behavior, psychological ownership has a greater impact on employee behavior, while psychological ownership has a more substantial influence on extra-role behavior. Psychological ownership significantly impacts overall and sublevels of organizational citizenship behavior. Although few literatures are focusing on the relationship between EPO and OR, it can be confirmed that employees' extra-role behavior, voice behavior, innovative behavior, improved work performance, and organizational citizenship behavior induced by EPO all contribute to the improvement of OR. In this regard, the following assumption is proposed:

H1: EPO has a positive impact on OR.

1.2. Social support and organizational resilience

Social support is a concept that first appeared in community psychology (Kaur, 2014; Taylor, 2011). It is a series of valuable information from other individuals, such as care, support, and respect. From the social exchange theory perspective, human behavior is related to activities that can benefit or reward (Emerson, 1976). When employees obtain SS from different aspects of the organization, in exchange, they will return it by conducting some behaviors; for example, the implementation of organizational citizenship behavior is one of the positive feedback. When the organization recognizes employees' work performance, they will be rewarded and promoted. This reward will significantly enhance employees' sense of cor-

porate responsibility and organizational identity. This improved organization identification will further encourage more effort and energy for the development of the organization. This promotes a sense of responsibility for work and demonstrates that attitudes to the organization are beneficial to the company (Kurtessis et al., 2017; Nekmahmud et al., 2020; Rhoades & Eisenberger, 2002). SS helps employees implement positive citizenship behaviors, such as donating, helping others, and oral communication (Zhu et al., 2016).

A higher SS also helps improve employees' work performance. In addition, organizational support can prompt employees to adopt positive work behaviors and improve innovation performance (Ling & Zhihua, 2017). When employees obtain support and recognition from organizations, leaders, and colleagues, they often become more innovative in their work, and their innovation behavior will also improve innovation performance (Guiqing et al., 2018). Besides, SS can reduce the pressure on employees and decrease the turnover rate (Bagger & Li, 2014). Additionally, the positive relationship between SS and physiological resilience has also been studied; however, few studies on SS and OR have been done. Therefore, SS can promote organizational citizenship behavior, improve work performance, implement innovative behaviors, reduce personnel turnover and improve OR. Hence, this study proposes the following hypothesis:

H2: SS has a positive impact on OR.

1.3. Mediation effect of organizational identification

Organizational identity refers to an individual's tendency to belong to an organization based on specific emotions and be recognized as a member of that organization. It enables individuals' behavior and psychology to be consistent with the organization (Zhengtang et al., 2018). Since individual OI brings tremendous power to the organization, the organization can coordinate an individual behavior to ensure the organization's goals (Zongbo & Hong, 2015). As an antecedent variable of affective commitment (Xueling et al., 2018), EPO can maximize employees' sense of belonging to the organization, create a home feel for employees, and promote employees to conduct behaviors that benefit the organization (Yi & Hui, 2016). When employees feel that the organization belongs to them, they identify themselves as part of the organization. Thereby, they appear to be consistent with the organization's psychology and behavior. EPO creates the sense of ownership of the organization and strengthens employees' sense of the owner. Then, employees will be willing to disclose their organizational membership, develop a sense of identity, make a high evaluation, and show a positive attitude towards the organization. In addition, employees will invest more resources in the organization to strengthen the emotional bond with the organization and form a community of common destiny. To achieve the common goals, employees will consciously think from the organization's perspective and actively implement beneficial behaviours (Hao, 2012). These can help strengthen OR. Therefore, the following hypothesis is proposed:

H3: OI plays a mediation effect between EPO and OR.

When employees receive higher SS, they increase organizational commitment to reduce anti-productive behaviors and reward them by conducting positive behaviors (Yuhe et al., 2014). SS can increase employees' perception of the organization, strengthen their emotional commitment, and promote positive behaviors (Aihui & Yaobin, 2014). Employees' perception of SS depends on how the organization treats them. When employees feel that the organization treats them very well, they increase their emotional commitment. They will use organizational citizenship and efficient work to pay back to the organization and help organizations achieve their goals (Chenhui & Yangyang, 2015). SS also positively influences employees' altruistic behavior. The more employees feel about SS, the more altruistic behaviors are performed (Xinxin et al., 2017). In addition, social support and organizational identity have also been experimented with in other significant literature such as Avanzi et al. (2018), Pepple and Davies (2019), and so others. Hence, this study proposes the following hypothesis H4:

H4: Organizational identity plays a mediation effect between social support and organizational resilience.

2. Methods

2.1. Survey, data procurement, and processing

As economic entities integrating knowledge and technology, high-tech companies continuously face business challenges, and survival crises brought about by fierce market competition and technological advancements. In this case, there is a high demand for OR. Therefore, this research focused on high-tech companies as research objects. This study randomly selected 20 companies from high-tech parks in Shenyang and Dalian for the survey. The human resource departments of the companies assisted in issuing the questionnaire, and we invited the employees who knew very well the primary operating conditions of the companies to fill out the questionnaire. A total of 400 questionnaires (20 questionnaires for each company) were distributed, and we have collected 374 questionnaires from the respondents. After excluding incomplete responses and invalid questionnaires, the number of valid questionnaires was 332, the effective rate was 88.77%, and the sample size also met the statistical requirements. Another 42 questionnaires were found to be incorrectly answered. In some cases, the respondents answered all the moderate responses without thinking about reality.

2.2. Demographic characteristics

The demographic characteristics of the respondents are as follows: (1) Gender: male accounted for 31.67%, female accounted for 68.33%; (2) Marital status: married status (53.33%), others accounted for 46.67%; (3) Age: mainly 18 years old – 40 years old, accounting for 89.61%; (4) Education level: bachelor degree or above accounted for 92.86%; (5) Working years: mainly 1 to 10 years, accounting for 60.87%; (6) Positions: grassroots, middle-level, and higher level, accounted for 35.09%, 41%, and 23.90%, respectively. Table 1 presents the details of the demographic variables in the following section.

Table 1. Demographic profile of the respondents (source: data collected from the survey)

Variables	Category	Frequency	%
Gender	Male	105	31.67
	Female	227	68.33
Marital status	Married	177	53.33
	Unmarried	155	46.67
Age	18–25 years	75	22.59
	26–35 years	93	28.01
	36–45 years	78	23.49
	46–55 years	52	15.66
	56 years plus	34	10.24
Education level	Below undergraduate	23	7.14
	Undergraduate	103	31.98
	Post-graduate	129	40.06
	Professional degree	67	20.80
Working Experience	Below five years	90	27.95
	6 to 10 years	106	32.92
	11 to 15 years	61	18.94
	16 to 20 years	39	12.11
	20 years plus	26	8.07
Working position	Grassroots	113	35.09
	Middle level	132	41
	Higher-level	77	23.90

2.3. Measurement scales

In this study, we used the 5-point Likert scoring method; "1" means "totally disagree", and "5" means "fully agree", and the degree is gradually strengthened. The measurement systems of the structured questionnaire are mentioned in the following concepts.

2.3.1. Psychological ownership measurement

It is commonly acknowledged that psychological ownership has a significant impact on an individual's behavior. In research, psychological ownership has been positively connected to organizational commitment, job satisfaction, and organizational citizenship behaviors (Menard et al., 2018). Psychological ownership can be compared to a sense of possession, which makes people see the goal as an extension of themselves, affecting their motivation and attitudes that ultimately lead to behavior. The concept of psychological ownership is mainly taken from (Pierce et al., 2001), one of the most significant contributions in psychological ownership and organization behavior. Later, based on this concept, a psychological ownership measurement scale was determined on the scale developed by Avey et al. (2009). The scale is composed of 4 dimensions: self-efficacy, responsibility, belongingness, and self-identity (Avey et al., 2009). Each dimension contains three items, and this scale has a total of 12 items.

2.3.2. Social support measurement

The social support measurement scale uses a scale developed by Zimet et al. (1988), consisting of 3 dimensions: family, friends, and other supports. Another study by Wang et al. (2021) divided other supports into government and non-government support groups. Gigantesco and Giuliani (2011) and Pushkarev et al. (2020) also include twelve items that are divided into three factors by following Zimet et al. (1988). These three divisions are family, friends, and significant other factors. All of the divisions also contain four items to consider the social support issue. Each dimension also has four items, and this scale has a total of 16 items. Whatever, finally, this study considers 12 items for family, friends, and others.

2.3.3. Organizational identity measurement

The organizational identity measurement scale adopts a scale developed by Mael and Ashforth (1992). It is a single dimension scale that contains six items. Lievens et al. (2007) also followed the concept of Mael and Ashforth (1992); however, they use five things instead of six as the power of organizational identity measurement. Finally, Voss et al. (2006) focused on examining the association between corporate performance and identity disagreement by concentrating on personnel's identity beliefs. However, after reviewing the stated studies, this study uses the concept developed by Mael and Ashforth (1992), and finally, we have specified six items to identify the organization's identity.

2.3.4. Organizational resilience measurement

Prayag et al. (2018) identified organizational resilience significantly influences corporate financial performance and economic sustainability. This is a very uprising concept of organizational research Hillmann and Guenther (2021). Whatever, the OR measurement scale is modified from the scale designed by Duchek (2020), Johnson et al. (2015), and Williams et al. (2017). This study directly followed the concept and scale design process from these three studies. The scale is a single dimension scale and contains three items, mainly associated with resources that support the organization's essential functions, such as human resources, materials, and information.

2.4. Reliability and validity assessment

This study analyses the α coefficients of 4 scales. The results show that Cronbach's α values are all greater than 0.8, indicating that all the scales used in this study have good reliability. Additionally, the scales used in this research have good content validity. They were developed based on widely used scales after analysis, evaluation, and improvement with corporate executives, human resources supervisors, and scholars. After the validation, the KMO values of all scales were above 0.6. Bartlett's ball test values were significant (P < 0.001), indicating that the scales used in this study are suitable for factor analysis. The cumulative contribution of all scales is more important than 60% except for OI, which indicates that the scale has good structural validity. This study also calculated each variable factor's composite reliability (CR) and mean-variance extraction volume (AVE). The results showed that the CR value was greater than 0.7 and the AVE value was greater than 0.5, indicating that all variables

had good convergence validity. The square root values of AVE were greater than the Pearson correlation coefficient, indicating that the discriminant validity of all variables was also good (see Table 2 and Table 3).

3. Results and analysis

3.1. Model data fit

This study used the confirmatory factor analysis to verify the discriminant validity. The results showed that four model confirmatory factor analysis (χ^2 / df = 1.785, NFI = 0.912, IFI = 0.959, CFI = 0.959, RMSEA = 0.049) was better than single model confirmatory factor analysis (χ^2 / df = 2.589, NFI = 0.873, IFI = 0.918, CFI = 0.917, RMSEA = 0.069), indicating that the variables have good discriminative validity.

3.2. Common method variation assessment

As the employees fill all the scales, the answers may have the common variance issue; hence, this study adopted the *Harman one-factor analysis* (Podsakoff et al., 2003). The results show that the explained variance of the first principal component obtained via unrotated exploratory factor analysis is 31.068% (below 40%), confirming no serious common variance issue in this study. Therefore, the common variance issue has little influence on the reliability of the conclusions.

Table 2. Reliability and validity of each measurement scale (source: authors' experiment)

Variable	KMO	CC (%)	CR	AVE	CA	Value
EOP	0.840	79.123	0.961	0.67	0.897	Excellent
SS	0.886	80.793	0.955	0.64	0.943	Excellent
OI	0.849	59.507	0.898	0.59	0.863	Good
OR	0.734	80.567	0.894	0.80	0.879	Excellent

Note: KMO – Kaiser-Meyer-Olkin test, CC – Cumulative contribution, CR – Composite Reliability, AVE – Average Variance Extracted, CA – Cronbach's α.

3.3. Descriptive statistics and variable correlation analysis

First of all, the descriptive statistics and correlations of these studies are presented here in Table 3. The mean value of EPO is 2.994, which is higher than the average value of this factor. The mean value of other variables is also showed greater than the average value. For example, SS, OI, and OR mean 3.5559, 3.1381, and 3.9196, respectively. The standard deviation also seems acceptable. In addition to descriptive statistics, this Table 3 also presents the correlation between the variables. The results showed that there is a positive correlation between EPO and OR (coefficient = 0.206, P < 0.01), SS and OR (coefficient = 0.220, P < 0.01), EPO and OI (coefficient = 0.178, P < 0.01), EPO and SS (coefficient = 0.470, P < 0.01). There is a positive correlation between SS and OI (coefficient = 0.186, P < 0.01), and between OI and

OR (coefficient = 0.156, P < 0.01). Therefore, H1 and H2 are verified, and H3 and H4 are preliminarily verified (see Table 3).

Table 3. Descriptive statistics and correlation coefficient of main variables (source: authors' experiment)

Variables	Mean Value	Standard Deviation	1	2	3	4
EPO	2.9937	0.32829	1.000	0.470**	0.178**	0.206**
SS	3.5559	0.47150		1.000	0.186**	0.220**
OI	3.1381	0.49418			1.000	0.156**
OR	3.9196	0.61390				1.000

Note: EPO – Employee Psychological Ownership, SS – Social Support, OI – organizational identity, OR – organizational resilience.
**. Is significantly correlated at 0.01 level (bilateral); diagonal bold is the square root value of AVE, others are Pearson correlation coefficient.

3.4. Structural model

In this phase of the experiment, all independent variables are tested to show organizational resilience. This study found that all of the covariates significantly influence organizational resilience. The relationship between organization identity and OR is (coefficient = 0.108, P < 0.05), psychological ownership significantly impacts on OR (coefficient = 0.120, P < 0.05), SS is significantly correlated with OR (coefficient = 0.143, P < 0.05), while the coefficient is significantly decreased and still significant, indicating that organizational recognition has played a part of mediating role. Therefore, H3 and H4 are assumed to be also validated here (see Table 4).

Table 4. Model coefficient (direct effect) (source: authors' illustration)

Variable	(Dependent Variable)
Independent Variable 1 (EPO)	
Independent Variable 2 (SS)	
Intermediary Variable (OI)	0.108*
Independent Variable 1 (EPO)	0.120*
Independent Variable 2 (SS)	0.143*
F	8.621***
N	332

Note: *** Significant at 0.001 level; ** Significant at 0.01 level; * Significant at 0.05 level.

3.5. Analysis of mediation effect

This study performed the mediation effect (Table 5) was an assessment based on the following steps. The first step shows that the independent variables (EPO and SS) and mediator (OI) must be significantly correlated. The second step shows that the independent variables (EPO and SS) and the dependent variable (OR) must be substantially correlated. In the third

step, it shows that after the introduction of the mediator (OI), that should be significantly related to the dependent variable (OR), and the statistical significance between the independent variables (EPO and SS) and the dependent variable (OR) should significantly be reduced or reach to zero. From the test results of the first step experiment, EPO has a significant impact on OI (coefficient = 0.170, P < 0.01), which means that EPO always supports the employees to think about their organizational identity. Therefore, this study supports investigating the relationship between organizational justice and psychological ownership (Atalay & Özler, 2013; Ozler et al., 2008; Pierce et al., 2001). In addition, there is a significant relationship between EPO and OR that has an incremental validity above that of organizational identification and organizational commitment in forecasting employees' organizational citizenship behaviors and in-role performance (Zhang et al., 2020). In addition, SS has a significant and positive influence on OI. It applies to corporate organizations and has similar effects on organizations' identity (Moazzami & Afrasyabi, 2016). The finding of this study also supports the result of Fuller et al. (2003), McKimmie et al. (2020), and Moonen (2018).

From the current test results in this stage, a significant correlation between EPO and OR supports EPO positively influences organizational ability, accepts changes, and survives in challenging circumstances.

Table 5. Path of mediating effect (source: authors' illustration)

Variable	Intermediary Variable (OI)	Dependent Variable (OR)
Independent Variable 1 (EPO)	0.170**	0.206***
Independent Variable 2 (SS)	0.196**	0.220***
Intermediary Variable (OI)		
Independent Variable 1 (EPO)		
Independent Variable 2 (SS)		
F	10.744**	14.654***
	11.864**	16.739***
N	332	332

Note: *** Significant at 0.001 level; ** Significant at 0.01 level; * Significant at 0.05 level.

4. Discussion

The discussion section of this study is presented in three segments. First, the results show that EPO has a direct impact on OR. EPO enables employees to see the organization as part of themselves and raises their awareness. This can encourage employees to put the organization's interests above their interests during the production activities. Employees also invest more energy and resources for the organization's development and generate more beneficial behaviors, including organizational citizenship and innovative behaviors, especially when the organization faces a problematic survival dilemma. In addition, EPO can motivate employees to unite and jointly contribute to the recovery and improvement of OR. Whatever the result of this study is supported by some other studies such as Carlson (2019) and George (2015). George (2015) investigated the positive relationship between psychological ownership, hap-

piness, and work engagement. However, our results are not supported by Amazue (2014). They found that EPO can't predict organizational behavior; however, resilience significantly predicted work engagement behavior among employees. Secondly, it also shows that SS has a direct impact on OR. Several studies support the result of this study. For example, Li et al. (2021) and Sippel et al. (2015) indicated that social supports positively impact organizational resilience. Sabouripour and Roslan, (2015) also found that social support and optimism are essential predictors of organizational resilience. Mai et al. (2021) investigated different social support factors and found that family and friends are the most important social support factors that impact organizational resilience. In any case, the support of colleagues, a kind of SS, allows employees to feel the care and warmth of the organization and promotes a harmonious atmosphere in the organization. It can also encourage employees to cooperate better, reduce friction, avoid vicious competition among colleagues, and implement mutually beneficial behaviors. In addition, family support and friend support can relieve the pressure at work, restore employees' positive attitudes and emotions, and strengthen their goals and beliefs (Cheung & Sun, 2000; Rousseau & Aubé, 2010; Van Emmerik et al., 2007). Mai et al. (2021) strongly support these findings. In this way, employees will be enthusiastic about their work and conduct beneficial actions for the organization. This devotion to work will ultimately improve the resilience of the organization.

Some other studies have also shown the mediating relationship of organizational resilience (Schierberl Scherr et al., 2021; Shi et al., 2011). Thirdly, the results reveal that OI is an essential internal mechanism for EPO and SS to affect OR. The findings are also supported by Amini et al. (2016), Daneji and Bambale (2019), Moonen (2018). Carlson (2019) also showed the mediating role of organizational stress and found a significant moderating effect of organizational stress. The findings are also supported by Nichodemus (2014), who pointed out that organizational behavior is an influential factor that mediates the relationship between EPO and OR. Some other studies, such as Wang et al. (2021), also indicate that social support is an essential factor affecting the organizational structure. Ozler et al. (2008) also supports the findings of this study. This study demonstrated that EPO significantly impacts different organizational behaviors. Job satisfaction and participative organizational climate may help improve employees' emotions of ownership towards their company. Daneji and Bambale (2019) also discovered a mediating effect of entrepreneurship on EPO and organizational performance. Whatever, OI enables employees to have a sense of belonging and dependence on the organization and psychologically see themselves as members of the organization and their home. Therefore, psychologically, employees feel that they are the organization's owners and are willing to improve their homes. In addition, employees will take more positive actions to promote organizational development and enhance their ability to resist external competition. Similarly, employees will also identify with the organization's culture and atmosphere and be more actively involved through organizational identification. Social support from colleagues, family and friends will also encourage employees to take positive actions to support organizational development, improve crisis management capabilities, and enhance organizational flexibility.

This study will have some managerial implications; firstly, administrative personnel should create a relaxed, fair, and harmonious atmosphere in the company. Thereby, employ-

ees will honestly treat the company as their home and develop a psychological sense of ownership. After that, employees are willing to work actively and recognize the organizational identification given by the company. They will actively complete their assignments, maintain good relationships with colleagues, and strengthen corporation and unity with colleagues. At the same time, all employees will devote their primary efforts to the company's overall development, implement the behavior of advancing the company, and grow its strength for the upcoming challenges. Employees will also promote the company's positive image to raise public awareness of the company and prevent slandering the company and maintain its image, which improves its capability to respond to external crises.

Secondly, personnel should always care about their employees and actively coordinate various resources to support employees in accomplishing their tasks. Administrative personnel should also consistently set goals and role models to motivate employees to improve work performance. Besides, a system of information sharing, emotional care, and physical support needed to be established within the company to create harmonious interpersonal relationships between employees, enabling them to help each other and work together to achieve its goals. In addition to caring about employees' daily lives, managerial personnel should also pay close attention to their families and help them with difficulties. In this way, with the support of family, relatives, and friends, employees can relieve their worries, focus entirely on their work, enhance corporate cohesion, and ensure survival and thrive.

Thirdly, managerial personnel should cultivate employees' organizational identity, which helps grow employees' sense of belonging to the company. By following this, employees treat the company as their own, obey its rules, and contribute to its development. Some rules must be implemented to achieve the cultivation of employees' organizational identification. These are (1) Companies must treat their employees as their owners, respect their employees, and fulfill their reasonable demands; (2) Companies must treat each employee fairly and give them equal opportunities in their career development; (3) Companies must treat all employees equally when developing policies, grasp the true thoughts of employees, and listen carefully to their views; (4) Companies must treat employees with sincerity, care about their lives, and help solve their problems.

Conclusions

This research focuses on the OR to help companies overcome crises and challenges and ultimately thrive with new development opportunities. The approaches to improve OR are investigated by building models and assessing hypotheses. Finally, the following conclusions are obtained. Firstly, this research is the first one designed from psychological perception. EPO and SS are utilized as employees' internal driving forces to evaluate the impact of EPO and SS on OR. The results show that EPO and SS have a positive effect on OR, which implies that the key to improving OR lies in the psychological recognition of employees. This conclusion is consistent with the opinions of valuing employees' voices raised by the academic research communities. Secondly, the mechanism of OI is discussed, which helps to understand interactions between EPO, SS, and OR. Based on emotional cognition, this study found that employees' identification with the organization and acting as a mediator are key factors

in improving OR. The results show that OI has a partial mediation effect on the relationship between EPO, SS, and OR. Thirdly, by integrating the cognitive psychological mechanism and the emotional identification mechanism into one framework for analysis, this study improves the understanding of improving OR, promoting the emotional connection between employees and the organization. Therefore, OI can be further developed to encourage organizational behaviors, which finally improves OR.

This study has several limitations; for example, the study was conducted in China; therefore, it is considered a limitation because the cultural impact is not reflected here. Also, the result may vary according to industry types. Therefore, the result of the high-tech industry may differ from other industries. In addition, there is another limitation of this study is the research area. This study was conducted based on the data of 20 companies from high-tech parks in Shenyang and Dalian. Therefore, we consider this as a limitation because China is one of the biggest high-tech markets; therefore, considering the population, 20 companies from two cities is still a small sample size. However, we still believe the results of this study represent the entire high-tech industry in China.

This study only evaluates one set of cross-sectional data obtained from a survey, and the impact of time on causality and conclusions was not considered. Future studies will utilize longitudinal data to explore further the causal relationship between organizational resilience and EPO and SS. Also, the measurement scales used in this research are modified from established scales. In addition, as the participants themselves filled the questionnaires, it is impossible to avoid the error caused by personal subjective opinions and the influence of common variance on the empirical results. The measurement scales that fit Chinese companies will need to be developed. Besides, to fully understand organizational resilience, the impact of employees' other perceptions, such as employees' thriving at work and self-efficacy on organizational resilience, also needs to be investigated. Also, another significant future direction is to investigate the cultural differences, if any. Comparative studies based on different countries can find the impact of cultural differences. Here, the comparison is suggested with the parallelly developed high-tech markets.

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Disclosure statement

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APPENDIX

Abbreviations

EPO – Employees Psychological Ownership;

SS – Social Support;

OR – Organizational Resilience;

OI – Organizational Identity;

RMSEA – Root Mean Square Error of Approximation;

KMO – Kaiser-Meyer-Olkin test;

CC – Cumulative contribution;

CR – Composite Reliability;

AVE – Average Variance Extracted;

CA – Cronbach's α.