Capital,

Vol. 8, No. 6, December 2019 Int. J Sup. Chain. Mgt

Empirical Study on Psychological Capital of Employees in Supply Chain Enterprises at Shenzhen in China

Kian Aun Law^{#1}, Valliappan Raju^{*2}, Amiya Bhaumik^{#3}, Ensejam Alkipsy^{#4}

¹Universiti Tunku Abdul Rahman Malaysia, ^{2,4}Limkokwing University, Malaysia, ³Lincoln University College, Malaysia ²valliappan.raju@limkokwing.edu.

ABSTRACT-This study focuses on the relationship in this study. Innovatively analyzed the multiple mediating role of psychological capital in organizational support and emotional commitment, work input, and job performance, and provides important research conclusions for academic circles and management practices. Finally, the paper summarizes the conclusions of this study, and explains the limitations and shortcomings in the research, as well as the prospects of subsequent research. Keywords: Performance, Psychological Organizational Support, Emotional Commitment, Job input. 1.1 Introduction

between psychological capital structure, psychological capital and related factors of Shenzhen Supply Chain enterprises employees. Shenzhen Supply enterprises stand in the front line of China's developed regions, which is the vane of the local economy. The acquisition and maintenance of their competitive advantages is a subject that corporate managers, academic researchers who care about corporate management and even government departments should be faced. People have to pay attention to the positive and developmental psychological elements that employees exhibit in the working environment, growth and development process. This psychological factor has input-output characteristics, which is conducive to the improvement of individual work performance and meets the Psychological Resources criteria for active organizational behavior. Thereby helping companies gain new competitive advantages. On the basis of literature research, this study collected 1768 psychological capital initial response items from 392 technicians in Shenzhen Province through personal interviews, group interviews and questionnaires. Concluded 35 initial psychological capitals from behavioral events. In terms of Entries, 92 initial capital entries were obtained through content analysis. A psychological capital pre-test questionnaire was compiled, and 254 valid responses for Shenzhen Supply Chain employees were collected. On this basis, researchers used strict item screening procedures and project analysis methods, EFA, CFA and other quantitative means, innovatively obtained the high-level structure of five-dimensional psychological capital which is Hope, Optimism, Resilience, Authenticity and Forgiveness of the employees in Shenzhen Supply Chain enterprises. After using correlation analysis, regression analysis, exploratory factor analysis, confirmatory factor analysis and other statistical methods, and using triangulating Excel, SPSS, AMOS and other statistical tools, researchers focus on the analysis and verification of the research models and related hypotheses proposed

This section mainly introduces the background information and origin of this research. Raise the specific issues of the research and describe the purpose and significance of the research. Meanwhile, the scope of the study was defined and the entire structure of the article designed. The rapid changes and spread of science and technology, the changing working environment, the dynamics of the organization become more obvious, and the cognition of economic capital (including economic and physical assets), even the recognition of human capital (sometimes called intellectual capital) and social capital, is not enough to constitute the driving force of enterprise competition. Effective human resource management faces the challenge of requiring new thinking and new approaches. Psychological Capital (PsyCap) ([1]-[2]-[3] - [4] - [5]) It came into being under such circumstances, and it provided a new vision for the theoretical and practical circles to enhance the competitiveness of enterprises. Luthans, Former President of the Psychology Association, proposed that in today's ultra-competitive environment, different organizations compete for the same kind of excellent human resources, and information flows rapidly between different organizations and even different industries. In this case, it is increasingly difficult to meet or exceed performance requirements

1229

Int. J Sup. Chain. Mgt Vol. 8, No. 6, December 2019

[6]–[7] – [8] – [9].

1.2 Problem Statement

Based on the existing research background, this research focuses on the field of human resource management, using active organizational behavior and active psychology to explore new ways for Shenzhen Supply Chain enterprises to create competitive advantages for employees. In view of the novelty of the theory of psychological capital, the current literature on psychological capital at home and abroad is basically based on the recommendations of [10] and [11].A series of theoretical discussions and empirical studies on the dimensions of this psychological capital structure[8] - [1] - [12].In addition to the research results of [10], domestic research has also achieved certain results for the independent development of the structure and psychological capital scale, such as[13]-[14]-[15].

This study will use qualitative and quantitative scientific methods to study the following issues: Characteristics [16].[17], quoted from[18] pointed out that there are at least three cultural issues deserve the attention of researchers: First, there are differences between different societies in terms of cultural values and attitudes [19]— Second, Due to the differences in hidden values and attitudes, different cultural communities, even in similar circumstances, will have different behaviors. Third, culture plays a considerable role in shaping working organizations and other social institutions.

1.3 Research Objectives

Based on the above background and research issues, the objectives of this study are:

- 1. To Compile the mental capital scale of the Supply Chain enterprises employees and explore the structural model of psychological capital under the cultural background of Shenzhen.
- 2. To measure the psychological capital status of employees of Shenzhen Supply Chain enterprises, and explore the characteristics of psychological capital status in demographic variables.
- 3. To explore the predictive function of the organizational support on their psychological capital.
- 4. To explore the predictive utility of the mental capital on performance, emotional commitment, and work input.
- 5. To explore the mediating effect of the psychological capital in the sense of organizational support and performance, emotional commitment, and work commitment.

2.1 Literature Review

This section comments on the literature related to psychological capital. It covers concepts, structures, measurements, antecedents, outcome variables, and research paradigms. It combs the key research directions from the intricate literature and constructs relevant models. [20]believes that positive psychology mainly studies the positive qualities of people, including happiness, optimism, understanding, self-esteem, fashion, creativity, resilience, pleasure, wisdom and spirituality. Its central point is to study the merits and happiness of human beings[21]-[22] - [23].

2.1.1 Positive Psychology

Chinese scholar [24] believes that the core task of positive psychology is to construct a science about human power. The mission is to find out how to cultivate or explore these forces and qualities in human beings. At present, the study of positive psychology focuses on positive emotions and experiences, positive personality traits, and positive psychological processes [25]. This is based on science, different from popular works on positive thinking power, positively oriented humanistic psychology and human potential movement [9]. [20] asserts that the positive psychology literature will constitute the mainstream of the human resources development literature for the next 10 years, and the reality confirms the correctness of the Sachau argument. [26] also mentioned in his doctoral research paper that positive psychology is a psychological trend of thought devoted to the study of human development potential and virtues, and is currently affecting many of society with a vigorous attitude. In the field, and in the whole society, an active movement has been launched. Some views of positive psychology have penetrated into the fields of sociology, education, economics, management, etc., and have had a major impact on many theories of these disciplines. In 2002, Professor Seligman first mentioned the concept "psychological capital" in his book "Real Happiness" [27], P46. He believes that the psychological factors that lead to positive behavior of individuals can be included [28]. To the scope of capital. In the context of the above positive psychology movement, Professor Luthans and his colleagues [29]- [2]) formally proposed the theory of psychological capital in 2004, announcing the formal birth of psychological capital theory [30] - [31] - [32] - [33] - [34].

2.1.2 The POB Standard of Psychological Capital

According to Luthans et al.[1]-[2]-[4]-[9]-[11]-[27]-[29]-[35]-[40], the factors contained in psychological capital must satisfy the positive organizational

1230

Int. J Sup. Chain. Mgt Vol. 8, No. 6, December 2019

behavior (POB). The standard is as follows:

- (1) Based on theory and research-
- (2) Can effectively measure-
- (3) Relatively unique in organizational behavior-
- (4) State class-
- (5) Positive performance orientation.

According to these criteria, [41] compares the existing

mental capital construct with the constructs of cognitive organizational behavior that may be incorporated into the psychological capital component (cognitive, emotional, social, and higher). As shown in Table 2-1:

Table 2.1: Assessment of positive psychological constructs in line with psychological capital standards

Classification	Active construct	Theoretica l basis	Trait personality characteristi cs fixed	State class personal ity features fixed	Meas urabl e	Related to job performan ce	Related to other positive results
	Self-efficacy	√	\checkmark	\checkmark	$\sqrt{}$	√	\checkmark
Psychological	hope	V	$\sqrt{}$	V	V	√	$\sqrt{}$
capital	optimism	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
	toughness		$\sqrt{}$	\checkmark		?	?
Cognition	creativity	$\sqrt{}$	$\sqrt{}$?	\checkmark	?	?
Cognition	wisdom	√	V	$\sqrt{}$		$\sqrt{}$	V
	Happiness		\checkmark	\checkmark	$\sqrt{}$	$\sqrt{}$	\checkmark
Emotion	Immersive experience	√	√	1	√	√	√
	humor	$\sqrt{}$	$\sqrt{}$	\checkmark	\checkmark	?	$\sqrt{}$
	thanksgiving	√	√	√	?	?	√
Society	forgive	√	V	$\sqrt{}$	$\sqrt{}$?	V
	Emotional intelligence	√	?	?	√	√	√
III-le and and	Spirituality	√	V	V	√	?	$\sqrt{}$
Higher level	Authenticity	√	V	V	$\sqrt{}$	$\sqrt{}$	V
	courage	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$?	$\sqrt{}$

Source:Luthans et al(2008a, P132,P161)

In the psychological capital structure of Table 2-1, the resilience factor has special characteristics, which is closely related to the psychological research orientation described above. In the research field of resilience, most of the literature is about the adolescents in an unfavorable environment. The problem of psychological resilience is that the role of resilience is limited to passive reaction and survival in adversity, but rarely in workplace research and impact on performance.

2.1.3 Psychological capital intervention (PCI)

Corresponding to the prosperous scene of empirical research, positive applications have grown exponentially. [9] pointed out that active and active interventions have been applied to small, medium and large enterprises around the world, involving manufacturing, medical, franchising, banking,

insurance, marketing, health care, telecommunications, shipping, airports, Army, police, sports, oil and gas, education, non-governmental organizations, non-profit organizations, etc. Psychological capital intervention is well suited for use in workplace-related training[42] – [43] – [44] – [45] – [42].

2.1.4 Social capital

Following human capital, the concept of social capital seems to be more elusive, unrealistic and difficult to measure [46]. According to [42], social capital is the sum of actual and potential resources owned by individuals or social units that are available and derived from network relationships. It also refers to the ability of an individual to gain interest by using his or her own special position in an organizational structure. Generally speaking, in the relationship between

relatives, friends, classmates, and fellow villagers, the higher the profit that a person can obtain from these relationships, the higher his social capital. Social capital includes the relationship, network and connection between individuals, groups and organizations, and is a multi-dimensional construct [47].

[42] believe that employees with specific knowledge and skills are necessary conditions for improving organizational performance, but they are not sufficient conditions. Employee attitudes and behaviors play an extremely important role in transforming these capital into organizational performance— Human capital and social capital are potential for achieving high

organizational performance, while employee attitudes and behaviors are tools for turning potential into real power. On this basis, the concept of psychological capital developed by Luthans demonstrates another value resource for organizational competitive advantage. As one of the resources of corporate competitive advantage, based on whether it is long-term, unique, whether it can be accumulated, whether it is related to each other, and whether it can be updated, [29]evaluated and organized economic capital, human capital, social capital and positive psychological capital from the perspective of different resource states of competitive advantage, as shown in Table 2-5.

Table 2.2: Comparison of resource status of capital

Capital	Index	Long term?	uniq ue?	accumulate?	Associated?	Updated?
Economi	Finance	No	No	Yes	No	No
c capital	Real thing	Yes	No	Yes	May	May
c capitai	Technology	No	No	no	May	No
human	Explicit knowledge	May	No	Yes	No	May
capital	Invisible knowledge	Yes	Yes	Yes	Yes	Yes
Social	The internet	May	Yes	Yes	Yes	May
	Norms and values	Yes	Yes	Yes	Yes	Yes
capital	trust	Yes	Yes	Yes	Yes	Yes
Davishala	Confidence	Yes	Yes	Yes	Yes	Yes
Psycholo	Норе	Yes	Yes	Yes	Yes	Yes
gical capital	Optimism	Yes	Yes	Yes	Yes	Yes
	Resiliency	Yes	Yes	Yes	Yes	Yes

Source:[29], P.145

Positive psychological capital, as a resource that constitutes the competitive advantage of enterprises, has more advantages than traditional economic capital, human capital and social capital. [34]pointed out that psychological capital is based on existing theories and research of human capital ("what do you know") and social capital ("who you know"), and transcends human capital and social capital. Psychological capital can include knowledge, skills, expertise, and experience, because these also belong to "what kind of person you are"- Psychological capital can also include meta-constructions at the group level, such as social support and relationship networks, as these are also part of the "what kind of person you are". Envick (2005) believes that the psychological capital model that drives entrepreneurs' success includes four aspects: self-confidence, hope, optimism resilience. And entrepreneurial investment must be based on financial capital and its own human capital, and then gain more advantages in the context of social With entrepreneurs having positive psychological capital, more efficient mobilization of financial, human and social capital, companies will be stronger. In this sense, psychological capital transcends human capital and social capital. In general, positively-oriented human traits, status, organization, and behavior may have a substantial impact on performance and transcend material resources and traditional business models [4]. Similarly, psychological capital goes beyond human capital and social capital. It is another new resource for enterprises to improve their performance and thus enhance their competitiveness. It has opened up new ways of human resource development [48]–[29].

2.2 Underpinning Theory

Personality and culture have always been the research hotspots in the psychology field, including the responsibility model, emotional stability, extroversion, pleasantness and openness[49] - [45] - [50] - [51]. As a representative theory of trait theory, it has been widely used and matured. For example, some personality psychologists have used questionnaires developed by the "Big Five" to measure the personality of tens of thousands of people in more than 50 countries and regions. According to the average score of people on the "Big Five", outline the outline of each country and region, and even the average score of the world map[52]. Among them, Extraversion mainly includes: warm and friendly, happy to be self-confident. clustered. fast-paced.

excitement and positive attitude. Practice shows enthusiasm, socialism, decisiveness, activeness, adventure, optimism, etc. Relevant positive traits Cheerful, social, powerful, energetic, courageous and passionate. Neuroticism mainly includes: anxiety. irritability, sensitivity, shyness, impulsivity and fragile dependence [53]. It is characterized by anxiety, hostility, depression, self-awareness, impulsivity and vulnerability. Positive traits are not nervous, not irritating, satisfying, not shy, not depressed, and confident. Openness: Imagination, aesthetic feelings, delicate emotions, attempts to change, speculative and characteristics of imagination, flexible, with aesthetics, emotional richness, diversity, creation, wisdom, etc. Positive traits are passionate and rich. Imaginative, aesthetic, excitable, broad-based, curious, and unconventional. Agreeableness mainly includes: trusting others, being straightforward, being helpful, being good, being humble and selfdeprecating, and showing kindness, showing the qualities of trust, altruism, straightforwardness, modesty, and empathy. Positive traits are lenient, not harsh, warm, not stubborn, not showing off, compassionate, etc. Conscientiousness: self-efficacy, neatness, responsibility, pursuit of achievement, perseverance and planning, including competence, justice, organization, due diligence, achievement, selfdiscipline, caution, restraint and so on. Positive traits are capable, organized, unruly, meticulous, not lazy, and impulsive.

Before the Big Five personality was widely recognized, Chinese scholars analyzed the four-factor structure of Chinese personality traits: reliability (DEP), interpersonal relationship (IR), leadership (SOC), and individuals' characteristics (IND). In 1997, some scholars made a corroborative joint factor Table 2.3. Summary of the hypothesis of this study.

analysis of the four-factor structure and the Big Five personality structure of Chinese personality traits. The results show that the "interpersonal relationship" in Chinese personality traits is a unique dimension. The other dimensions are inclusive with each dimension of the Big Five personality, thus developing a six-factor personality model suitable for Chinese people in the context of Chinese culture[54]. This result shows that under the Chinese cultural background, the personality traits of Chinese people and the personality traits of Westerners are mutually inclusive and unique.

1232

In addition, personal characteristics, job characteristics (work challenge, enrichment, expansion), work experience and organizational structure characteristics are also significantly related to Affective Commitment [31]. Among them, the mechanism of action of personal characteristics and work experience on Affective Commitment can be explained by the need-satisfaction, social exchange theory and cognitive dissonance theory [55] – [56] – [57].

2.3 Outcome Variables

Job performance is the goal pursued by business managers. It is also the focus of human resource management and organizational behavior research. It is often an effective benchmark variable for organizational behavioral domains and psychological theory in enterprise application research. There is a large body of empirical research [58]–[59]–[66] They all confirm the effective predictive effect of psychological capital on performance. There are also studies [67]

Table 2.3 :	Summary of the hypothesis of this study
No.	Hypothesis content
Н1	Shenzhen Supply Chain enterprises employees' psychological capital has a unique structure, which is different from HERO structure.
H2	Shenzhen Supply Chain enterprises employee psychological capital, is a high-order construct
Н3	The psychological capital of Shenzhen Supply Chain enterprises can significantly predict the performance of employees
Н4	The psychological capital of Shenzhen Supply Chain enterprises can significantly predict the employee's Affective Commitment.
Н5	The psychological capital of Shenzhen Supply Chain enterprises can significantly predict the work input of employees.
Н6	The sense of organizational support of Shenzhen Supply Chain enterprises can significantly predict the psychological capital of employees
Н7	The sense of organizational support of Shenzhen Supply Chain enterprises can significantly predict the performance of employees
Н8	The organization support of Shenzhen Supply Chain enterprises can significantly predict the employee's Affective Commitment
Н9	The sense of organizational support of Shenzhen Supply Chain enterprises can significantly predict the work input of employees.
H10	Psychological capital mediates the relationship between organizational support and Affective Commitment

H11	Psychological capital plays a mediating role in the relationship between organizational support and work input
H12	Psychological capital plays a mediating role in the relationship between organizational support and job performance
H13	Work input mediates the relationship between Affective Commitment and job performance

Source: collation of this study

3.1 Research Methodology

Through the literature review, the subject and model of the research were established. This chapter explains the research methods required for research models including how the research data is collected, organized and analyzed to guide the implementation of specific research practices.

3.2 Closed questionnaire

The psychological capital items are collected through the above-mentioned methods, and the initial scales and the formal questionnaires analyzed and tested are analyzed through content analysis. The use of closed questionnaires for issuance and recycling is the basis for the empirical work of this research Hypothesis and derivation model.

4.1 Data Analysis

In the context of the chapter 1, researchers intend to use the research ideas and research methods of the chapter 3 according to the structural model of the chapter 2 of literature reasoning. In this chapter, researchers will explore the psychological capital structure exploration and scale development of Shenzhen Supply Chain enterprise employees, and provide a solid empirical basis for the entire research model.

Table 4.1: Summary of research data on psychological capital structure

source	Number of participants	Number of reaction items	Itemized quantity
Personal interview	8	87	35
Group interview	176	454	-
Open questionnaire	208	1317	-
Grand total	392	1858	35

Source: By this study

4.2 Content analysis

It's because of the huge amount of data, it is difficult for one person to complete the content analysis work. Therefore, at this stage, the author set up a research team and cooperated in division of labor: First of all, the data entry workload is large. I hired two college students, and collected 1858 responses from the researcher's collection of manuscripts and other group group interview manuscripts and open paper questionnaires into the word document [25]. One read

content, one computer entry, I reviewed it on the side, and printed four copies after being correct. Secondly, I invited a doctoral student with a background in psychology, a doctoral student with a background in social science research and a corporate executive with a background in human resources. Four people form a research team. After 2 hours of psychological capital-related knowledge communication, they were divided into two groups to carry out the content analysis work of this stage of research. Proceed as follows:

The result was 92 entries, as described in Table 4.1:

Table 4.1: Summary of Psychological Capital Initial Items (Excerpt)

No.	Description	Frequency	No.	Description	Frequency
1	Committed things, said to do	201	83	Trust others	21
2	Never lie	198	84	Like challenging work	21
3	Can suffer hardship and resilience	187	85	Love your job	20
4	Have the courage to face difficulties	134	86	No one is perfect	20
5	I believe that tomorrow will be better.	134	87	Happy to enjoy every day	20
6	Being sincere	130	88	Help colleagues grow up often	20
7	Grateful to the people and things around	129	89	Exercise regularly	20
8	Always working diligently at work	124	90	Modest	20
9	Fair and just	116	91	Always make colleagues happy	20
10	Enjoy work	109	92	Never interrupted learning	20

Source: By this study

Researchers have compiled the Psychological Capital Pre-Test Questionnaire for 92 items, show in Appendix IV.

** Significantly correlated when the significance level is 0.01 (two sides). Source: By this study

Table 4.2: Psychological Capital 5 Factor Correlation Matrix

Item	Average	Standard deviation	Authenticity	Hope	Forgiveness	Resiliency	Optimism
Authenticity	4.9616	.73210					
Норе	4.6217	.70145	.431**				
Forgiveness	4.9420	.73845	.497**	.431**			
Resiliency	4.6582	.73328	.279**	.533**	.368**		
Optimism	4.7415	.73087	.361**	.485**	.359**	.441**	
PsyCap	4.7850	.53148	.704**	.783**	.729**	.717**	.724**

**. Correlation is significant at the 0.01 level (2-tailed). Source: By this study

4.3 Comparative model hypothesis

The advantage of SEM technology is that it allows researchers to determine the best match model by comparing the pros and cons of multiple models. In this study, the researchers compared the five-dimensional model of corporate employees' psychological capital with other possible one-dimensional models, two-dimensional models, three-

dimensional models, and four-dimensional models to find the best model. Single dimensional model. In the EFA phase, researchers have demonstrated that a one-dimensional model is not suitable, but that is only an exploratory factor analysis. This will be further validated by a method of confirmatory factor analysis to ensure the reproducibility of the research conclusions. The model is shown in Figure 4.1:

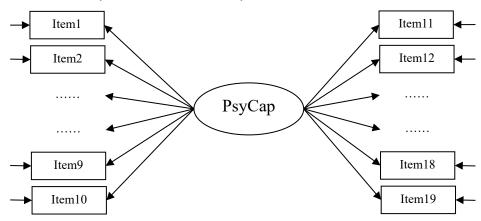


Figure 4.1: Mental capital single factor structure assumption Source: By this study

4.4 Data Analysis

Our analysis results are shown in Table 4.4:

From Table 4-14, researchers can see that all the error values are positive and reach a significant level of 0.05, and the variation standard error is between 0.02 and 0.07. That is to say, in the estimation parameters, there is no negative error variation, and the standard error estimation value is very small, indicating that the model has no definition error problem, and the model

has a good basic fit. Next, researchers continue to do high-order factor analysis. The results are shown in Table 4-15. From the table researcher scan see that the significance probability is less than 0.001. Except for the factor load of forgiveness in psychological capital is 0.43, the other factors are high-order factors, and the factor load of each measurement item is between 0.52 and 0.94, indicating that the basic fit of the model is good. Observing the variables in the initial factors is very ideal. The initial factors are basically ideal for the factors of high-order factors.

Table 4.4: Measuring residual variation

	Estimated value	S.E.	C.R.	P<0.001		Estimated value	S.E.	C.R.	P<0.001
PsyCa p	.13	.03	3.94	***	e23	.32	.03	11.08	***
z1	.21	.04	4.68	***	e24	.66	.05	13.17	***
z2	.05	.02	2.32	.02	e25	.51	.04	12.81	***
z 3	.35	.06	6.03	***	e31	.60	.06	10.85	***
z 4	.18	.03	5.49	***	e32	.33	.07	4.95	***
z 5	.36	.04	8.10	***	e33	.54	.05	11.72	***
e11	.92	.07	12.72	***	e41	.58	.05	12.14	***
e12	.28	.03	10.86	***	e42	.20	.03	6.95	***
e13	.68	.05	12.87	***	e43	.31	.03	10.66	***
e14	.36	.03	11.46	***	e51	.25	.03	9.08	***
e15	.18	.02	7.89	***	e52	.15	.03	5.91	***
e21	.32	.03	11.49	***	e53	.56	.04	12.88	***
e22	.26	.03	10.23	***					

Source: By this study

Table 4-15: Load, error and t value of each variable in the structure

	<u> </u>	iror and t varae or	Factor load	Non- standardized path coefficient	S.E.	C.R.	P<0.00 1	Label
Authenti city	<	PsyCap	.62	1.00				
Hope	<	PsyCap	.94	1.70	.23	7.43	***	par_17
Forgiven ess	<	PsyCap	.43	.78	.16	5.02	***	par_18
Resilienc y	<	PsyCap	.76	1.37	.21	6.69	***	par_19
Optimis m	<	PsyCap	.75	1.86	.26	7.20	***	par_20
A1	<	Authenticity	.52	1.00				
A2	<	Authenticity	.69	.87	.09	9.42	***	par_1
A3	<	Authenticity	.53 .68	.88	.07 .11	12.83	***	par_2
A4 A5	<	Authenticity Authenticity	.81	.96 1.02	.11 .11	8.61 8.95	***	par_3 par_4
	·	Authenticity			.11	0.93		pai_4
H1	<	Hope	.75	1.00				
Н2	<	Норе	.81	1.07	.07	16.15	***	par_5
Н3	<	Норе	.78	1.07	.07	15.28	***	par_6
H4	<	Норе	.56	.84	.08	10.54	***	par_7
Н5	<	Норе	.63	.88	.07	11.95	***	par_8
F1	<	Forgiveness	.65	1.00				
F2	<	Forgiveness	.82	1.26	.12	10.11	***	par_9
F3	<	Forgiveness	.54	.71	.09	8.22	***	par_10

R1	<	Resiliency	.65	1.00				
R2	<	Resiliency	.85	1.09	.09	12.66	***	par_11
R3	<	Resiliency	.73	.91	.08	11.86	***	par_12
01	<	Optimism	.87	1.00				
02	<	Optimism	.92	1.03	.04	23.69	***	par_13
03	<	Optimism	.70	.81	.05	15.88	***	par_14

Source: By this study

4.5 ANOVA

 Table 4.5: Analysis of Variance (Dependent Variables: Emotional Commitment)

Mo	del	Sum of Squares	df	Mean Square	F	Sig.
	Regression	1047.814	5	209.563	13.004	.000a
1	Residual	6462.147	401	16.115		
	Total	7509.961	406			

a. Predictors: (Constant), Optimism, Forgiveness, Authenticity, Resiliency, Hope

5.1 Conclusion

Based on the questionnaire data of 432 subjects (shown in Table 4-12) of 43 Supply Chain enterprises in Guangzhou, Shenzhen, Foshan, Dongguan, Shantou, Zhanjiang, Zhaoqing and Zhongshan. The analysis and discussion was around the Hypothesis H3 ~ H13. This study uses the self-made enterprise employee psychological capital scale, which uses a six-point Likert score method, "completely disagree", "very disagree", "a little disagree", "a little agree",

"Agree very much" and "fully agree". The scale is obtained by the researcher on the basis of literature research, qualitative and quantitative, and obtained in the psychological capital reaction item collection stage. 1768 reaction items and 35 initial entries were collected from 392 samples.

5.2 Hypothesis Results

The results of this study Hypothesis are shown in Table 6-1.

Table 6-1: Study Hypothesis verification results

No.	Hypothesis content	Results
H1	Shenzhen Supply Chain enterprises employees' psychological capital has a unique structure, which is different from HERO structure.	Established
Н2	Shenzhen Supply Chain enterprises employee psychological capital is a high-order construct	Established
Н3	The psychological capital of Shenzhen Supply Chain enterprises can significantly predict the performance of employees	Established
H4	The psychological capital of Shenzhen Supply Chain enterprises can significantly predict the emotional commitment of employees.	Established
Н5	The psychological capital of Shenzhen Supply Chain enterprises can significantly predict the work input of employees.	Established
Н6	The sense of organizational support of Shenzhen Supply Chain enterprises can significantly predict the psychological capital of employees	Established
Н7	The sense of organizational support of Shenzhen Supply Chain enterprises can significantly predict the performance of employees	Established
Н8	The sense of organizational support of Shenzhen Supply Chain enterprises can significantly predict the emotional commitment of employees	Established
Н9	The sense of organizational support of Shenzhen Supply Chain enterprises can	Established

	significantly predict the work input of employees.	
H10	Psychological capital plays a mediating role in the relationship between	Established
	organizational support and emotional commitment	
H11	Psychological capital plays a mediating role in the relationship between	Established
	organizational support and work input	
H12	Psychological capital plays a mediating role in the relationship between	Established
	organizational support and job performance	
H13	Work input mediates the relationship between emotional commitment and job	Established
	performance.	

Source: By this study

5.3 Summary

One of the theoretical service objects is the application, especially the research on the psychological capital theory of enterprise employees, which is based on active organizational behavior [68] - [28]. Its key service object is the application of psychological capital theory in the organization. In the theoretical discussion stage, researchers summarize the development of

searchers summarize the development of attention of relevant res

REEFERENCES

- [1] B. J. Avolio, W. L. Gardner, F. O. Walumbwa, F. Luthans, and D. R. May, "Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors," *Leadersh. Q.*, vol. 15, no. 6, pp. 801–823, 2004.
- [2] F. Luthans and C. M. Youssef, "Emerging positive organizational behavior," *Journal of Management*. 2007, doi: 10.1177/0149206307300814.
- [3] X. LIU, J. GU, Y. SUN, and X. CUI, "Planning and scheduling system of MES in iron and steel industry [J]," *Metall. Ind. Autom.*, vol. 1, 2004.
- [4] F. Luthans and C. M. Youssef-Morgan, "Psychological capital: An evidence-based positive approach," *Annu. Rev. Organ. Psychol. Organ. Behav.*, vol. 4, pp. 339–366, 2017.
- [5] N. Malik and R. L. Dhar, "Authentic leadership and its impact on extra role behaviour of nurses," *Pers. Rev.*, 2017.
- [6] T. Baum *et al.*, "Sustainability and the tourism and hospitality workforce: A thematic analysis," *Sustain.*, vol. 8, no. 8, 2016, doi: 10.3390/su8080809.
- [7] K. A. Law, A. Bhaumik, J. Fang, and V. Raju, "Exploring Network Capability, International Opportunity Recognition and Development on the International Performance of Born Global firms in China," *Test Eng. Manag.*, 2020.
- [8] K. A. Law, A. Bhaumik, P. Sun, and V. Raju, "The structure of superior behavior and individual belonging behavior based on trust development direction in Chinese firms," *Int. J.*

psychological capital. The development of psychological capital is one of the effective ways of psychological capital theory in enterprise practice[69] – [70] However, this study does not study this, and it seems to be somewhat inadequate. It can be foreseen that the issue of psychological capital development is one of the key topics in the future of psychological capital theory, and it needs to attract the attention of relevant researchers [71].

- *Psychosoc. Rehabil.*, 2020, doi: 10.37200/IJPR/V24I6/PR260006.
- [9] L. Deckers and L. Deckers, "Emotions and Moods," in *Motivation*, 2018.
- [10] B. C. Luthans, K. W. Luthans, and J. B. Avey, "Building the Leaders of Tomorrow," *J. Leadersh. Organ. Stud.*, 2014, doi: 10.1177/1548051813517003.
- [11] S. M. Jensen and F. Luthans, "Relationship between entrepreneurs' psychological capital and their authentic leadership," *J. Manag. Issues*, 2006.
- [12] H.-L. Yang and S.-L. Lin, "The reasons why elderly mobile users adopt ubiquitous mobile social service," *Comput. Human Behav.*, vol. 93, pp. 62–75, 2019.
- [13] Q. Hui, X. Cao, L. Lou, and H. He, "Empirical research on the influence of organizational support on psychological capital," *Am. J. Ind. Bus. Manag.*, vol. 2014, 2014.
- [14] J.-L. KE, J.-M. SUN, and Y.-R. LI, "Psychological capital: chinese indigenous scale's development and its validity comparison with the western scale," *Acta Psychol. Sin.*, vol. 41, no. 09, pp. 875–888, 2009.
- [15] H. Erxiu, C. Shuwen, and C. Qing, "The effect of knowledge worker psychological capital on innovative performance: The mediating effect of psychological contract," *Sci. Sci. Manag. S T*, vol. 33, pp. 149–155, 2012.
- [16] H. Ye, "Theoretical thinking about the limitations of evolutionary psychology," *Acta Psychol. Sin.*, vol. 38, no. 05, pp. 784–790, 2006.

- [17] M. Tayeb, "Organizations and national culture: Methodology considered," *Organ. Stud.*, vol. 15, no. 3, pp. 429–445, 1994.
- [18] D. Jiang and B. Cheng, "Affect-and role-based loyalty to supervisors in Chinese organizations," *Asian J. Soc. Psychol.*, vol. 11, no. 3, pp. 214–221, 2008.
- [19] V. Raju, "Vally theory of motivation-by-disguise," *Test Eng. Manag.*, vol. 81, no. 10, pp. 1910–1913, 2019.
- [20] D. A. Sachau, "Resurrecting the motivation-hygiene theory: Herzberg and the positive psychology movement," *Hum. Resour. Dev. Rev.*, vol. 6, no. 4, pp. 377–393, 2007.
- [21] P. R. Magaletta and J. M. Oliver, "The hope construct, will, and ways: Their relations with self-efficacy, optimism, and general well-being," *J. Clin. Psychol.*, vol. 55, no. 5, pp. 539–551, 1999.
- [22] C. Maslach, W. B. Schaufeli, and M. P. Leiter, "Job burnout," *Annu. Rev. Psychol.*, vol. 52, no. 1, pp. 397–422, 2001.
- [23] S.-Y. Chen and L.-J. Chen, "Capital structure determinants: An empirical study in Taiwan," *African J. Bus. Manag.*, vol. 5, no. 27, pp. 10974–10983, 2011.
- [24] S. Ogawa, J. Tang, A. Yoshigoe, S. Ishidzuka, and Y. Takakuwa, "Enhancement of SiO2/Si (001) interfacial oxidation induced by thermal strain during rapid thermal oxidation," *J. Chem. Phys.*, vol. 145, no. 11, p. 114701, 2016.
- [25] V. Raju, "Theory of Lim law: Leadership style," *Eurasian J. Anal. Chem.*, vol. 13, no. 6, pp. 125–136, 2018.
- [26] Z.-C. Pan, J.-G. He, S.-P. Weng, Z.-X. Yin, X.-Z. Fu, and S.-D. Li, "Changes in mortality and immunological variables of Litopenaeus vannamei parents and their filial families infected with white spot syndrome under different experimental conditions," Fish Shellfish Immunol., vol. 25, no. 5, pp. 459–471, 2008.
- [27] B. C. Luthans, K. W. Luthans, and J. B. Avey, "Building the Leaders of Tomorrow: The Development of Academic Psychological Capital," *J. Leadersh. Organ. Stud.*, 2014, doi: 10.1177/1548051813517003.
- [28] V. R. K. Chetty and S. P. Phung, "Economics Behind Education: Elements of Development Outcomes through Political Involvement," *Eurasian J. Anal. Chem.*, vol. 13, no. 6, pp. 146–157, 2018.
- [29] F. Luthans, K. W. Luthans, and B. C. Luthans, "Positive psychological capital: Beyond human and social capital," *Bus. Horiz.*, 2004, doi: 10.1016/j.bushor.2003.11.007.

- [30] E. Babbie, "Truth, objectivity, and agreement," *Prod. Real. essays readings Soc. Interact.*, pp. 36–39, 2005.
- [31] H. Weipeng and S. Kan, "A Review of the Research about Organizational Commitment [J]," *Adv. Psychol. Sci.*, vol. 1, 2004.
- [32] J. B. Avey, J. L. Patera, and B. J. West, "The implications of positive psychological capital on employee absenteeism," *J. Leadersh. Organ. Stud.*, vol. 13, no. 2, pp. 42–60, 2006.
- [33] C. Jiazhou, L. Guo'an, W. Shi, and Z. Lili, "Soil moisture characteristics of red soil profile in drying course and soil layer drought index [J]," *Trans. Chinese Soc. Agric. Eng.*, vol. 4, 2007.
- [34] A. Bhaumik, K. A. Law, and Y. Xu, "INFLUENCE OF PSYCHOLOGICAL CAPITAL OF EMPLOYEES IN TECHNOLOGY ENTERPRISES AT GUANGDONG IN CHINA.," *Int. J. Psychosoc. Rehabil.*, vol. 24, no. 4, 2020.
- [35] F. Luthans, "Positive organizational behavior: Developing and managing psychological strengths," Acad. Manag. Exec., 2002, doi: 10.5465/AME.2002.6640181.
- [36] F. Luthans and S. J. Peterson, "Employee engagement and manager self-efficacy: implications for managerial effectiveness and development," *J. Manag. Dev.*, 2002, doi: 10.1108/02621710210426862.
- [37] G. Bayramoğlu *et al.*, "Self-Efficacy in the workplace: Implications for motivation and performance," *J. Manage.*, 2013, doi: 10.1007/978-1-4419-6868-5.
- [38] C. M. Youssef and F. Luthans, "Positive organizational behavior in the workplace: The impact of hope, optimism, and resilience," *J. Manage.*, 2007, doi: 10.1177/0149206307305562.
- [39] A. D. Stajkovic and F. Luthans, "Self-Efficacy and Work-Related Performance: A Meta-Analysis," *Psychol. Bull.*, 1998, doi: 10.1037/0033-2909.124.2.240.
- [40] F. Luthans, Organizational behavior an evidence-based approach 12th edition. 2012.
- [41] J. B. Avey, T. S. Wernsing, and F. Luthans, "Can positive employees help positive organizational change? Impact of psychological capital and emotions on relevant attitudes and behaviors," *J. Appl. Behav. Sci.*, vol. 44, no. 1, pp. 48–70, 2008.
- [42] Y. Zhou, Z. Tan, and B. Liu, "Loading stresses in cement concrete pavement slab with void underneath," *JOURNAL-TONGJI Univ.*, vol. 35, no. 3, p. 341, 2007.
- [43] K. A. Law, A. Bhaumik, J. Fang, and V. Raju, "Impact of network relationship management capability towards international opportunity

- recognition for improving efficiency and effectiveness: Cross organizational knowledge integration in China," *Test Eng. Manag.*, 2020.
- [44] K. A. Law, A. Bhaumik, P. Sun, and V. Raju, "Factors determining the relationship between superiors and their subordinates: Evaluating the trust factor in chinese organizations," *Int. J. Control Autom.*, 2019.
- [45] H. Kim, J. Y. Kim, J. Lee, and Y. Kang, "How to enhance social relationships of older adults: Design and development of a mobile application for active seniors," *Arch. Des. Res.*, 2020, doi: 10.15187/adr.2020.05.33.2.105.
- [46] S. P. Phung, V. Raju, and S. R. Ramzani, "Factors determining managerial role in supply chain management: Study on administrative trait's effects on production," *Int. J. Supply Chain Manag.*, 2019.
- [47] S. P. Phung and V. R. K. Chetty, "Conceptualizing the Application for Ethereum Blockchains: Front End Application Development."
- [48] F. Luthans, J. B. Avey, B. J. Avolio, S. M. Norman, and G. M. Combs, "Psychological capital development: toward a microintervention," *J. Organ. Behav. Int. J. Ind. Occup. Organ. Psychol. Behav.*, vol. 27, no. 3, pp. 387–393, 2006.
- [49] T. Li *et al.*, "METTL3 facilitates tumor progression via an m6A-IGF2BP2-dependent mechanism in colorectal carcinoma," *Mol. Cancer*, vol. 18, no. 1, pp. 1–15, 2019, doi: 10.1186/s12943-019-1038-7.
- [50] D. Valliappan Raju, "Siew Poh Phung, Prof. Dr. Ramanathan Kalimuthu, Identifying Elements to Implement E--Governance: Role of Organizational Readiness, Authority Readiness, Customer Readiness, Competency Readiness and Technology Readiness," *Int. J. Eng. Technol.*, vol. 8, no. 1.10, 2019.
- [51] Y. Alkatheeri, A. Ameen, O. Isaac, A. Al-Shibami, and M. Nusari, "The Mediation Effect of Management Information Systems on the Relationship between Big Data Quality and Decision making Quality," TEST Eng. Manag., vol. 82, no. 2, pp. 12065–12074, 2020.
- [52] R. Abell *et al.*, "Freshwater ecoregions of the world: A new map of biogeographic units for freshwater biodiversity conservation," *BioScience*. 2008, doi: 10.1641/B580507.
- [53] K. A. Law, A. Bhaumik, H. Yin, and V. Raju, "Effectiveness of mobile phone users based on aging issue: In the context of urban part of China," *Int. J. Psychosoc. Rehabil.*, vol. 24, no. 4, 2020, doi: 10.37200/IJPR/V24I4/PR201118.
- [54] Y. Yang, H. Shieh, J. Leu, and G.-H. Tzeng, "A

- novel hybrid MCDM model combined with DEMATEL and ANP with applications," *Int. J. Oper. Res.*, 2008.
- [55] M. Hmedan, V. R. K. Chetty, and S. P. Phung, "Malaysian tourism sector: Technical review on policies and regulations," *Eurasian J. Anal. Chem.*, 2018.
- [56] J. Wu, F. Liu, J. Ma, R. J. Silbey, and J. Cao, "Efficient energy transfer in light-harvesting systems: Quantum-classical comparison, flux network, and robustness analysis," *J. Chem. Phys.*, 2012, doi: 10.1063/1.4762839.
- [57] S. L. Chu Yew Yee, H. B.-L. Duh, and F. Quek, "Investigating narrative in mobile games for seniors," in *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 2010, pp. 669–672.
- [58] P. H. Phan and M. C. Jensen, "A Theory of the Firm: Governance, Residual Claims, and Organizational Forms," *Adm. Sci. Q.*, 2002, doi: 10.2307/3094817.
- [59] F. Luthans, B. J. Avolio, F. O. Walumbwa, and W. Li, "The psychological capital of Chinese workers: Exploring the relationship with performance," *Manag. Organ. Rev.*, vol. 1, no. 2, pp. 249–271, 2005.
- [60] K. W. Luthans and S. M. Jensen, "The linkage between psychological capital and commitment to organizational mission: A study of nurses," *JONA J. Nurs. Adm.*, vol. 35, no. 6, pp. 304–310, 2005.
- [61] R. Clapp-Smith, F. Luthans, and B. J. Avolio, "The role of psychological capital in global mindset development," *Adv. Int. Manag. Glob. mindset*, vol. 19, pp. 105–130, 2007.
- [62] F. Luthans, C. M. Youssef, and B. J. Avolio, "Psychological capital: Investing and developing positive organizational behavior," *Posit. Organ. Behav.*, vol. 1, no. 2, pp. 9–24, 2007.
- [63] F. Luthans, C. M. Youssef, and B. J. Avolio, "Psychological capital: Developing the human competitive edge," 2007.
- [64] F. Luthans, G. R. Vogelgesang, and P. B. Lester, "Developing the psychological capital of resiliency," *Hum. Resour. Dev. Rev.*, vol. 5, no. 1, pp. 25–44, 2006.
- [65] F. Luthans, J. B. Avey, and J. L. Patera, "Experimental analysis of a web-based training intervention to develop positive psychological capital," *Acad. Manag. Learn. Educ.*, vol. 7, no. 2, pp. 209–221, 2008.
- [66] F. Luthans, S. M. Norman, B. J. Avolio, and J. B. Avey, "The mediating role of psychological capital in the supportive organizational climate—employee performance relationship,"

J. Organ. Behav. Int. J. Ind. Occup. Organ. Psychol. Behav., vol. 29, no. 2, pp. 219–238, 2008.

- [67] L. R. Shanock and R. Eisenberger, "When supervisors feel supported: Relationships with subordinates' perceived supervisor support, perceived organizational support, and performance.," *J. Appl. Psychol.*, vol. 91, no. 3, p. 689, 2006.
- [68] A. S. Masten, "Ordinary magic: Resilience processes in development," *Am. Psychol.*, 2001, doi: 10.1037/0003-066X.56.3.227.
- [69] K. A. Law, A. Bhaumik, H. Yin, and V. Raju, "Effectiveness of mobile phone users based on aging issue: In the context of urban part of China," *Int. J. Psychosoc. Rehabil.*, 2020, doi: 10.37200/IJPR/V24I4/PR201118.
- [70] Q. Wang and K. Domen, "Particulate Photocatalysts for Light-Driven Water Splitting: Mechanisms, Challenges, and Design Strategies," *Chemical Reviews*. 2020, doi: 10.1021/acs.chemrev.9b00201.
- [71] A. Bhaumik, K. A. Law, F. Jiemiao, and V. Raju, "Impact of globalization of firms: Descriptive study on performance on network ability," *Int. J. Control Autom.*, 2019, doi: 10.33832/ijca.2019.12.5.01.