pISSN: 1906 - 3296 © 2020 AU-GSB e-Journal.
eISSN: 2773 – 868x © 2021 AU-GSB e-Journal.
http://www.assumptionjournal.au.edu/index.php/AU-GSB/index

Factors Impacting Innovative Work Behavior of Employees at University in Yunnan, China

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Received: April 3, 2023. Revised: June 5, 2023. Accepted: June 7, 2023.

Abstract

Purpose: This study aimed to explore the factors influencing psychological empowerment and innovative work behavior of college faculty in Yunnan Province. A conceptual framework was proposed to establish the causal relationship between organizational culture, work engagement, transformational leadership, knowledge sharing, psychological capital, psychological empowerment, and innovative work behavior**. Research design, data, and methodology:** The sampling method was to select 500 employees from Yunnan University, Southwest Forestry University, and Yunnan University of Finance and Economics in Yunnan, China. A questionnaire adapted from previous studies was used, which was tested for validity and reliability. Hypotheses were tested using CFA and SEM, and the model's goodness of fit was validated via SEM. **Results:** The results showed that organizational culture has a significant influence on psychological empowerment. Work engagement, transformational leadership, knowledge sharing, and psychological capital, and psychological empowerment has a significant influence on innovative work behavior. **Conclusions:** The findings of this study suggest that the six hypotheses were confirmed to meet the research objectives. It was found that a more harmonious cultural environment, a working system that encourages employee participation, transformational leadership, a more congruous atmosphere of knowledge sharing, and the use of employees' psychological capital and empowerment are all associated with an increase in teachers' innovative work behavior.

Keywords: Organizational Culture, Transformational Leadership, Knowledge Sharing, Psychological Empowerment, Innovative Work Behavior

JEL Classification Code: E44, F31, F37, G15

1. Introduction

In recent years, China has experienced an increasingly complex international competitive situation, particularly the continuous escalation of the Sino-US trade war in 2019, which caused many Chinese science and technology enterprises to suffer heavy losses and threats, sounding the alarm bell of independent innovation in the age of science and technology for Chinese people (Fan & Li, 2019). Nowadays, society has fully realized that innovation is the first power to lead development, and talent is the first resource of innovation. Enterprise innovation and national innovation must be realized by cultivating innovative talents

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and stimulating employees' innovative behavior (Zhang & Yao, 2020).

Traditional education was implemented with a face-to-face learning and interactivity model, regarded as the pillar system of education. Teachers were the knowledge centers. Teachers are the direct embodiment of educational activities, the main body of educational activities, and the main body of educational innovation, playing an important role in educational innovation (Khan & Qudrat-Ullah, 2021). The implementation of educational innovation must be embodied by the concrete activities of teachers teaching students. Educational innovation should lead and be exemplary in innovating students' education. Educators can influence and promote the formation and development of the students' innovative capability through their innovative consciousness, thinking, and ability. Education innovation has created new requirements for teachers to innovate their teaching behaviors (Liu & Yang, 2017). Due to Yunnan's relative scarcity of educational resources, the demand for educational innovation is more urgent. In 2021, the full scale of all types of higher education in the province of Yunnan reached 1,501,500, with a gross enrollment rate of 53.03%. Among them, 82 are regular institutions of higher learning, and 1 is an adult institution of higher learning. The average number of full-time undergraduate and vocational students is 12,890, including 16,108 undergraduate students and 10,788 vocational students (Yunnan Education Dept., 2022).

Innovative work behavior is an important branch of current innovation theory research and one of the core concepts of this research. Employee IWB is the source of organizational innovation performance, which integrates the elements of creativity and builds the micro-foundation for organizational and enterprise innovation. Teachers are the main body of educational activities and the main body of educational innovation, significantly impacting the process of educational innovation. The implementation of educational innovation must be embodied by the concrete activities of teachers teaching students. Innovation in education has posed new demands on teachers to innovate their teaching methods (Feng, 2011). As teachers, we must be creative, imaginative, and enterprising, with a strong desire to learn and diverse interests and pastimes. Teachers should challenge experience and authority and push themselves out of their comfort zone. Teachers with innovative consciousness should devote themselves to teaching, seize the opportunity, learn new teaching techniques and tools, reflect on the success or failure of teaching, and carry out educational innovation unremittingly. (Liu, 2002).

Empowerment is a way to help managers gain more freedom and space for career development by either taking the initiative to obtain power or being granted power (Liu & Deng, 2015). University teachers have a deep professional theoretical foundation, and their work competencies reflect their practical ability (Dong & Wang, 2015). Participating in teaching can help university teachers enhance their professional level and bolster their self-confidence. This study aims to investigate university teachers' empowering behavior to enhance their self-efficacy scientifically, further improve their IWB, and ultimately augment the innovative capacity of higher education.

Research on PE and IWB in China needs to catch up compared to other countries, and most research objects are enterprise employees. Although there are numerous studies on the innovative behavior of personnel from different backgrounds, the research topics are usually quite broad. The present study provides theoretical and technical backing for enhancing university teachers' psychological empowerment and innovative work behavior. Through quantitative analysis, it examines the factors that impact PE and IWB and investigates the mechanism of each variable and each dimension. The research advances the field of individual innovative work behavior research, builds the fundamental structure for teacher innovative work behavior research, and develops and enhances the study's focus on the psychological empowerment of teachers. This study is novel in that it advances the theoretical knowledge of teachers' creative work behavior and, to some extent, helps localize the study of teachers' creative work behavior. It examines how Organizational Culture (OC) affects Psychological Empowerment (PE) and how each of the different components of Work Engagement (WE), Knowledge Sharing (KS), Transformational Leadership (TL), Psychological Capital (PC), and Psychological Empowerment (PE) separately influence Innovative Work Behaviors (IWB).

Practically, by systematically analyzing the factors influencing teachers' innovative work behavior and considering the actual situation of school management and teacher development, one can effectively control and promote teachers' innovative education and teaching, thereby improving work efficiency and quality and supporting educational reform. Moreover, this can increase teachers' autonomy and awareness of professional development, shape teaching innovation, and encourage students' creative learning. Additionally, it can create a favorable organizational climate and environment for teachers' innovative work, nurture innovative instructors, and support the scientific development of schools. Furthermore, it can enhance school management's effectiveness and teachers' scientific evaluation.

2. Literature Review

2.1 Organizational Culture

Organizational culture refers to the daily norms and practices observed and adhered to by the staff of an organization (Choueke & Armstrong, 2000). Lim (1995) suggests that although "culture" appears to be a descriptive and explanatory rather than a predictive tool for understanding organizations, it is still a cause for concern due to more detailed and conclusive results. Therefore, organizational development and related business consulting emphasize the need for strong internal validity in the belief that organizational culture influences performance (Tan, 2019). Hofstede (2001) found that organizational culture is the brains of collaborative planning, distinguishing one organization from another. Schein (1990) argues that organizational culture arises from the interaction and learning between individuals. Furthermore, Japan's benefit of its distinctive corporate culture in order to achieve economic take-off has made organizational culture a hotbed of research (Wei, 2016). Appelbaum et al. (1999) found that OC has long been recognized as an important factor influencing employee empowerment. As such, the following hypothesis is given:

H1: Organizational culture has a significant impact on psychological empowerment.

2.2 Work Engagement

It refers to a work-related mental state characterized by vigor, dedication, and absorption (Schaufeli et al., 2006). It encourages initiative, helps employees manage great geographic dispersion, and improves their ability to handle cross-border activities (Lauring & Selmer, 2015). According to Fredrickson (2001), engaging in work leads to pleasant feelings that stimulate imaginative and adventurous thoughts and ideas. Koyuncu et al. (2006) reported a consistent but moderate relationship between WE and some work outcomes and mental health indicators. Employee engagement results in enthusiasm, willingness to put in extra effort, and the creation of greater resources (Kakkar et al., 2020). Hakanen et al. (2008) found that work engagement fosters individual initiative, influencing innovation. The degree of work engagement helps the organization retain good employees through innovative work behavior (Agarwal, 2014). Therefore, this research hypothesizes the following:

H2: Work engagement has a significant impact on innovative work behavior.

2.3 Transformational Leadership

Leithwood and Jantzi (1999) defined transformational leadership as the ability to reorganize, develop a shared vision, and delegate. As organizational structures have evolved from centralized to flatter models, the interaction between managers and employees in the vertical hierarchy has fundamentally changed, necessitating a shift in leadership style. Managerial style has a significant impact on how effectively personnel is led. Transformational leadership can inspire employees to reach their highest level of self-achievement, shape their behavior, and maximize their potential. Creativity requires a strong belief in one's innovation ability (Mao, 2021). Boehnke et al. (2003) found that the leadership qualities necessary for extraordinary performance are universal. A leader's vision and the implementation of that vision through task clues can influence subordinates' performance and attitudes (Kirkpatrick & Locke, 1996). Burns (1978) argued that transformational leaders appeal to followers' higher moral values. Avolio et al. (2004) discovered that TL is an antecedent of organizational commitment. The leader's importance to collective identification relates to subordinates' identification with the leader (Shamir et al., 1998). Organizational structure and other factors can promote the emergence and development of TL (Shamir & Howell, 1999). TL positively impacts employees' IWB and the relationship between TL and employees' IWB is stimulated by innovation climate and job complexity (Afsar & Umrani, 2020). Afsar et al. (2014) believe that TL positively affects innovative work behavior and has a stronger relationship with independent performance. Accordingly, the following assumption is proposed:

H3: Transformational leadership has a significant impact on innovative work behavior.

2.4 Knowledge Sharing

Hooff and Ridder (2004) define knowledge sharing as individuals successfully exchanging implicit and explicit knowledge to create new knowledge. Many references present the links between knowledge sharing and various organizational processes and outcomes. According to Bastaki et al. (2020), workers are more likely to participate in Knowledge Sharing (KS) if they have a favorable opinion of the training. KS and organizational learning positively influence and significantly promote organizational effectiveness (Yang, 2007). Businesses can only become more competitive by constantly innovating. Employee innovation can significantly impact how well businesses innovate, and employee knowledge levels can significantly impact how effectively individuals apply their innovative behaviors and activities. Employee knowledge sharing is a

social exchange activity that creates a process of reciprocal knowledge flow between the sharer and receiver, creating new knowledge in this flow process to increase the total knowledge (Wu, 2020). Organizations should make an extra effort to foster employee sharing. Activities to secure the organization's long-term viability. The following hypothesis has therefore been developed:

H4: Knowledge sharing has a significant impact on innovative work behavior.

2.5 Psychological Capital

Luthans and Youssef (2007) defined psychological capital (PC) as a positive psychological state of individual development. Research has shown that those with high psychological capital report higher job satisfaction and organizational commitment (Luthans et al., 2008). Roberts et al. (2011) further suggest that PC provides a protective buffer between job stress and uncivilized behavior at work. Additionally, Yu et al. (2019) and Hirst et al. (2009) indicate that the various components of PC are specifically related to creativity and positive behaviors that affect creative work solutions. Therefore, to help employees reach their maximum potential and further their development, a firm should focus on enhancing this vital resource within its workforce. Mutonyi (2021) argues that PC is influenced by organizational culture, ethnic culture, and market culture and that psychological empowerment affects PC and individual innovative behavior. Bouckenooghe et al. (2019) utilized a person-centered approach to identify distinct configurations of PC and how various pairings of the four components of PC affect work engagement and job performance. Furthermore, Abbas and Raja (2015) have found that employees with a high PC level generally have greater individual innovative behavior. This research puts forward the following hypothesis.

H5: Psychological capital has a significant impact on innovative work behavior.

2.6 Psychological Empowerment

It has been suggested that intrinsic motivation is expressed in four cognitive aspects, which reflect the individual's work role orientation: meaning, ability, self-determination, and influence (Spreitzer et al., 1999). This type of structural authorization creates a motivational path determined by the level of self-awareness and perceived authority held by subordinates and by the level of "empowerment" of personal experience, which focuses on people's psychological experiences. It has been found that this type of authorization is more likely to increase the job passion and potential of employees and achieve superior organizational performance (Song, 2018).

In the western context, psychological empowerment and other concepts have been proven effective in creating a positive psychological and ideological environment among staff and improving their performance (Avolio et al., 2004). According to the theory of expectations, motivation to increase efforts in each task will depend on the expectations of the efforts that lead to the expected performance, which will lead to the expected results. Maynard et al. (2013) suggest that most empowerment initiatives are carried out at the team level and that PE in communication between team members is important. It has been found that the beneficial work behaviors of employees with high experience in PE are related to each other through training or providing fair performance compensation to the employees. Such human resource practices can enhance the psychological empowerment of employees, such as enhancing their sense of meaning, competence, and belonging, thus enhancing their commitment and contribution to organizational success. Managers should promote the psychological empowerment of employees by providing a clear vision and goals to motivate employees to take greater responsibility for their work (Nguyen et al., 2021). Psychological empowerment is extremely important when examining authorization behavior from the standpoint of an employee's motivation-driven organizational behavior (Song, 2018). Khan et al. (2022) state that servant leadership encourages employees to engage in IWB through PE. This research proposes the following hypothesis:

H6: Psychological empowerment has a significant impact on innovative work behavior.

2.7 Innovative Work Behavior

It is a deliberate process of generating, introducing, and applying new ideas to products, processes, and systems in a work role, team, or organization to benefit its performance. This process involves identifying existing difficulties, judging the problems, coming up with potential remedies or alternative ideas, obtaining evidence to support the hypothesis, and experimenting with the developed idea (Jin, 2021). IWB benefits both the organization and the employees, as it can help exceed customer expectations and gain competitive advantages (Javed et al., 2018; Seeck & Diehl, 2017). For IWB to be successful, employees need a strong sense of management and supervision or support in the form of free work and resource availability (Afsar et al., 2016). IWB and a proactive personality can also promote corporate performance and organizational efficiency (Crant, 2000).

Moreover, when employees experience interpersonal trust, emotional commitment, and psychological well-being, internal curiosity drives self-exploration, leading to complex and creative work behaviors (Jain, 2022). Ultimately,

knowledge workers are essential to the growth of businesses as they are the knowledge carriers and innovation subjects of organizational innovation (Jin, 2021). Their innovation capacity and willingness play a significant role in the whole innovation process, as organizational and social innovation directly depends on individual innovation (Amabile et al., 1996).

3. Research Methods and Materials

3.1 Research Framework

The conceptual framework of this study is adapted from five previous studies. Sinha et al. (2016) investigated the relationship between Organizational Culture (OC), Psychological Empowerment (PE), and Innovative Work Behavior (IWB). Agarwal (2014) studied the relationship between Work Engagement (WE) and IWB. Wojtczuk-Turek and Turek (2015) explored the relationship between Psychological Capital (PC) and IWB. Odugbesan et al. (2022) examined the relationship between Transformational Leadership (TL) and IWB. Finally, Ye et al. (2021) investigated the relationship between Knowledge Sharing (KS) and Innovative Behavior (IB). The conceptual framework of this study is presented in Figure 1.

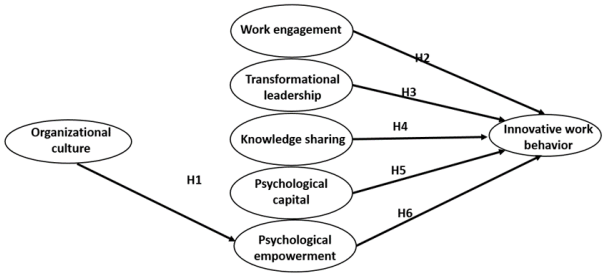

Figure 1: Conceptual Framework

H1: Organizational culture has a significant impact on psychological empowerment.
H2: Work engagement has a significant impact on innovative work behavior.
H3: Transformational leadership has a significant impact on innovative work behavior.
H4: Knowledge sharing has a significant impact on innovative work behavior.
H5: Psychological capital has a significant impact on innovative work behavior.
H6: Psychological empowerment has a significant impact on innovative work behavior.

3.2 Research Methodology

In order to explore factors impacting psychological empowerment and innovative work behavior of employees at a university in Yunnan, China, this study used a quantitative method and a questionnaire survey to collect data from the target group. The content validity was checked using Item-Objective Congruence (IOC) and Cronbach's Alpha. The data-gathering process was discussed, as well as the statistical analysis of the data. SEM was used to validate the structure of the link between variables. The research methodology was divided into eight sections: research method used, respondents and sampling procedure, research questionnaires, research instrument validity and internal consistency reliability, data collection/gathering procedures, Confirmatory Factor Analysis (CFA), the goodness of fits or model fits, and Structural Equation Model (SEM).

This study used a questionnaire survey to collect sample data from the target population of teachers from three different universities, based on empirical analysis and quantitative methods, to explore the factors of psychological empowerment and innovative work behavior of employees. Questionnaire Star's online questionnaire was used to create the questionnaire, providing efficient distribution and data collection. IOC and a pilot test (n=50) were conducted to verify the reliability of the questionnaire before it was distributed. The results are that IOC passed at a score not less than 0.6 , and Cronbach's Alpha coefficient value at equal or higher than 0.7 in the pilot test (Gable & Wolf, 1993). SPSS and AMOS statistical tools were used to analyze the sample data. CFA and SEM were used to empirically test the conceptual framework and the hypothesized relationship between the variables. The content of the study was organized according to the standards of empirical research, with the introduction, theoretical foundation, review of related research, theoretical model construction, relation hypothesis proposal, questionnaire design, data collection, empirical analysis, result discussion and revelation, conclusion, and prospect steps.

3.3 Population and Sample Size

The researcher chose these three universities as they are representative:

1. They are under the jurisdiction of the Ministry of Education, Central and local co-construction, Yunnan Province.
2. They all prioritize teacher development.
3. These universities have existed for over 70 years.
4. Each university has more than 1,200 teachers.
5. All three have established entrepreneurship schools.

The researcher selected the most suitable sample size, considering previous research. Five hundred samples were collected from three higher education institutions in Yunnan for better statistical results. Therefore, 500 samples each were appropriate for this study and suitable for the structural equation modeling (SEM) statistical technique.

3.4 Sampling Technique

This study adopted sampling methods, including judgment, stratified, and convenience sampling. Three higher education institutions in Kunming, Yunnan, China, were selected using judgment sampling to ensure that the samples could represent Yunnan's best university research field. Proportional stratified sampling was used to assign 500 samples to each stratum. Table 1 was used to calculate the proportional sample size for each university, and a questionnaire was distributed to each university accordingly. Finally, convenience sampling was used to select the participants from each university.

Table 1: Sample Units and Sample Size

University Name	Population Size	Sample Size
Yunnan University	3,023	236
Southwest Forestry University	1,266	99
Yunnan University of Finance and Economics	2,123	165
Total	**6,412**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

The profile of the demographic target 500 participants is shown in Table 2. Female respondents accounted for 63.6%, male respondents accounted for 36.4%, and female respondents were 27.2% more than male respondents. Regarding the age group, teachers aged 36-45 accounted for 42.8% of the total number of teachers, young teachers under 35 accounted for 39.6%, and teachers over 46 accounted for 17.6%. Regarding working years, 48.20% of respondents have worked for less than ten years, 35.8% have worked for 11 to 20 years, 11% have worked for 21 to 30 years, and 5% have worked for more than 31 years. New teachers who have worked for less than ten years for a large proportion can be seen, while those who have worked for more than 30 years for a small proportion. Regarding educational background, 91.6 percent of respondents have a master's degree or above, 7 percent have a bachelor's degree, and 1.4 percent have a junior college or below. College teachers with high degree account for a large proportion of staff. In the field of research, the highest proportion is 24% in management, followed by 15.2% in education, 11.2% in economics, 11.2% in agriculture, 9.4% in science, 8% in other fields, 5.8% in the literature, 5.6% in engineering, 3% in law, 3% in history, 1.8% in philosophy, 1.2% in art and 0.6% in medicine.

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	Male	182	36.4
	Female	318	63.6
Age	Less than 35 years	198	39.6
	36-45 years	214	42.8
	More than 46 years	88	17.6
Years of Working	Below 10	241	48.2
	11–20	179	35.8
	21–30	55	11
	Above 31	25	5
Education	Junior college or below	7	1.4
	Bachelor's degree	35	7
	Master or above	458	91.6
Field of Study	Economics	56	11.2
	Engineering	28	5.6
	Philosophy	9	1.8
	Law	15	3
	Education	76	15.2
	Literature	29	5.8
	History	15	3
	Science	47	9.4
	Agriculture	56	11.2
	Medicine	3	0.6
	Management	120	24
	Art	6	1.2
	Other fields	40	8

Source: Constructed by author

4.2 Confirmatory Factor Analysis (CFA)

In the structural research model, the CFA was cited as crucial for all latent variables (Alkhadim et al., 2019). As the initial model presented data that met the acceptable thresholds and agreed with CFA, the modified model was unnecessary. The measurement model was examined for convergent validity, and the fit model results indicated acceptable values, thus certifying its convergent validity. This is further illustrated in Table 3, showing the model measurement with all approved results. According to Hair et al. (2006), CFA's results are validated by factor loading equal to 0.5 or above, Cronbach's Alpha coefficient value at equal or higher than 0.7, and the Composite Reliability (CR) at equal or higher than 0.7. Furthermore, Average Variance Extracted (AVE) is higher than the cut-off points of 0.4, which can ensure convergent and discriminant validity (Fornell & Larcker, 1981).

Table 3: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Organizational Culture (OC)	Choueke and Armstrong (2000)	9	0.924	0.675-0.803	0.924	0.575
Work Engagement (WE)	Schaufeli et al. (2006)	5	0.880	0.755-0.801	0.880	0.595
Transformational Leadership (TL)	Leithwood and Jantzi (1999)	5	0.890	0.737-0.833	0.891	0.620
Knowledge Sharing (KS)	Hooff and Ridder (2004)	3	0.818	0.749-0.791	0.818	0.600
Psychological Capital (PC)	Luthans and Youssef (2007)	4	0.851	0.746-0.801	0.854	0.593
Psychological Empowerment (PE)	Spreitzer et al. (1999)	6	0.906	0.698-0.840	0.906	0.619
Innovative Work Behavior (IWB)	West and Farr (1989)	4	0.867	0.746-0.830	0.868	0.622

Table 3 shows that the initial model had all model-fit values within the acceptable thresholds, including CMIN/DF =1.399, GFI = 0.916, AGFI = 0.902, NFI = 0.927, CFI = 0.978, TLI = 0.976, and RMSEA =0.028. Thus, all results exceeded the acceptable values. The fair values indicated that the convergent and discriminant validity were confirmed.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values Adjustment
CMIN/ DF	< 3.00 (Hair et al., 2006)	1.399
GFI	≥0.85 (Wu & Wang, 2006)	0.916
AGFI	≥ 0.80 (Wu & Wang, 2006)	0.902
NFI	≥ 0.80 (Wu & Wang, 2006)	0.927
CFI	≥ 0.90 (Hair et al., 2006)	0.978
TLI	≥ 0.90 (Hair et al., 2006)	0.976
RMSEA	< 0.05 (Hair et al., 2006)	0.028
Model summary		**In harmony with empirical data**

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index and RMSEA = Root mean square error of approximation
Source: Created by the author.

Discriminant validity was assessed by calculating the square root of the AVEs (Fornell & Larcker, 1981). The findings of this study suggest that the discriminant validity is higher than all inter-construct/factor correlations, as shown in Table 5, thus indicating its supportiveness.

Table 5: Discriminant Validity

	OC	WE	TL	KS	PC	PE	IWB
OC	**0.758**						
WE	0.410	**0.771**					
TL	0.357	0.387	**0.787**				
KS	0.417	0.448	0.390	**0.775**			
PC	0.320	0.346	0.317	0.320	**0.770**		
PE	0.637	0.408	0.268	0.307	0.247	**0.787**	
IWB	0.465	0.550	0.461	0.493	0.375	0.536	**0.789**

Note: The diagonally listed value is the AVE square roots of the variables
Source: Created by the author

4.3 Structural Equation Model (SEM)

The SEM analysis after modification yielded satisfactory results, as indicated by CMIN/DF = 1.958, GFI = 0.871, AGFI = 0.852, NFI = 0.897, CFI = 0.947, TLI = 0.942, and RMSEA = 0.044. Thus, Table 6 showed that the modified SEM model had met the desired fit criteria.

Table 6: Goodness of Fit for Structural Model

Index	Acceptable	Statistical Before Values Adjustment	Statistical Values After Adjustment
CMIN/DF	< 3.00 (Hair et al., 2006)	2.229	1.958
GFI	≥0.85 (Wu & Wang, 2006)	0.854	0.871
AGFI	≥ 0.80 (Wu & Wang, 2006)	0.834	0.852
NFI	≥ 0.80 (Wu & Wang, 2006)	0.881	0.897
CFI	≥ 0.90 (Hair et al., 2006)	0.931	0.947
TLI	≥ 0.90 (Hair et al., 2006)	0.926	0.942
RMSEA	< 0.05 (Hair et al., 2006)	0.05	0.044
Model Summary		**Not in harmony with empirical data**	**In harmony with empirical data**

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index and RMSEA = Root mean square error of approximation
Source: Created by the author

4.4 Research Hypothesis Testing Result

The importance of each variable was examined based on its standardized path coefficient (β) and t-value, as presented in Table 7. This study verified the substantial effect of H1, H2, H3, H4, H5, and H6.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-value	Result
H1: OC → PE	0.684	12.906*	Supported
H2: WE→ IWB	0.318	6.690*	Supported
H3: TL → IWB	0.245	5.419*	Supported
H4: KS → IWB	0.273	5.670*	Supported
H5: PC → IWB	0.135	3.007*	Supported
H6: PE→ IWB	0.424	8.480*	Supported

Note: * p<0.05
Source: Created by the author

The results showed that organizational culture had the strongest significant influence on employee psychological empowerment. Psychological empowerment occurs when employees realize that they have some control over their work lives. If an organization has a culture of employee engagement and its management emphasizes flexibility, autonomy, and rewarding engagement, this culture will promote employee empowerment (Spreitzer, 1995). Psychological empowerment ranked second in the influencer score of employee innovation behavior. The research results of Zeng and Li (2015) showed that psychological empowerment significantly impacted the innovation behavior and performance of service employees in China. Work engagement ranked third in the influence rating of employee innovative work behavior. Work engagement also correlated positively with employees' innovative behavior (Agarwal et al., 2012). Knowledge sharing ranked fourth in the influence rating of employee innovative work behavior. Knowledge-sharing practices were found to have an important impact on organizational innovation (Kim et al., 2013). Transformational leadership ranked fifth in the influencer score of employee innovative work behavior. Transformational leadership was demonstrated to significantly impact innovative work behavior throughout the organization (Jaruwanakul, 2021). Finally, psychological capital ranked sixth in the influence rating of employee innovative work behavior. According to previous studies, employees with a high level of psychological capital generally had a greater Individuals Innovative Behavior (Abbas & Raja, 2015).

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

This study focuses on the significant influence of teachers' innovative work behavior in three representative universities in Yunnan Province. Conceptual frameworks were presented to examine how organizational culture, work engagement, transformational leadership, knowledge sharing, psychological capital, and psychological empowerment can significantly influence innovative work behavior. Questionnaires were then developed and distributed to faculty members at the three universities in the target sample. Through data analysis, this paper discussed the influencing factors of psychological empowerment and innovative work behavior of university workers in the Yunnan region. Confirmatory factor analysis (CFA) and structural equation (SEM) path analysis was used to measure and test the validity and reliability of the conceptual model, as well as to verify the influencing factors of employee psychological empowerment and innovative work behavior.

In conclusion, organizational culture, work engagement, transformational leadership, knowledge sharing, psychological capital, psychological empowerment, and innovative work behavior are all positively correlated. This study aimed to realize that these are the key factors influencing psychological empowerment and innovative work behavior of university employees in Yunnan Province. For conclusions, the main conclusions of the study may be presented in a short Conclusions section, which may stand alone.

5.2 Recommendation

The research conducted in three representative universities in Yunnan Province identified key factors influencing employee psychological empowerment and innovative work behavior, such as organizational culture, work engagement, transformational leadership, knowledge sharing, and psychological capital. The results suggest that university administrators and Human Resources Department should take measures to improve teachers' innovation performance. These measures include creating a harmonious organizational culture environment, developing a work incentive mechanism more conducive to employee involvement, employing transformational leaders to lead teams, fostering a more harmonious atmosphere of knowledge sharing, and better-utilizing employees' psychological capital and empowerment. In conclusion, the research results benefit university managers by stimulating employees' innovative behavior, cultivating more innovative talents, and ultimately achieving higher education innovation.

5.3 Limitation and Further Study

The limitations of this study are that the population and sample surveys used faculty and staff from three universities in Yunnan Province. The analysis results may differ depending on the surveyed region, university, or faculty position. Future research may focus on factors influencing employees' innovative work behavior, such as team learning

and goal motivation. Additionally, it could explore the influence of teachers' innovative behavior on new courses, textbooks, teaching methods, and innovative education of college students. Through such research, more innovative knowledge can be provided, and more innovative talents can be cultivated.

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