



Influence Of Leadership Styles On Motivation And Productivity Of Employees: A Study On Chinese It Firms

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Abstract: In today's rapidly changing society, Information Technology (IT) enterprises continue to develop invincible and IT enterprise managers are responsible for taking corrective initiatives to avoid future problems. In an organization, leadership style is a key factor to improve employee performance and promote organizational innovation culture, which plays a crucial role in every organization and business. The purpose of this study is to help improve employee performance through effective leadership in Chinese IT enterprises through the mediating role of organizational innovation culture. In this study, the researcher uses quantitative methods to analyze and process the data collected through the questionnaire. The study discusses in detail the effects and influence of the two leadership styles, namely transformational leadership and transactional leadership on employee performance. The results depict that transformational leadership has a significant positive influence on employee performance and organizational innovation culture, while the influence of transactional leadership is weak in comparison to that of Transformational leadership. Finally, it is suggested that in order to improve the transformational leadership, especially in the IT industry, which is constantly changing and innovating, the firm needs to be constantly stimulating innovation and change of employees. The enterprise needs to adapt to the development of the times and improve the performance of employees, thereby enhancing the core competitiveness of the enterprise.

Keywords: Transformational leadership, Transactional leadership, Employee performance, Organizational innovation climate

I. INTRODUCTION

With the vigorous development of the new technological revolution and the acceleration of the process of Chinese economic integration, the leading role of the information technology industry in economic development is increasingly prominent, and its development level has become an important symbol of the comprehensive competitiveness of the horizontal region. According to the statistics report [1], China's IT industry market size is expanding from \$5 million in 2015 to \$20 billion in 2019 (Error! Reference source not found.). Faced with the reality, countries have focused their economic development on the information technology industry, and vigorously developing the IT industry has become the fundamental way to speed up the transformation and upgrading of economic structure, raise the speed of economic growth and improve the pace of economic growth

In today's complex environment which is full of uncertainty, the IT industry is facing increasingly fierce competition. To gain sustained competitiveness in such a competitive environment, it is necessary that the Information Technology sector continuously innovate and improve its performance. The improvement in creativity is the basic way of improving employee performance, which can effectively promote the innovation and development of enterprises. Therefore, the creativity of employees in the IT

industry is particularly important. How to improve the creativity of employees, make full use of the skill-set of all employees to improve the innovation and change ability of enterprises, and promote the long-term sustainable innovation and development of IT enterprises has become a hot topic of academic research .With the increase of the uncertainty of the external environment and the increasingly fierce industry competition in China, the organizational structure of IT enterprises is reduced and the management is increasingly flattened. Employees in the enterprise perceive that the innovation climate and leadership style of the enterprise to have a certain impact on the behavior of employees [2].

As for the managers of IT enterprises, the leaders who can really stimulate employees' innovative behaviors in the

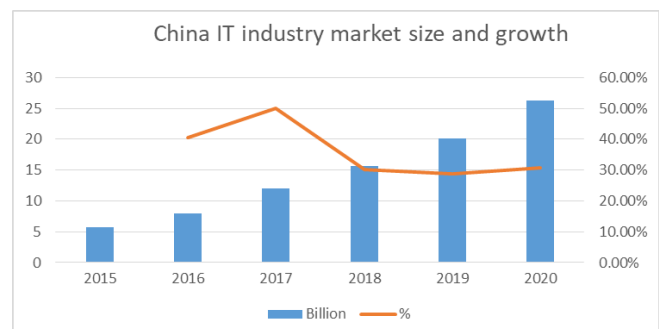


Figure 1: China IT industry market size and growth

enterprise are a little less in numbers. When employees show creativity and innovation ability, they can better complete their tasks, thus improving the performance and competitive advantage of the organization in an uncertain environment. In the long run, the improvement of employee performance is the key factor for the survival and development of an organization [3]. Therefore, in order to improve the level of organizational innovation, it is particularly important to study the antecedent variables of individual innovation behavior [4].

In the era of the knowledge economy and industrial upgrading, fully releasing the innovation ability of scientific and technological talents and improving employee performance is the magic weapon for the sustainable and stable development of IT enterprises [5]. Leadership style influences employee performance, through mediating organizational innovation climate, thus subtly forms organizational culture. Therefore, Leadership is very important for the development and sustainability of IT enterprises and the effectiveness of human resource performance management that enterprise leaders should adopt leadership style and management measures to stimulate employees' innovative behaviors

The purpose of this study is to analyze the influence of leadership style and employee performance on the mediating role of organizational innovation climate, on this basis, build a theoretical model, including the relationship between leadership style, organizational innovation climate, and employee performance variables. This study puts forward some instructive suggestions for the development of leadership style theory and the improvement of human resource management efficiency.

- i. To analyze the relationship between different leadership styles, such as transformational leadership style, transactional leadership style and employee performance in the IT industry.
- ii. To analyze the relationship between different leadership styles, such as transformational leadership style, transactional leadership style and organizational innovation climate in the IT industry.
- iii. To analyze the relationship between organizational innovation climate and employee performance in the IT industry.
- iv. Analyze the mediating role of organizational

innovation climate between leadership style and employee performance.

IT enterprises are becoming more and more competitive in China and improving employee performance is an important measure to enhance competitiveness. It is hoped that the conclusions of this study can give IT enterprise leaders or managers suggestions to effectively improve employee performance and create an innovative organizational climate for reference advice. Based on the development of the IT industry, this study investigates the organizational innovation climate as mediates variables and explores how different leadership styles affect employee performance. For employees, they can have a clear understanding of their leadership management style and can use different types of leadership styles and methods to influence employees' innovative behaviors, so as to choose a more suitable development need. Leadership style, timely adjustment of their psychological state to adapt to organizational change and development. For companies and leaders, by enhancing employees' organizational innovation behavior, employees are aware of the meaning and value of their work, and build a good climate for the organization, communicating to employees the expectations and support of the organization to improve performance, thereby maximizing the incentive and protecting employees' innovative thinking and potential creativity.

II. RELATED WORK

IT industry is also termed as the information technology industry, is the direct product of the third scientific and technological revolution [6]. IT industry is based on computer technology and information technology, mainly including an electronic computer, communication equipment, software industry. IT industry is an emerging industry, IT is based on scientific theory and technology, the use of advanced theory. According to the statistics of the CBG (2019), since the 21st century, China's IT industry has experienced rapid development, whether the industry sales or the number of enterprises both increased substantially. From January to August 2019, the industry realizes operating profit of 70.9 billion yuan, up by 32.7% from a year earlier, the growth rate increased by 19.7% year-on-year, the (Figure 2) shows that as earlier in 2002, annual sales of 4500 billion yuan, the IT industry before the number to 4700, But in 2018, the annual value of the IT industry has increased by 70.9 billion yuan, the figure has reached 41,000, growing at a staggering rate.

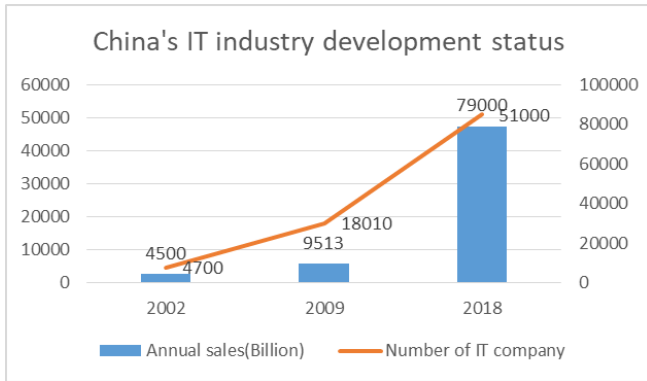


Figure 2: China's IT industry development status

China's IT industry structure under the market-oriented approach has undergone a major adjustment, the industrial investment structure began from the earlier focus on investment processing and assembling software, networks, information services, and other fields to expand; Not only the economic benefits significantly improved, but the overall competitiveness of the industry has also increased significantly [5].

At the same time as the expansion of the industrial scale, the competitiveness of Chinese IT enterprises has also been enhanced. Industrial innovation is the core factor to increase industrial competitiveness, the level of innovation determines the strength of the industry's competitiveness, as shown in **Error! Reference source not found.**, according to the statistics of the Ministry of Industry and Information Technology (2019), in 2014-2018, the China's IT industry innovation index continued to improve, from 62 points in 2014 to 77 points in 2018, an increase of 24%. And since 2014, the industrial innovation index has always been higher than the overall development index, highlighting the fact that China's IT industry innovation level has made great progress, and began to become one of the driving forces of industrial development.

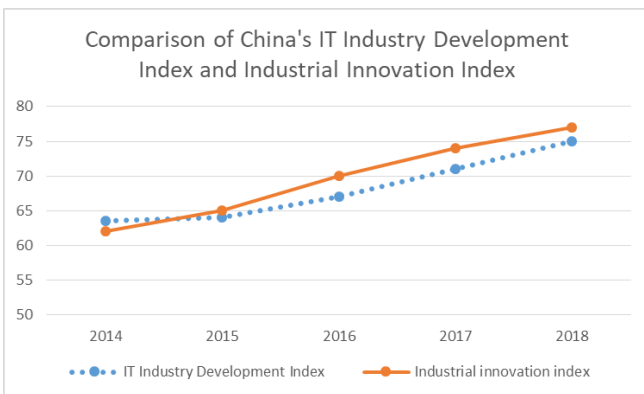


Figure 3: Comparison of China's IT Industry Development Index and Industrial Innovation Index (Ministry of Industry and Information Technology)

Information technology is the design and information industry-related industries, represented by

computers. Generally speaking, electronic products, such as computers, mobile phones, cameras, printers, and all computer peripherals are called IT products [7]. The IT industry refers to the industry that operates these products and also includes the network, software, etc.

It is pointed out that the main body of human resources is the talent. The focus of IT enterprises is knowledge employees with high human capital, rather than land and capital [7]. Knowledge employees generally have higher quality and profound knowledge, broad vision, strong learning ability, and have received perfect education, strong professional skills, can adapt to the ever-evolving and continuously changing information and the development of science and technology. Therefore, knowledge employees are the core and the largest proportion of employees in the IT industry, and they are the source of sustainable competitiveness of enterprises. The enterprise has strong innovation ability and high added value. IT enterprises not only have strong innovation ability, but its product science and technology content and added value are also very important and can bring huge economic benefits for the enterprise. With the development of the computer, laser, aerospace, and other high technologies, IT enterprises continue to innovate, the product added value continues to improve, and it has made a great contribution to the social and economic development [8].

More than ever before, IT enterprises need leaders to promote organizational innovation and stimulate the creativity of employees and tap more innovative employees. Organizations and enterprises are all affected by internal and external complex environments. The innovation ability of the organization brings added value, make the enterprise invincible in the background of globalization, and improve the core competitiveness of the organization. Creativity is the prelude to innovation. The creativity of scientific research teams is not only influenced by individual creativity, but also by environmental factors, one of which is a leadership [9]. In management organizations, leaders interact with employees from different backgrounds to produce different types of leadership styles. Leadership style may be that employees voluntarily contribute or conceal new ideas to the organization, thus affecting or hindering the effective implementation of corporate strategy and the realization of organizational goals. In today's dynamic business environment of intense competition, rapid technological change and improved quality requirements, traditional leadership doctrines have fallen behind in new factors, with the focus shifting from emphasis on control to the source of employee performance [10].

There are many forms to describe employee performance. Employee performance refers to the performance and behavior of employees or individuals working in an organization, and the output they create, it is a

result-oriented indicator. The performance is the entire process used to manage organizational performance [11], and the implementation of this process is determined by organizational structure, corporate strategy, technical business system, and related procedures. Deep significance of performance management lies in the efforts to seek the support points for the goals of the whole organization by connecting the work of superiors and subordinates and department goals [12]. From the perspective of public basic theories, Some authors defined performance management as follows: a systematic integration process in which an organization makes its employees a member of the team to improve its efficiency and achieve its mission and goals [13].

Traditional performance evaluation only focuses on financial growth and financial stability and is only a means to measure the benefits and efficiency brought by employee behaviors [14]. However, after continuous development and research, performance management has become more and more mature and gradually produces behavioral effects. It not only focuses on efficiency but also pays more and more attention to soft evaluation, innovation level, employee enthusiasm, employee satisfaction, etc. Performance is a very important tool for enterprises to implement strategies [15]. In the past, employee performance has always been the focus of research through the organizational and human resource modules that transform corporate strategy into corporate financial indicators.

III. METHODOLOGY

This study use the quantitative analysis method because the aim of this study is to understand the relationship between the variables and, namely the study of leadership styles influence on employee performance, through reading a large number of literature after assuming the independent variable and dependent variable, through a questionnaire survey to verify the relationship between the variables, so the quantitative analysis method can better help complete the research purpose, research significance and the implementation in this study. In order to better describe the results of the survey data, we use Statistical Package for the Social Science (SPSS) and Smart PLS statistical software to analyze and describe the data of its questionnaire and form a report.

This study focuses on the relationship between leaders and employees in the IT industry in China. Therefore, the survey respondents selected the leaders and talents of IT companies. Because China's IT industry is mainly distributed in the eastern and central regions, such as Shanghai, Beijing, Guangzhou, Chongqing and so on. Different regions have different cultural backgrounds and working methods, so as to more comprehensively investigate the overall

phenomenon of China's IT industry and select representative IT company employees in different regions as survey targets.

Due to the coverage of the survey subjects in this study is very wide, although China's IT industry is mainly distributed in the eastern and central regions, but still cannot simply classify the IT industry employees of various enterprises, the statistical distribution is uncertain, so it is not possible to carry out parameter estimation research, the selection of non-probability sample survey is the most appropriate [16]. The use of non-probabilistic sampling can easily collect the individual message of the respondents, which is helpful for researchers to form ideas, expand upon those ideas and draw conclusions [17]. According to the classification of non-probabilistic sampling, there are 4 different methods of : judgment sampling, chance sampling, quota sampling, and snowball sampling. The judgment sampling is a sampling method which selects the survey object according to the need of the research purpose and the comprehensive judgment of the researcher. Based on the comparison of 4 sampling methods, this study uses the judgment sampling of non-probabilistic samples to investigate the samples.

The sample size of this study is calculated according to the following formula: $N = Z^2 \times (P(1-P)) / E^2$, where Z is the statistic, when the confidence degree is 95%, $Z=1.96$; When the confidence degree is 90%, $Z=1.64$; N is the sample quantity; E is the error value; P is the probability value; [21]. The following Table 3.1 calculates the standard sample size:

Table 3.1: Sample Size Calculation

Z	E	P	N
1.96	3%	0.5	1067
1.96	5%	0.5	384
1.96	10%	0.5	96
1.64	3%	0.5	747
1.64	5%	0.5	269
1.64	10%	0.5	67

According to the calculation of the above table, the statistical confidence of this study is selected as 95%, the error value is 5%, that is, plus or minus 5%, so the sample quantity of this study should be 269, but in order to increase the credibility, this study takes 300 sample sizes.

In this study, in addition to demographic variables, leadership style, organizational identity, employee performance, and other variables are measured using a Likert scale five-point scale.

In order to avoid the influence of other irrelevant variables on the relationship between the main research variables, this study took the demographic information of employees, the time they worked with the leaders as control variables.

Specifically, it includes gender, age, position, education level, working time with the leader.

The analysis in this study intended for a mixed method of which all the demographic data or control variables of age, gender, educational level, position, working time with the leader through the IBM-SPSS v. 23.0. The study, therefore, uses the quantitative method of the IBM SPSS for the analysis of the demographic variables. Whilst, the other constructs such as transformational leadership, transactional leadership, organization innovation climate as well as employee performance. All these are subjected to quantitative analysis of PLS-SEM analysis using Smart PLS v. 3.0. The structural equation model (SEM) of the Smart PLS enables the researcher to do the following analysis; composite reliability CR, validity and reliability, convergent validity and discriminant validity, the average variance extracted (AVE) and path coefficient (R^2). The quantitative analysis tests the hypothesis on the model fit, t-value statistics, and p-value, all these effects continue undercover the estimates and magnitudes of the regression.

The Data was collected by means of questionnaires, which were distributed to employees working in China's IT industry. A total of 330 questionnaires were distributed, among which 24 were invalid. Therefore, 306 valid questionnaires were used in this study. After the data were collected, IBM SPSS.23 was used for the descriptive analysis of samples, mainly the descriptive analysis of population frequency distribution. The assessment of the measurement model was performed through Smart PLS 3.0 software in order to assess the validity and reliability of the construct, as well as the correlation analysis among variables. The sample of an effective questionnaire was collected and statistically described, mainly from the following five aspects: gender, age, education, position, working years of the respondents. The results are shown in Table 3.2.

(a) Gender. According to the gender ratio in the sample, male employees account for a larger proportion than female employees in China's IT industry, accounting for 52.3%. But the overall difference is small. Generally speaking, the proportion of males in the IT industry is higher than that of females due to high work pressure and uncertainty.

(b) Age. From the age distribution of the sample, most employees are between 25 and 29 years old, followed by 21.5% from 30 to 34 years old, so the proportion from 25 to 34 years old is 55.5%, which is also consistent with the phenomenon that IT enterprises have high risks, great pressure, and young employees.

(c) Education level. From the distribution of education level in the sample, IT can be seen that the education level of employees in IT enterprises is mostly bachelor's degree,

accounting for 70.9%, followed by a master's degree and doctor's degree. Generally speaking, employees in the IT industry have a relatively high education level.

(d) Position. Basic and middle-level employees account for more than 80%.

(e) Working time with your leader. As can be seen from the work-life structure of the sample, most employees in IT enterprises have a working life of fewer than 5 years, and 84.6% have a working life of fewer than 5 years. On the one hand, employees in IT enterprises are generally young, so most of their working years are less than 5 years. On the other hand, due to the rapid development of the IT industry, great competitiveness and high turnover rate of employees, most employees with the insufficient ability or lack of innovation choose job-hopping.

Table 3.2: Descriptive Statistics for Respondents' Profile

Description	Frequency(n=306)	Percent (%)	
Gender	Male	160	52.3
	Female	146	47.7
	Total	306	100.0
Age	24 Below	78	18.5
	25-29	104	34.0
	30-34	44	21.4
	35-39	51	16.7
	40-44	25	8.2
	45 and above	4	1.3
Total	306	100.0	
Education	SPM	22	7.2
	Bachelor's Degree	217	70.9
	Master's Degree	54	17.6
	PhD	13	4.2
	Total	306	100.0
Position	Basic level employee	191	62.4
	Middle-level employee	82	26.8
	Senior-level employee	33	10.8
	Total	306	100.0
Working time with your leader	1 year and below	71	23.2
	1-2 years	102	33.3
	3-5 years	86	28.1
	6-10 years	36	11.8
	10 years and above	11	3.6
	Total	306	100.0

IV. RESULTS AND DISCUSSION

Descriptive statistical analysis uses several key figures to describe the overall situation of the data set, mainly reflecting the concentration and discreteness (volatility) of the sample data. "mean" is defined as "average score"; "standard deviation" is "average difference

between each score and mean” Table 4.1 calculates the maximum, minimum and average values of each variable in the sample were calculated by SPSS.

Table 4.1: Descriptive statistical

	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
CIMEAN	306	1.00	5.00	3.5523	1.01482
IMMEAN	306	1.00	5.00	3.5817	1.00130
ISMEAN	306	1.00	5.00	3.5643	1.04840
ICMEAN	306	1.00	5.00	3.5566	1.05886
CRMEAN	306	1.00	5.00	3.6253	1.01452
MEMEAN	306	1.00	5.00	3.6667	.94782
OICMEAN	306	1.00	5.00	3.6484	.95924
EPMEAN	306	1.00	5.00	3.6422	.95812
Valid N (listwise)	306				

After completing the descriptive analysis of the sample, the first step is to use Smart PLS to construct the structural equation relationship between the variables. In this study, the measurement model of each variable is constructed according to the framework.

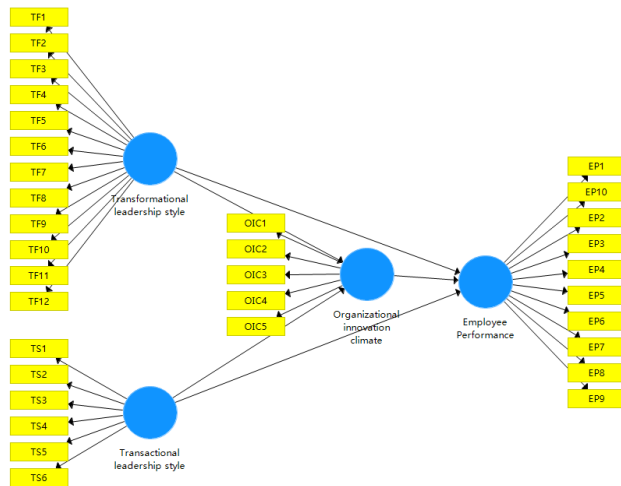


Figure 4: Measurement Model

a) Assessment of construct reliability and convergent validity of the reflective-item model

For reflective indicators, the factor load is considered as indicator reliability, reflecting the extent to which the measured variable is interpreted by the associated facet. The high factor load indicates that the measurement indicators have a high commonality and can be explained by the associated facets [18]. As can be seen from Table 4.2, the loading value is higher than 0.7 except for the transformation type variable below 0.7, indicating higher reliability between the indicators. In the social sciences, loading values above 0, 5 are acceptable.

The Composite reliability (CR) takes into account the difference in factor loading between observed variables.

The value of the CR is between 0-1, and the closer the value is to 1, the higher the reliability. It is preferred that the CR value is between 0.7 and 0.9, and the CR value is slightly lower (between 0.6 and 0.7), which is also acceptable. It can be seen from the table that the CR values of each variable are higher than 0.7 and lower than 0.95. It indicates that the four facets of the initial model have better composite reliability [19]. The evaluation threshold for AVE is 0.5. Except for the Transformation leadership style of less than 0.5, others are above 0.5.

Table 4.2: Reflective Measurement Model: Factor Loading, CR and AVE

Construct	Indicator	Loading	CR	AVE
Employee Performance	EP1	0.852	0.91	0.707
	EP2	0.859		
	EP3	0.826		
	EP4	0.842		
	EP5	0.839		
	EP6	0.853		
	EP7	0.867		
	EP8	0.809		
	EP9	0.827		
	EP10	0.836		
Organization innovation climate	OIC1	0.863	0.934	0.739
	OIC2	0.855		
	OIC3	0.842		
	OIC4	0.865		
	OIC5	0.874		
Transformation leadership style	TF1	0.658	0.916	0.478
	TF2	0.682		
	TF3	0.714		
	TF4	0.680		
	TF5	0.706		
	TF6	0.742		
	TF7	0.703		
	TF8	0.702		
	TF9	0.672		
	TF10	0.697		
	TF11	0.664		
	TF12	0.672		
Transaction leadership style	TS1	0.782	0.891	0.578
	TS2	0.771		
	TS3	0.777		
	TS4	0.745		
	TS5	0.723		
	TS6	0.761		

Note: AVE=Average Variance Extracted, CR=Composite Reliability; Outer Loading>0.5, AVE>0.5 and CR>0.7 (Joseph F Hair et al., 2011)

b) Assessment of discriminant validity

Differential validity refers to the actual difference between a facet and other facets. Each construct and its indicators should be larger than the construct and the other construct. In general, the Heterotrait-Monotrait (HTMT) test is used and the HTMT value less than 0.85 or 0.9 is acceptable. Table 4.3 shows that the HTMT value of each variable is

lower than 0.85, indicating that the initial model has discriminant validity.

Table 4.3: Discriminant Validity

	Employee Performance	Organizational innovation climate	Transactional leadership style	Transformational leadership style
Employee Performance				
Organizational innovation climate	0.523			
Transactional leadership style	0.500	0.635		
Transformational leadership style	0.603	0.640	0.712	

Note: HTMT < 0.85

c) Structural Model

The structural model was formed and analyzed in PLS shown in Error! Reference source not found.. This part of the data analysis follows the five-step process assessment carried out by Hair et. al. (2017) to examine this structural model.

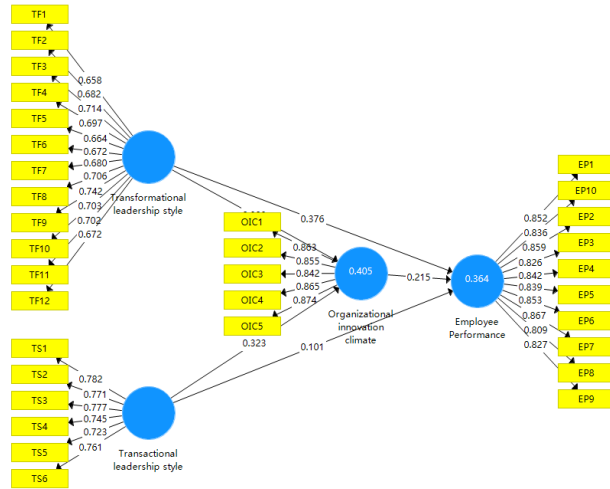


Figure 5: Measurement of the Structural Model

d) Assess the collinearity of the structural model.

In the structural model, organizational innovation climate, transformational leadership style, and transactional leadership style predict employee performance. so, it is necessary to examine the collinearity between the three latent variables. The collinearity evaluation threshold is 5.0. If the VIF value of multiple latent variables is greater than 5.0, it indicates that the latent variable has a collinearity problem. The results are shown in table 4.4, VIF values of all latent variables are less than threshold value 5, indicating that there is no serious collinearity problem in the latent variables of the structural model [20].

Table 4.4: Lateral Collinearity Assessment

Employee Performance	Organizational innovation climate	Transactional leadership style	Transformational leadership style
1.631	1.68	1.806	1.878

Note: VIF < 5 (Joe F Hair et al., 2013)

e) Assess the path coefficient

The path coefficients of the model represent the hypothetical relationship between the various facets of the model. The standardized path coefficients can indicate the quality of the internal model. The standardized path coefficient is between -1 and +1 [21]. A path coefficient value close to +1 indicates a highly positive correlation between the two facets and usually reaches a significant value. Similarly, if the path coefficient value is close to -1, it means that there is a high degree of negative correlation between the two facets.

The distribution of measurement variables was not normal, bootstrapping was used to calculate the standard error, and then t and p values were calculated to investigate the significance of factors. Bootstrapping is set to sample 5000 times, and the calculation results are shown in Table 4.5. Hypothesis 1 path evolution is the result of the $\beta = 0.376$, $t = 4.871$, $p = 0.000$, hypothesis 2 is the result of the $\beta = 0.101$, $t = 1.411$, $p = 0.079$, hypothesis 3 is the result of the $\beta = 0.383$, $t = 5.609$, $p = 0.000$, hypothesis 4 is the result of the $\beta = 0.323$, $t = 4.711$, $p = 0.045$, hypothesis 5 is the result of the $\beta = 0.215$, $t = 2.591$, $p = 0.005$

According to the evaluation criteria, except that the p-values of H2 are greater than 0.05, the p-values of all other measurement indexes are less than 0.05, Bate value is equal to the critical value, which indicated that the relationship between transactional leadership style and employee performance was not significant.

Table 4.5: Path Coefficient Assessment (N=200)

Hypothesis	Relationship	Std. Beta	Standard Deviation	T-Value	P-Values	Results
H1	Transformational leadership style -> Employee Performance	0.376	0.077	4.871	0.000	S
H2	Transactional leadership style -> Employee Performance	0.101	0.072	1.411	0.079	NS
H3	Transformational leadership style -> Organizational innovation climate	0.383	0.068	5.609	0.000	S
H4	Transactional leadership style -> Organizational innovation climate	0.323	0.069	4.711	0.045	S
H5	Organizational innovation climate ->	0.215	0.083	2.591	0.005	S

Hypothesis	Relationship	Std. Beta	Standard Deviation	T-Value	P-Values	Results
	Employee Performance					

Note: $\beta > 0.1$, $p\text{-value} < 0.05$, $t\text{-value} \geq 1.645$ (Joe F Hair et al., 2013); S = Significant, NS = Not Significant (Joe F Hair et al., 2013)

f) Assess the level of R²

The coefficient of determination and R² represents the explanatory power of variance for each internal latent variable. This coefficient is the square of the correlation coefficient between the actual value and the predicted value of the endogenous dimension and represents the overall interpretation effect of all exogenous variables on the endogenous variables in the model. R² is between 0 and 1, and higher values mean higher explanatory power [22]. The R² value of 0.02 is weak, 0.13 is considered moderate, and 0.26 is considered to be substantial. As can be seen from Table 4.6, the R² value of organizational change climate and employee performance is higher than 0.26, indicating that the explanatory power between variables is very strong.

Table 4.6: Coefficient of Determination (R²)

Construct	R ²	Explanatory Power
Employee Performance	0.364	Substantial
Organizational innovation climate	0.405	Substantial

Note: R² score interpretation (0.26-Substantial, 0.13-Moderate, 0.02-Weak) (Cohen, 1998)

g) Assessment of the effect size (f²)

The threshold for the f² effect value is typically 0.02 for small effects, 0.15 for medium effects, and 0.35 for large effects [22-25]. The f² effect values of the sample data in this study are shown in Table 4.7. As the final dependent variable of employee performance, the three independent variables have little influence on it, both at a small effect level, and have not reached the medium effect of 0.15. Among them, the transformational leadership style is relatively high, but it is only close to the average level.

Table 4.7: Assessment on the Effect size (f²)

	Employee Performance	Effect size
Organizational innovation climate	0.043	Small
Transactional leadership style	0.009	Small
Transformational leadership style	0.151	Medium

Note: f² score interpretation (0.35 – Strong effect size, 0.15 – Medium effect size, 0.02 – Small effect size, < 0.02 – Trivial effect size) (Cohen, 1988)

h) Assess the predictive relevance Q²

When evaluating the predictive validity of the model, not only R² value should be looked at, but also the Q² value of prediction validity. The Q² value is one of the predictive

relevance of the model. The value of Q² greater than 0 indicates that the path model has a predictive correlation with the predicted dimension. As can be seen from Table 4.8, the Q² value of all dimensions is greater than 0, indicating that the path model has a predictive correlation with the predicted facet.

Table 4.8: Assess the Predictive Relevance Q²

Construct	Q ²
Employee Performance	0.237
Organizational innovation climate	0.278

Note: Q² score interpretation > 0

i) Assessment of Mediation Effect

By using PLS-SEM bootstrapping procedure with 5,000 resamples at 5% significance level, as shown in Table 4.9, it was found that organizational innovation climate mediated the relationship between leadership style and employee performance. Among them, the mediate result of organizational innovation climate in transformational leadership style and employee performance is t-value = 2.240, p-value = 0.013, and the mediate result of organizational innovation climate in transactional leadership style and employee performance is t-value = 2.283, p-value = 0.011, so it can be judged that whether it is a transformational leadership style or a transactional leadership style, the mediating role of the organizational innovation climate is significant.

Table 4.9: Mediating Results

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	t-values	P-values	Results
Transactional leadership style -> Organizational innovation climate -> Employee Performance	0.069	0.069	0.031	2.240	0.013	S
Transformational leadership style -> Organizational innovation climate -> Employee Performance	0.082	0.083	0.036	2.283	0.011	S

Note: $t > 1.96$, $**p < 0.01$, $*p < 0.05$; S = Significant, NS = Not Significant (Joe F Hair et al., 2013)

j) Overall Hypothesis Results

Based on the bootstrapping assessments from the above section, the results from testing the structural model were summarized in Table 4.10. It was proved that Transformational leadership style has a positive effect on Employee Performance; Transactional leadership style not accept with the relationship with Employee Performance; Transformational leadership style has a positive effect on Organizational innovation climate; Transactional leadership

style has a positive effect on Organizational innovation climate; Organizational innovation climate has a positive effect on Employee Performance.

Table 4.10: Summary of Hypothesis Testing

Hypothesis	Descriptions	Results
H1	Transformational leadership style has a positive effect on Employee Performance	Supported
H2	Transactional leadership style has a positive effect on Employee Performance	Unsupported
H3	Transformational leadership style has a positive effect on Organizational innovation climate	Supported
H4	Transactional leadership style has a positive effect on Organizational innovation climate	Supported
H5	Organizational innovation climate has a positive effect on Employee Performance	Supported
H6	Organizational innovation climate mediates leadership style and employee performance	Supported
H6a	Organizational innovation climate mediates the transformational leadership style and innovation performance	Supported
H6b	Organizational innovation climate mediates between transactional leadership style and employee performance.	Supported

V. CONCLUSION AND FUTURE DIRECTIONS

The main content of this study is to explore the influence of leadership style on employee performance. This study selects two typical leadership styles, transformational leadership, and transactional leadership, and explores the impact of two leadership styles on employee performance through the mediator organizational innovation climate. The study presented a total of eight hypotheses, seven of which were fully supported and one was rejected. Leadership style, organizational innovation climate, employee performance has many aspects of the internal composition dimension when the study found that there is a correlation between the two study variables, then we think that the relationship between the two variables is fully supported, this study assumes that hypothesis 1,3,4,5,6,6a,6b empirical research is completely consistent with the hypothesis, Hypothesis 2 is that transactional leadership style has a positive impact on employee performance, because the sample data shows that the correlation between the two is weak and even irrelevant, so it is inconsistent with the hypothesis. The reason for the inconsistency is because the two dimensions of the transactional leadership style are different, contingency rewards and exception management. The contingency reward is that only when the employee completes the task, the leader gives corresponding rewards. If it is not completed, the leader gives corresponding punishment, so it has a great impact on the enthusiasm of the employees, resulting in little impact on the performance improvement of the employees. Most of the hypotheses in this study are

supported by the empirical data of the sample and these hypotheses are discussed and analyzed respectively.

In future research, the first step is to increase the scope of sample collection, collect random samples in different regions, and cover enterprises with different properties and industries. Secondly, due to the different innovation climate in different regions, the discussion can be conducted in different regions and comparative analysis can be conducted in another or more regions. Thirdly, this study only aims at the IT industry as a controlling factor. Some scholars have shown that different industries have different characteristics and leaders should adopt different management methods. This variable can be valued in future studies. Fourth, you can also to different levels of leadership behavior influence mechanism analysis, such as from an individual, group and organizational levels leadership behavior influence mechanism, further research to explore the mechanism of leadership behavior influence more different variables and regulation, to fully grasp the relationship between them to provide strong theoretical support, better reveal and examine leadership behavior influence mechanism.

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