

The Roles of Job Satisfaction as a Mediator in the Relationship between Organizational Citizenship Behavior and Innovation Performance

Li Zhao^{a,b}, Khai Wah Khaw^{*a}, Xinying Chew^{*c}

^aSchool of Management, Universiti Sains Malaysia, Penang, MALAYSIA, ^bHao Jing College of Shaan Xi University of Science&Technology, Xi'an, Shaan Xi, CHINA, ^cSchool of Computer Sciences, Universiti Sains Malaysia, Penang, MALAYSIA

Corresponding Author Email: khaiwah@usm.my

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Abstract

Innovation is increasingly becoming a common practice within Small and Medium-sized Enterprises (SMEs) to improve performance. In China, small and medium-sized enterprises (SMEs) are essential drivers of economic growth, job creation, and innovation. Representing over 99% of all businesses, they contribute significantly to China's GDP, employment, and technological advancement. SMEs account for about 60% of the country's GDP and 80% of urban employment. This study explores the mediating role of Job Satisfaction in the relationship between Organizational Citizenship Behavior (OCB) and innovation performance within SMEs. The study employs a quantitative research design, utilizing survey data collected from 200 SMEs across various industries. Partial Least Squares Structural Equation Modeling (PLS-SEM) was applied to test the proposed relationships among OCB, job satisfaction, and innovation performance. These results underline the critical role of job satisfaction as a psychological state that bridges OCB and innovation performance.

Keywords: Small and Medium-sized Enterprises, Organizational Citizenship Behavior, Job Satisfaction

Introduction

In today's global economy, small and medium-sized enterprises (SMEs) play a vital role in driving economic growth, job creation, and technological progress. SMEs represent the overwhelming majority of businesses worldwide and are key drivers of employment and innovation, fostering competitiveness across various industries (Ayyagari, Demirgüç-Kunt, & Maksimovic, 2011). In China, SMEs make up over 99% of all registered companies, contributing around 60% to the nation's GDP and 80% to urban employment. This underscores the significant economic impact of SMEs, highlighting their importance in

maintaining economic stability and supporting social development (Storey, 1994). Despite their critical contributions, SMEs often face considerable challenges in remaining competitive, particularly in dynamic markets that demand high levels of adaptability and innovation. Innovation is essential for the survival and growth of SMEs, especially in the context of an increasingly competitive and rapidly evolving business landscape. Among the various factors that influence innovation, the creative behavior of employees has emerged as a key determinant. Creative behavior encompasses the generation, promotion, and implementation of novel ideas aimed at improving products, processes, or services (Anderson et al., 2014).

Background

SMEs rely on their workforce to identify unique solutions to complex challenges, adapt to customer needs, and explore opportunities for differentiation. Unlike large corporations with extensive research and development departments, SMEs often depend on the ingenuity and proactive engagement of their employees to drive innovation. Studies have shown that fostering an environment that encourages creativity among employees can significantly enhance an organization's innovation performance (Shin et al., 2020). For example, when employees are empowered to share ideas and collaborate, they contribute to the development of innovative products and services that help SMEs gain a competitive edge. The enterprise innovation performance of existing research results shows that the human resource factor has a significant influence on innovation performance, innovation performance stems from employees' creative behavior, So, graduate employees are the main drivers for SMEs innovation. Based on reviewing relevant literature, these innovation performances are mainly focused on large enterprises and less research on the innovation performance of small and medium-sized enterprises. This study seeks to contribute to this understanding by exploring the relationships between Organizational Citizenship Behavior, job satisfaction, and innovation performance within SMEs.

Motivation for the Study

In China, SMEs are mainly concentrated in the Yangtze River Delta, Zhejiang province. Zhejiang Province is one of China's most economically dynamic regions, known for its robust small and medium-sized enterprises (SMEs). According to the latest data on China's undergraduate education in 2024, There are as many as 11.58 million graduates, and 90% of these graduates are working in small and medium-sized enterprises. Small and Medium-sized Enterprises (SMEs) are recognized as crucial contributors to economic growth, job creation, and technological advancement. Representing the vast majority of businesses worldwide, SMEs account for a substantial share of employment and innovation, driving competitiveness across diverse sectors. Innovation is increasingly viewed as a core driver of success and sustainability for SMEs. China's rapid economic ascent over the past few decades has been underpinned by the proliferation and growth of Small and Medium-sized Enterprises (SMEs). These enterprises, characterized by their agility, adaptability, and innovative spirit, have become the cornerstone of China's economic fabric. Within this dynamic landscape, understanding the nuances of employee behavior, their satisfaction levels, and their contribution to innovation becomes paramount. By focusing on SMEs in China, this study addresses an important gap in the literature, as much of the existing research has centered on large corporations or Western contexts. Understanding how job satisfaction mediates the

relationship between OCB and innovation performance can provide valuable insights for SME managers and policymakers to foster an innovative and productive workforce.

Objective and Scope of the Study

This study focuses on SMEs in the Yangtze River Delta region of China. It is one of China's most economically dynamic regions, known for its robust small and medium-sized enterprises (SMEs). SMEs play a crucial role in driving economic growth and technological innovation in this region. The government has implemented a range of policies to support SME innovation, including financial subsidies, tax incentives, and financing support. These policies provide strong backing for SMEs' innovative activities (Wang, 2019). In order to prove that the innovation atmosphere of Small and Medium-sized Enterprises in the Yangtze River Delta region of China is leading. The innovative development of Small and medium-sized enterprises plays an important role in economic development. Thus, in this study, the purpose is to examine the mediating role of job satisfaction, as well as the relationship between OCB and SMEs' innovation performance.

Literature Review

This section will summarize the related concepts and the relationships between them, and propose a research framework based on existing studies.

Conceptualizing Organizational Citizenship Behaviour (OCB)

The conceptualization of OCB has evolved over multiple iterations over the past years, in 1938, Barnard first proposed the concept of "cooperative intention," emphasizing that cooperation and mutual assistance among team members are an essential part of an organization and vital to its sustainable development. This is the earliest source of organizational citizenship behavior. Based on the theory, different scholars put forward different views. Organizational Citizenship Behaviour (OCB) was originally Organ (1988), in an analysis of organizational citizenship, he thinks that there is no perfect organization system, in the role of the individual employee within depends only on the organization's work behavior, there is no guarantee that a certain organization established goals can be accomplished, finish the task, it is necessary to use role outside the behavior to make up for the defects. This kind of behavior is not restricted by the system of organization, is spontaneous, active employee behavior, and outraged behavior is defined as Organizational Citizenship Behavior. There have been a large number of studies on OCB, but researchers have six views on the dimensional division of OCB, according to the literature, it includes the two dimensions, three dimensions, four dimensions, five dimensions, seven dimensions and ten dimensions. In this study adopts China's local organizational citizenship behavior measurement dimensions and studies. Because Liu et al. (2017) believed that the questionnaire of Farh et al. (1997) may cause the respondents to feel disgusted, and unwilling to answer or answer truthfully, they modified the scale developed by Farh et al. (1997) in the context of Chinese culture. In numerous studies, although different scholars have different definitions of OCB and different dimensions, there is one thing in common: they all believe that OCB plays a significant role in promoting organizational performance.

The Relationship between Organizational Citizenship Behavior (OCB) and Innovation Performance.

Improving an organization's performance is a way to sustain competitive advantage as the overall performance of an organization is highly dependent on the employee performance

level This was verified by Ritchie (2000) that the capacity of an organization to earn more profits and maintain competitive advantage depends on the joint participation and efforts of employees due to the common goal of all organizations is operate for profit. Therefore, a successful organization entails employees who perform more routine duties than expected (Sackmanns & Bertelsmann, 2006). Organizational Citizenship Behavior (OCB) and innovative behavior are two notions that are increasingly being addressed when evaluating employee performance. Employees can come up with new ideas and solutions, as well as imagination, integration, and innovation, to boost job performance significantly. Organizational Citizenship Behavior (OCB) is also one of the significant predictors that influence the achievement of organizational goals through enhancing employee performance (Podsakoff,2000). By putting forward improvement suggestions, employees exceed the minimum requirements described by employees to affect performance and results and improve the efficiency of the working performance. For example, being responsible and helping others will reduce conflicts between teams and enable managers to focus on more urgent things. Organizational Citizenship Behavior helps organizations improve long-term performance it encourages the employee to use their maximum knowledge, skills, and abilities in the workplace.

The above literature primarily focuses on research conducted on large enterprises and state-owned enterprises, without addressing small and medium-sized enterprises (SMEs) in China. Therefore, a hypothesis 1 has been proposed:

H1: OCB has a positive relationship with Innovation performance in China.

Conceptualizing Job Satisfaction(JS)

Hoppock (1935) put forward the concept of job satisfaction and elaborated it in his book Job Satisfaction. Smith, Kendall & Hulin (1969) pointed out from the perspective of expected remuneration that job satisfaction is essentially an emotion, which reflects the difference between employees' work effort and work return. Locke (1976) pointed out that job satisfaction is a kind of job evaluation of employees, which can lead to positive emotions. Chen and Shi (2021) believe that job satisfaction is an emotion and attitude of employees to find out whether they are satisfied with various factors of work by comparing their achievements and expectations. Based on the evaluation of job characteristics. Wang (2013) believes that job satisfaction is an employee's attitude towards work, which may be positive or negative. Yang (2016) pointed out that job satisfaction is a comprehensive concept and a comprehensive reflection of employees' overall work rather than a specific aspect. According to the above complaint, it is not difficult to find different scholars. Emphasize different emphases due to their different research objectives and focus points.

The Relationship Between Job Satisfaction (JS) and Innovation Performance

Understanding job satisfaction has garnered significant attention, as it is a critical element of work quality and is often viewed as essential for an organization's success (Brown & Lam, 2008). Research has consistently demonstrated that job satisfaction is a key factor in improving efficiency. Additionally, numerous studies have explored its relationships with various factors, such as innovation, commitment, productivity, organizational behavior, work performance, customer satisfaction, and empowerment. These relationships are further influenced by environmental factors like leadership, corporate culture, communication, career development, employee roles, recognition, teamwork, working conditions, supervision, training, compensation, and benefits. These aspects are particularly relevant to service

organizations and their workforce (Hoffman & Ingram, 1992; Dienhart & Gregoire, 1993; Bernhardt et al., 2000; Spinelli & Canavos, 2000; Kim et al., 2009; Masouras, 2015; Jain, 2016; Atteia, 2016; Park et al., 2016; Masadeh et al., 2019).

Ali et al. (2020) highlighted that job satisfaction significantly enhances employees' commitment and performance, contributing to improved innovation outcomes. By fostering a positive psychological state, job satisfaction motivates employees to work more effectively toward achieving organizational goals, including fostering innovation. Most of the literature on the relationship between job satisfaction and job performance comes from the service industry and large enterprises. In China, there is relatively little research on employee satisfaction in SMEs. This study can fill the current gap in the literature. Therefore, the second hypothesis is proposed.

H2: Job Satisfaction has a positive relationship with Innovation Performance in SMEs.

The Relationship Between Job Satisfaction (JS) and Innovation Performance

The relationship between job satisfaction and organizational citizenship behavior (OCB) has been extensively explored in organizational studies. Job satisfaction is a crucial factor that encourages employees to exceed their formal job requirements by engaging in OCB, such as helping colleagues, taking initiative, and maintaining a positive work environment (Organ, 1988). Satisfied employees are more likely to exhibit altruistic and cooperative behaviors, which strengthen teamwork and organizational efficiency (Podsakoff et al., 2000). Research by Bateman and Organ (1983) found that job satisfaction positively influences OCB by fostering a sense of belonging and motivation. Furthermore, employees with higher job satisfaction are more inclined to support organizational goals through voluntary contributions (Organ et al., 2006). Studies also show that satisfied employees demonstrate greater loyalty and are more likely to engage in behaviors that benefit their peers and the organization as a whole (Williams & Anderson, 1991). Therefore, job satisfaction is a critical predictor of OCB. Therefore, it is hypothesized:

H3: Job Satisfaction as a mediator in the relationship between Organizational Citizenship Behavior and Innovation Performance.

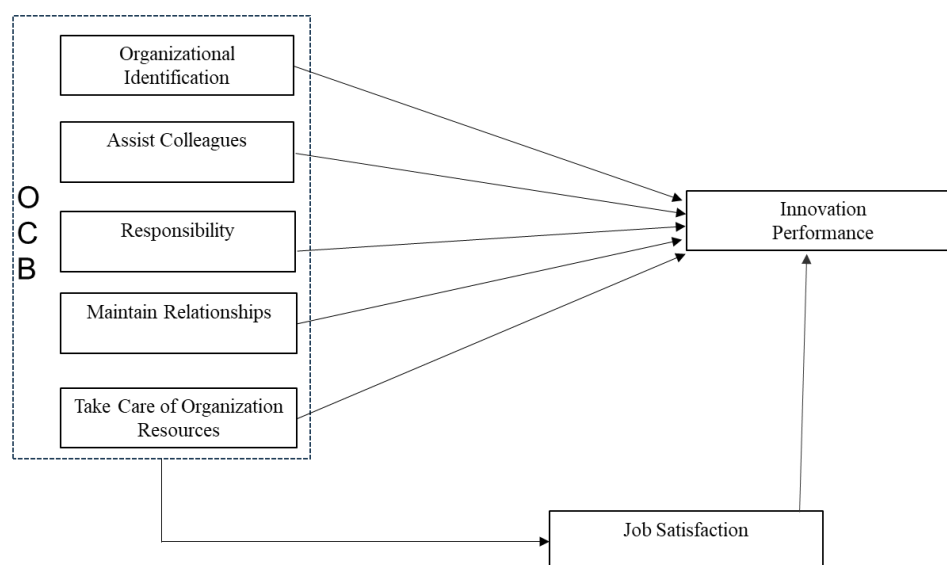


Figure 1: The Research Framework

Research Methods

This research is quantitative and focuses on relational explanatory design. In this context, this study uses a five-point Likert questionnaire to collect data. The scope of the survey is the employees of 200 small and medium-sized enterprises in the Yangtze River Delta region as the sample of the questionnaire survey.

Basic Characteristics of Samples

This study targeted employees of small and medium-sized enterprises (SMEs) as the subjects of a questionnaire survey. Invalid questionnaires were excluded based on the following criteria: (1) questionnaires with missing responses to key questions; (2) questionnaires with entire pages left blank; (3) questionnaires not completed as instructed, including cases of multiple answers or unanswered sections; and (4) questionnaires with obvious logical inconsistencies. Ultimately, 416 valid responses were collected.

The key demographic characteristics of the valid sample are shown in Table 1. The data indicates that, in terms of gender, male employees (50.2%) slightly outnumbered females (49.8%). Regarding age, most employees were between 41–50 years old (33.4%), followed by those aged 31–40 (34.3%), suggesting that the workforce predominantly consists of middle-aged individuals. In terms of education, the majority held a bachelor's degree (33.4%), followed by those with an associate degree (21.6%). For monthly income, the largest proportion of respondents earned between 4,500–5,000 RMB, accounting for 24% of the sample. Regarding years of work experience, the highest percentage (52.9%) had less than three years of tenure, followed by employees with 3–5 years (30.8%) and 6–10 years (14.4%). Concerning the companies' years in operation, the largest group (32.9%) were from companies established for 2–4 years, followed by those with 4–6 years of history (28.1%). Overall, the demographic data of the sample reflects general workforce trends, indicating a certain level of representativeness.

Table 1
Basic Characteristics of Samples

Variable		Frequency	Percent
gender	Male	209	50.2
	Female	207	49.8
education level	High school and below	53	12.7
	college	90	21.6
	Undergraduate course	139	33.4
	Postgraduate above	82	19.7
	above	52	12.5
age	Under the age of 30	53	12.7
	31-40 years old	90	21.6
	41-50 years old	139	33.4
	51-60years old	82	19.7
	Age 61 and older	52	12.5
monthly income	2500-3500	61	14.7
	3500-4500	89	21.4
	4500-5000	100	24
	5000-6000	86	20.7
	6000 and above	80	19.2
company	1-2 years	100	24
	2-4 years	137	32.9
	4-6 years	117	28.1
	6years and above	62	14.9

Descriptive Statistics of the Variables

To determine whether the questionnaire data holds value for in-depth analysis, a descriptive statistical analysis was first conducted. This analysis primarily focuses on the mean and standard deviation of the survey items. The mean reflects the central tendency of the items, with the criterion being that the mean for all items should be close to the midpoint; extreme means may lead to biased analysis results. The standard deviation is used to assess the degree of deviation and variability of the responses relative to the mean. For the questionnaire, a standard deviation of no less than 0.05 is expected. Smaller standard deviations indicate lower differentiation in responses, while larger values suggest greater variability and higher discriminatory power in the responses.

The table 2 below provides descriptive statistics for the surveyed employees' responses to items measuring organizational citizenship behavior, employee satisfaction, and innovation performance. The results show that the means for all items range between 3.6 and 3.9, and the standard deviations are all above 0.05. This indicates that the responses did not exhibit extreme means and showed substantial variability. As such, the data reflects a sufficient

degree of differentiation, allowing for the extraction of meaningful variation for further analysis.

Table 2

Basic Characteristics of Samples

	N	Mean	Std. Deviation
OI1	416	3.69	0.063
OI2	416	3.74	0.06
OI3	416	3.72	0.059
OI4	416	3.71	0.06
AC1	416	3.72	0.063
AC2	416	3.69	0.063
AC3	416	3.67	0.062
AC4	416	3.64	0.062
R1	416	3.71	0.061
R2	416	3.73	0.061
R3	416	3.67	0.058
R4	416	3.71	0.063
R5	416	3.63	0.064
MHR1	416	3.85	0.058
MHR2	416	3.83	0.06
MHR3	416	3.8	0.058
MHR4	416	3.82	0.058
TCOR1	416	3.53	0.064
TCOR2	416	3.56	0.061
TCOR3	416	3.53	0.063
Pay 1	416	3.78	0.058
Pay 2	416	3.81	0.061
Pay 3	416	3.72	0.063
Pay 4	416	3.71	0.061
Pro1	416	3.77	0.059
Pro2	416	3.72	0.06
Pro3	416	3.66	0.062
Pro4	416	3.74	0.06
B1	416	3.8	0.057
B2	416	3.87	0.057
B3	416	3.86	0.06
B4	416	3.87	0.057
R1	416	3.73	0.06
R2	416	3.87	0.058
R3	416	3.83	0.059
R4	416	3.73	0.059
WN1	416	3.64	0.063
WN2	416	3.61	0.064
WN3	416	3.6	0.064
WN4	416	3.6	0.064
S1	416	3.85	0.059
S2	416	3.85	0.058
S3	416	3.88	0.057
S3	416	3.87	0.055

S4	416	3.82	0.058
Cow1	416	3.71	0.061
Cow2	416	3.67	0.064
Cow3	416	3.63	0.065
Cow4	416	3.67	0.062
Com1	416	3.76	0.056
Com2	416	3.86	0.055
Com3	416	3.8	0.058
Com4	416	3.79	0.059
Con1	416	3.9	0.057
Con2	416	3.9	0.057
Con3	416	3.81	0.058
Con4	416	3.82	0.057
DJ1	416	3.69	0.061
DJ2	416	3.76	0.061
DJ3	416	3.63	0.061
DJ4	416	3.71	0.061
DJ5	416	3.65	0.061
PJ1	416	3.74	0.06
PJ2	416	3.74	0.06
PJ3	416	3.71	0.059
IJ1	416	3.77	0.058
IJ2	416	3.81	0.06
IJ3	416	3.81	0.058
IJ4	416	3.83	0.057
IJ5	416	3.79	0.06
IP1	416	3.8	0.06
IP2	416	3.8	0.062
IP3	416	3.73	0.061
IP4	416	3.8	0.059
IP5	416	3.78	0.06
IP6	416	3.76	0.059
IP7	416	3.77	0.058
IP8	416	3.84	0.059
IP9	416	3.77	0.06
IP10	416	3.74	0.06
IP11	416	3.85	0.06
IP12	416	3.73	0.059
IP13	416	3.76	0.059
IP14	416	3.81	0.059

Validity and Reliability Test

This study conducted a reliability test on the preliminary survey data for the independent variable, organizational citizenship behavior (OCB), which includes dimensions such as organizational identification, assisting colleagues, responsibility, maintaining harmonious relationships, and caring for organizational resources, in relation to innovation performance. The testing process and results are as follows:

A reliability analysis was performed on the preliminary survey data for the OCB and innovation performance scales, as shown in Table 3. The results indicate that Cronbach's values for the

preliminary data of organizational citizenship behavior, job satisfaction and innovation performance were above 0.8. Furthermore, the corrected item-total correlation (CITC) values for all items were above 0.5. Additionally, the Cronbach's α values after the deletion of any item were all lower than the Cronbach's α for each dimension. These findings demonstrate that the scales exhibit high overall reliability.

Table 3
Reliability Test

Study Variables	Cronbach's Alpha	No. of Item
OCB		
Organizational Identification	0.836	4
Assist Colleagues	0.854	4
Responsibility	0.872	5
Maintain harmony in your relationships	0.839	4
Take care of organizational resources	0.822	3
Job Satisfaction		
Pay	0.851	4
promotion	0.841	4
Benefit	0.829	4
Reward	0.841	4
Work Nature	0.859	4
Supervision	0.865	4
Coworkers	0.85	4
Communication	0.811	4
Conditions	0.827	4
Innovation Performance	0.95	14

Normality Tests

Although PLS-SEM does not require data to follow a normal distribution (Hair, Hult, Ringle, & Sarstedt, 2014), testing for normality was conducted to ensure data quality. This is because highly non-normal data can lead to inaccurate estimation of parameter significance (Hair et al., 2014). Normality is assessed using skewness and kurtosis, with values near zero indicating a distribution close to normality (Hair et al., 2014). Typically, values beyond the range of +1 to -1 are considered non-normal, and data is classified as extremely non-normal if skewness exceeds 2.828 or kurtosis exceeds 12 (Kock, 2014).

Table 4
Normality Test

Variables	Kolmogorov-Smirnov		Shapiro-Wilk	
	Statistic	Sig. (<)	Statistic	Sig. (<)
IP	0.232	0	0.862	0
AC	0.235	0	0.879	0
R	0.232	0	0.872	0
MHR	0.246	0	0.855	0
TCOR	0.218	0	0.894	0
Pay	0.217	0	0.877	0
Pro	0.229	0	0.875	0
B	0.25	0	0.852	0
Rq	0.229	0	0.873	0
WN	0.211	0	0.879	0
S	0.262	0	0.838	0
Cow	0.225	0	0.883	0
Com	0.223	0	0.883	0
Con	0.223	0	0.866	0

Table 5
Skewness and Kurtosis of Main Variables

Variables	N	Mean	Std. Deviation	Skewness	Kurtosis
IP	416	3.8065	1.08291	-0.997	0.008
AC	416	3.6803	1.14015	-0.77	-0.581
R	416	3.6671	1.14769	-0.875	-0.343
MHR	416	3.8377	1.05316	-1.092	0.318
TCOR	416	3.5276	1.17856	-0.628	-0.833
Pay	416	3.7452	1.06363	-0.94	-0.054
Pro	416	3.7548	1.08826	-0.924	-0.132
B	416	3.8341	1.02152	-1.167	0.608
Rq	416	3.732	1.07026	-0.954	-0.041
WN	416	3.619	1.17439	-0.751	-0.647
S	416	3.8353	1.05393	-1.205	0.612
Cow	416	3.6887	1.12093	-0.769	-0.557
Com	416	3.7776	1.01872	-0.946	0.073
Con	416	3.8594	1.0256	-1.108	0.545

PLS-SEM Structural Model Inspection

This study utilizes Partial Least Squares Structural Equation Modeling (PLS-SEM), a regression-based analytical technique for structural equation modeling. There are two primary reasons for choosing PLS-SEM: (1) it does not require the assumption of data normality and can effectively handle non-normally distributed data; and (2) as this study involves exploratory model analysis, PLS-SEM is well-suited for managing complex relationships among variables.

Model Fit

This study evaluates the model's goodness of fit and predictive power using three key indicators: GoF, R^2 , and Q^2 . GoF serves as the main metric for assessing the fit of PLS models

and is categorized into three levels: low (0.1), moderate (0.25), and high (0.36). The required GoF threshold depends on the model's complexity and sample size. For simpler models or smaller samples, GoF should exceed 0.1; for moderately complex models or medium-sized samples, it should surpass 0.25; and for complex models or large samples, it should be above 0.36. In this study, the GoF value is 0.602, indicating strong model fit.

The R^2 value reflects how well the exogenous latent variables explain the variance of the endogenous latent variables. In this model, the R^2 values range from 0.259 to 0.788, demonstrating sufficient explanatory power.

The Q^2 value assesses the model's predictive capability, representing how well the structural model predicts the endogenous latent variables. A Q^2 value greater than 0 indicates strong predictive ability. Using the blindfolding algorithm, the results confirm that all Q^2 values for the endogenous variables are above 0, indicating the model's predictive power is satisfactory.

Table 6

Model fit

Construct	R^2	Adj-R2	Q^2
OCB	0.259	0.255	0.167
IP	0.295	0.290	0.146
\JS	0.788	0.788	0.620

Hypothesis Tests

This study employed the Bootstrapping algorithm in SmartPLS 3.0 to analyze the model's path coefficients. A resampling procedure with a sample size of 5,000 was conducted using the original dataset. The results of the hypothesis testing are presented in the table below.

Table 7

Results of the direct effect hypotheses

Hypotheses	Path coefficient	Beta	hypothesis	std	T
H1a	0.164	0.179	support	0.047	3.628
H1b	0.064	0.094	support	0.048	1.86
H1c	0.119	0.079	no support	0.046	1.564
H1d	0.003	0.148	support	0.051	2.979
H1e	0.191	0.069	support	0.051	1.311

The results of the overall model test are shown in the table above. From the table, it can be observed that: The path coefficient of organizational identification (a dimension of organizational citizenship behavior) on innovation performance is 0.164 ($t = 3.628$, $P < 0.05$), indicating that organizational identification has a significant positive impact on innovation performance. The path coefficient of assisting colleagues (a dimension of organizational citizenship behavior) on innovation performance is 0.064 ($t = 1.86$, $P < 0.01$), suggesting that assisting colleagues also has a significant positive effect on innovation performance. The path coefficient of responsibility (a dimension of organizational citizenship behavior) on job satisfaction is 0.119 ($t = 1.564$, $P < 0.01$), showing that responsibility has a significant positive influence on job satisfaction. The path coefficient of harmonious relationships (a dimension

of organizational citizenship behavior) on job satisfaction is 0.003 ($t = 2.979, P < 0.01$), indicating that harmonious relationships significantly enhance job satisfaction.

The path coefficient of protecting organizational resources (a dimension of organizational citizenship behavior) on innovation performance is 0.191 ($t = 1.311, P < 0.01$), demonstrating that job satisfaction has a significant positive effect on innovation performance.

Mediation Effect Test

Table 8

Mediation effect test

Total Effect	se	t-statistics	P-level	LLCI	ULCI	c_cs
.274	.050	5.464	.000	.176	.373	.259
Direct Effect						
.199	.051	3.899	.000	.099	.299	.188
Indirect Effect	BootSE	BootLLCI	BootULCI			
JS	.076	.021	.038	.120		

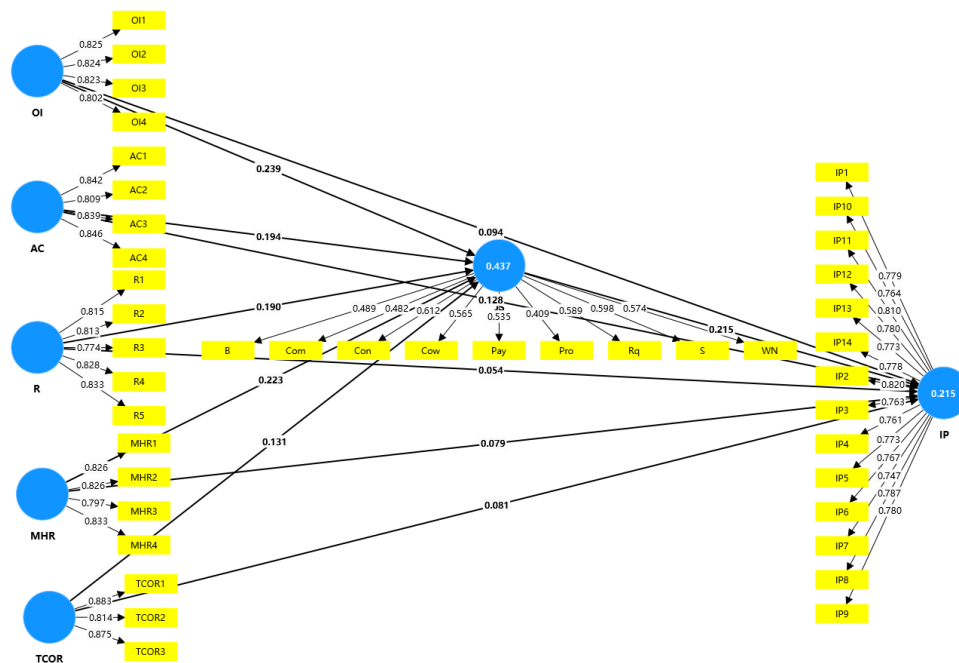


Figure 2: The Path Coefficient Diagram of This Research Model

Result and Discussion

Based on the empirical data analysis results of this study, it can be concluded that the various dimensions of organizational citizenship behavior have a significant positive direct impact on innovation performance, with path coefficients of 0.164, 0.064, 0.119, 0.003, and 0.191, respectively. Therefore, in the management of employees, organizational leaders should focus on enhancing employees' organizational citizenship behavior from the perspectives of organizational identification, helping colleagues, and fostering positive interpersonal relationships to improve employees' innovation performance.

Additionally, job satisfaction has a significant positive impact on employees' innovation performance, with a path coefficient of 0.277. This shows that the higher the job satisfaction of employees, the more it can boost their innovation performance, including promoting better innovation outcomes, innovative behavior, and an innovative atmosphere. These findings are consistent with existing research conclusions.

This study also investigates the mediation effect of job satisfaction between organizational citizenship behavior and innovation performance. Using the Bootstrap method, it was found that organizational citizenship behavior has a significant indirect effect on innovation performance through job satisfaction. This indicates that job satisfaction plays a significant mediating role between organizational citizenship behavior and innovation performance, and it acts as a partial mediator. That is, organizational citizenship behavior can directly affect innovation performance and influence innovation performance indirectly through job satisfaction.

Conclusion

In summary, we used PLS-SEM to further explore the relationships between organizational citizenship behavior, job satisfaction, and employee innovation performance. The analysis shows that organizational citizenship behavior has a significant positive impact on both job satisfaction and innovation performance, and job satisfaction plays a significant partial mediation role between organizational citizenship behavior and innovation performance. Therefore, in efforts to improve employee innovation performance, managers should pay close attention to factors that positively influence innovation performance, as well as the extent to which each factor impacts performance, in order to formulate reasonable management strategies that enhance employees' organizational citizenship behavior and job satisfaction.

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References

- Ali, M., Ali, I., Albort-Morant, G., & Leal-Rodríguez, A. L. (2020). The role of job satisfaction in enhancing employee commitment and performance. *Journal of Innovation&Knowledge*, 5(3), 123–134.
<https://doi.org/10.21776/ub.jam.2021.019.02.06>
- Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, 40(5), 1297–1333. <https://doi.org/10.1177/0149206314527137>
- Atteia, M. (2016). The relationship between job satisfaction and organizational commitment among academic staff members at Al-Azhar University in Gaza Governorates. *Journal of Al-Azhar University*, 18(2), 1–34.
- Ayyagari, M., Demirgüç-Kunt, A., & Maksimovic, V. (2011). Small vs. young firms across the world: Contribution to employment, job creation, and growth. World Bank Policy Research Working Paper, 5631. <https://doi.org/10.1596/1813-9450-5631>
- Barnard, C. I. (1938). *The functions of the executive*. Harvard University Press.
- Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee "citizenship." *Academy of Management Journal*, 26(4), 587–595. <https://doi.org/10.2307/255907>
- Bernhardt, K. L., Donthu, N., & Kennett, P. A. (2000). A longitudinal analysis of satisfaction and profitability. *Journal of Business Research*, 47(2), 161–171. [https://doi.org/10.1016/S0148-2963\(98\)00078-4](https://doi.org/10.1016/S0148-2963(98)00078-4)
- Brown, S. P., & Lam, S. K. (2008). A meta-analysis of relationships linking employee satisfaction to customer responses. *Journal of Retailing*, 84(3), 243–255. <https://doi.org/10.1016/j.jretai.2008.04.002>
- Chen, & Shi. (2021). Transformational leadership and employee job satisfaction: The mediating role of employee relations climate and the moderating role of subordinate gender. *International Journal of Environmental Research and Public Health*, 19(1), 233. <https://doi.org/10.3390/ijerph19010233>
- Dienhart, J. R., & Gregoire, M. B. (1993). Job satisfaction, job involvement, job security, and customer focus of quick-service restaurant employees. *Hospitality Research Journal*, 16(2), 29–44. <https://doi.org/10.1177/109634809301600203>
- Farh, J. L., Earley, P. C., & Lin, S. C. (1997). The impetus for action: A cultural analysis of justice and organizational citizenship behavior in Chinese society. *Administrative Science Quarterly*, 42(3), 421–444. <https://doi.org/10.2307/2393734>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*. SAGE Publications.
- Hoppock, R. (1935). *Job satisfaction*. Harper & Brothers.
- Hoffman, K. D., & Ingram, T. N. (1992). Service provider job satisfaction and customer-oriented performance. *Journal of Services Marketing*, 6(2), 68–78. <https://doi.org/10.1108/08876049210014959>
- Jain, R. (2016). Impact of job satisfaction on employees' performance. *International Journal of Management and Commerce Innovations*, 4(1), 123–128.
- Kim, W. G., Leong, J. K., & Lee, Y. K. (2005). Effect of service orientation on job satisfaction, organizational commitment, and intention of leaving in a casual dining chain restaurant. *International Journal of Hospitality Management*, 24(2), 171–193. <https://doi.org/10.1016/j.ijhm.2004.01.003>

- Kock, N. (2014). Advanced mediating effects tests, multi-group analyses, and measurement model assessments in PLS-based SEM. *International Journal of e-Collaboration*, 10(1), 1–13. <https://doi.org/10.4018/ijec.2014010101>
- Liu, J. G., Zhou, Y., & Shi, Q. W. (2017). Research on the negative effects of organizational citizenship behavior: An analysis integrating generalized exchange, impression management, and evolutionary psychology. *Management Review*, 29(4), 163–180. <https://doi.org/10.54254/2753-7048/17/20231212>
- Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297–1349). Rand McNally. <https://doi.org/10.4236/psych.2013.46074>
- Masouras, A. (2015). The impact of employee satisfaction on company's well-being and sustainability of the company in the long run. *Journal of Business and Economics*, 6(1), 123–135. DOI:10.13140/2.1.1703.9043
- Masadeh, R., Obeidat, B., & Tarhini, A. (2019). The associations among market orientation, technology orientation, entrepreneurial orientation, and organizational performance. *Benchmarking: An International Journal*, 26(3), 893–922. <https://doi.org/10.1108/BIJ-10-2017-0252>
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington Books.
- Organ, D. W., Podsakoff, P. M., & MacKenzie, S. B. (2006). *Organizational citizenship behavior: Its nature, antecedents, and consequences*. SAGE Publications. <https://doi.org/10.4135/9781452231082>
- Park, J., Kim, H. J., & Kang, S. W. (2016). The role of leadership behaviors for enhancing organizational effectiveness in the Korean social enterprise context. *International Journal of Sociology and Social Policy*, 36(7/8), 435–452. <https://doi.org/10.1108/IJSSP-04-2016-0066>
- Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, 26(3), 513–563. <https://doi.org/10.1177/014920630002600307>
- Ritchie, J. B., & Miles, R. E. (2000). An analysis of quantity and quality of participation as mediating variables in participative decision making. *California Management Review*, 42(1), 86–94. <https://doi.org/10.2307/41166018>
- Sackmanns & Bertelsmann. (2006). Examination of the relationship between organizational culture and performance. *International Review of Applied Sciences and Engineering*, 8(1), 99–105. <https://doi.org/10.1556/1848.2017.8.1.14>
- Podsakoff, P. M., Mackenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, 26(3), 513–563. <https://doi.org/10.1177/014920630002600307>
- Smith, P. C., Kendall, L. M., & Hulin, C. L. (1969). The measurement of satisfaction in work and retirement. Rand McNally. <https://doi.org/10.4236/psych.2013.46074>
- Storey, D. J. (1994). *Understanding the small business sector*. Routledge. <https://doi.org/10.4324/9781315544335>
- Shin, S. J., Yuan, F., & Zhou, J. (2020). When perceived innovation job requirement increases employee innovation: A social-cognitive perspective. *Journal of Organizational Behavior*, 41(1), 63–78. <https://doi.org/10.1002/job.2436>

- Spinelli, M. A., & Canavos, G. C. (2000). Investigating the relationship between employee satisfaction and guest satisfaction. *Cornell Hotel and Restaurant Administration Quarterly*, 41(6), 29–33. [https://doi.org/10.1016/S0010-8804\(00\)88927-9](https://doi.org/10.1016/S0010-8804(00)88927-9)
- Wang, C. Y., Zhu, L., & Chen, X. (2019). Research on the influence of mixed reform of state-owned enterprises on corporate innovation. *Economic Management*, 11(5), 72–91. <https://doi.org/10.1177/21582440221093358>
- Wang, Y. (2013). Work environment, character strengths, job satisfaction, and subjective well-being for primary and secondary teachers: A mediated moderation model. *Acta Psychologica Sinica*, 45(3), 345–358. <https://doi.org/10.3724/SP.J.1041.2013.00345>
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17(3), 601–617. <https://doi.org/10.1177/014920639101700307>
- Yang, L. (2016). Job insecurity, job instability, and job satisfaction in the context of economic crisis. *Journal of Competitiveness*, 8(2), 12–25. <https://doi.org/10.7441/joc.2016.02.01>