

Organizational Drivers of Turnover Intention in China's Manufacturing Industry: Evidence of the Mediating Role of Employee Motivation

Qi Sheng *, Datin Dr. Norhanim Binti Dewa

Graduate School of Business, SEGI University, Kota Damansara, Selangor, 47810, Malaysia

* Corresponding author: qisheng780@gmail.com

Abstract: This study investigates the influence of organizational factors—namely organizational commitment, organizational justice, and reward management—on employees' turnover intention in China's manufacturing industry, with employee motivation as a mediating variable. A quantitative approach was adopted using a structured survey distributed to 487 full-time employees in medium and large manufacturing firms across several industrial provinces in China. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to test the proposed direct and mediating relationships among the variables. The results reveal that all three organizational factors significantly reduce turnover intention both directly and indirectly through employee motivation. Organizational commitment, justice, and reward management positively influence employee motivation, which in turn negatively impacts turnover intention. Furthermore, employee motivation plays a partial mediating role in the relationship between organizational factors and turnover intention. These findings confirm the theoretical assumptions of Self-Determination Theory and Social Exchange Theory within the Chinese manufacturing context. The cross-sectional design limits causal interpretation, and the reliance on self-reported data may introduce common method bias. Future studies are encouraged to use longitudinal designs and multi-source data. The findings provide practical insights for HR managers in manufacturing firms to reduce employee turnover by fostering commitment, fairness, and equitable reward systems that enhance motivation and engagement. This study extends motivational and exchange-based theories by providing empirical evidence of the psychological mechanism through which organizational practices influence turnover intention in an emerging economy context.

Keywords: Organizational commitment; Organizational justice; Reward management; Employee motivation; Turnover intention.

1. Introduction

Employee turnover has emerged as a pressing challenge for organizations worldwide, particularly in the manufacturing sector where workforce stability is crucial for operational continuity, knowledge retention, and quality assurance. In China, the world's largest manufacturing hub, the rapid industrial transition driven by technological advancement and economic restructuring has intensified this issue (Liu et al., 2021). Manufacturing enterprises, especially those labor-intensive in nature, face high employee attrition rates, which lead to increased recruitment costs, decreased morale, and disruptions in productivity (Wang & Sun, 2022). Against this backdrop, it becomes imperative to investigate the organizational determinants that drive employees' turnover intention and explore the psychological mechanisms underlying this phenomenon.

Among the myriad organizational factors, three constructs—organizational commitment, organizational justice, and reward management—are frequently cited as significant predictors of employee behavior, particularly turnover intention. Organizational commitment, defined as the psychological attachment and loyalty employees feel toward their organization, is consistently negatively associated with turnover intention (Meyer et al., 2021). When employees strongly identify with their organization's goals and values, they are more likely to remain, even in the face of adversity or alternative job opportunities.

Organizational justice, which encapsulates employees'

perceptions of fairness in decision-making processes, resource allocation, and interpersonal treatment, also plays a vital role. A strong sense of justice within the workplace fosters trust, psychological safety, and positive work attitudes, thereby reducing the likelihood of voluntary turnover (Colquitt et al., 2023). In parallel, reward management—including fair compensation, benefits, recognition, and career advancement opportunities—directly influences job satisfaction and motivation, which are key antecedents of retention (Kim & Park, 2020; Jiang & Xiao, 2023).

While prior studies have established direct relationships between these organizational factors and turnover intention, the underlying psychological mechanism remains underexplored, particularly in the context of China's evolving manufacturing industry. One potential pathway lies in the role of employee motivation. Motivation is a multidimensional construct that reflects the internal drive, direction, and persistence of effort that employees exhibit in their work (Deci & Ryan, 2000). When organizational practices are aligned with employees' intrinsic and extrinsic motivational needs, individuals are more likely to be engaged, committed, and less inclined to leave (Su et al., 2021; Ghosh et al., 2022).

This study proposes a conceptual model to test the mediating role of employee motivation in the relationship between three key organizational factors—organizational commitment, organizational justice, and reward management—and employees' turnover intention. Drawing on Self-Determination Theory and empirical insights from organizational behavior literature, this study employs Partial

Least Squares Structural Equation Modeling (PLS-SEM) to analyze survey data from manufacturing firms in China. By illuminating the motivational mechanisms that link organizational factors to turnover intention, this research contributes both theoretically and practically to human resource management in emerging economies.

2. Literature Review

2.1. Theoretical Foundation

The present study is primarily anchored in Self-Determination Theory (SDT) (Deci & Ryan, 2000), which emphasizes the role of social and environmental factors in either facilitating or undermining individual motivation. According to SDT, motivation exists on a continuum ranging from amotivation to intrinsic motivation, with extrinsic motivation in between. Organizational practices that satisfy employees' needs for autonomy, competence, and relatedness can foster more self-determined forms of motivation, which in turn result in positive work outcomes such as job satisfaction, organizational citizenship behavior, and lower turnover intention (Van den Broeck et al., 2021).

In the manufacturing sector, where the work is often repetitive and physically demanding, motivation is particularly vulnerable to fluctuations caused by workplace conditions. In this context, supportive organizational factors such as organizational commitment, organizational justice, and reward management become crucial in sustaining employee motivation. When employees feel valued, treated fairly, and rewarded appropriately, their sense of purpose and engagement increases, reducing their propensity to consider leaving (Gagné et al., 2019; Su et al., 2021).

Complementing SDT, this study also draws upon Social Exchange Theory (SET) (Blau, 1964), which posits that employee attitudes and behaviors are shaped by perceived reciprocity in the employment relationship. When organizations invest in employees through fair policies, career development opportunities, and recognition, employees are likely to reciprocate with loyalty, commitment, and continued service (Cropanzano & Mitchell, 2005). Thus, the combination of SDT and SET provides a dual-theoretical lens through which the psychological mechanism (i.e., motivation) mediating the link between organizational factors and turnover intention can be better understood.

Furthermore, studies from the Chinese context indicate that traditional collectivist values, high power distance, and emphasis on harmony make factors such as perceived fairness, group belongingness, and stable compensation especially salient for Chinese manufacturing employees (Chen & Aryee, 2007; Liu et al., 2021). Thus, investigating the mediating effect of motivation in this specific cultural and industrial environment adds contextual richness and relevance to the theoretical model.

2.2. Hypotheses Development

Organizational commitment refers to the degree to which employees identify with and are involved in their organization (Meyer & Allen, 1997). In high-involvement work environments like manufacturing plants, organizational commitment is not only a reflection of emotional attachment but also a function of perceived mutual investment. When employees perceive that the organization values their contribution and is committed to their development, they are more likely to internalize organizational goals, leading to

enhanced intrinsic and extrinsic motivation (Jaiswal & Dhar, 2019). Empirical research has shown that committed employees report higher levels of work engagement and are more intrinsically motivated to contribute to organizational success (Meyer et al., 2021).

H1: Organizational commitment positively influences employee motivation.

Organizational justice encompasses distributive justice (fairness of outcomes), procedural justice (fairness of decision-making processes), and interactional justice (fairness in interpersonal treatment) (Colquitt et al., 2023). In Chinese manufacturing enterprises, perceived injustice—whether in performance evaluations, promotions, or task assignments—can rapidly erode trust and morale. Conversely, perceived fairness helps fulfill employees' need for autonomy and relatedness, increasing motivation to perform (Kim & Park, 2020). When justice is upheld, employees believe their contributions are respected and reciprocated, thus reinforcing their willingness to exert discretionary effort.

H2: Organizational justice positively influences employee motivation.

Reward management encompasses financial (e.g., salary, bonuses) and non-financial (e.g., recognition, promotion, flexible scheduling) incentives. According to SDT, rewards that are perceived as supportive rather than controlling enhance autonomous motivation by satisfying the need for competence and appreciation (Deci & Ryan, 2000). Especially in the manufacturing sector, where tasks may lack inherent interest, extrinsic rewards aligned with individual goals and performance can drive employee motivation (Ghosh et al., 2022). When employees feel fairly compensated and recognized for their contributions, they tend to remain engaged and loyal.

H3: Reward management positively influences employee motivation.

Turnover intention is a key attitudinal predictor of actual turnover behavior. Motivated employees are more psychologically invested in their work and organization, which reduces the cognitive evaluation of alternative job options (Su et al., 2021). In manufacturing settings, where motivation is directly linked to effort, commitment, and safety behavior, its absence can lead to burnout, disengagement, and resignation. Hence, higher levels of work motivation—especially when internally regulated—correspond with lower turnover intention (Liu et al., 2021).

H4: Employee motivation negatively influences employees' turnover intention.

While organizational commitment, justice, and reward management are well-established antecedents of employee turnover intention, the psychological mechanism by which these factors influence such behavioral outcomes warrants deeper examination. Employee motivation, in this context, is positioned as a critical mediator that links external organizational inputs to internal psychological states, ultimately shaping employees' intention to remain with or leave an organization.

Self-Determination Theory (SDT) emphasizes that the internalization of workplace experiences—such as being fairly treated, feeling respected, or receiving appropriate rewards—can enhance motivation by fulfilling the needs for autonomy, competence, and relatedness (Deci & Ryan, 2000). When employees perceive their organization as fair and supportive, they are more likely to experience higher levels of autonomous motivation, which is associated with greater

resilience, effort, and organizational attachment (Gagné et al., 2019; Van den Broeck et al., 2021).

In China’s manufacturing sector, which often operates under high pressure and repetitive labor conditions, the role of motivation is particularly salient. Research indicates that Chinese workers who feel intrinsically and extrinsically motivated are more likely to endure hardship, show higher engagement, and resist turnover temptations (Su et al., 2021). Conversely, a lack of motivation—despite seemingly favorable external conditions—can still result in elevated turnover intention due to psychological disengagement.

The mediating role of motivation is thus conceptualized as a psychological pathway that helps explain why and how organizational conditions influence turnover intention. For instance, an organization may offer competitive rewards, but if such rewards do not enhance employees’ feelings of competence or recognition, they may fail to reduce turnover intention. Similarly, organizational justice that does not translate into personal motivation may have limited influence on retention. Thus, employee motivation serves as a central conduit through which organizational factors exert their influence on turnover attitudes.

H5: Employee motivation mediates the relationship between organizational commitment and employees’ turnover intention.

H6: Employee motivation mediates the relationship between organizational justice and employees’ turnover intention.

H7: Employee motivation mediates the relationship between reward management and employees’ turnover intention.

Although employee motivation is proposed as a key mediator in this study, existing literature also supports the existence of direct relationships between organizational factors and turnover intention. These relationships are particularly relevant in contexts where organizational perceptions are strong enough to directly influence employee decision-making, independent of their motivational states.

Organizational commitment has long been negatively associated with turnover intention. Employees with strong affective commitment tend to feel emotionally bonded to their organization and internalize its goals, making them less likely to leave even in the presence of external job opportunities (Meyer et al., 2021). This is especially true in Chinese manufacturing firms, where employees may equate loyalty and long-term employment with stability and honor (Chen & Aryee, 2007).

Organizational justice, similarly, has been shown to exert a direct impact on turnover decisions. When employees perceive a lack of fairness in the distribution of rewards, promotion opportunities, or daily treatment, they are more likely to experience psychological contract violations, which can directly lead to turnover intention (Colquitt et al., 2023). This relationship is further intensified in the Chinese context, where social harmony and respect are deeply rooted cultural values.

Reward management, particularly in labor-intensive industries, directly influences retention by meeting basic economic and social needs. Fair and transparent reward systems not only satisfy the need for competence but also act as a signal of organizational recognition and care. Empirical evidence has shown that inadequate or poorly managed reward systems are one of the strongest predictors of employee attrition, particularly among skilled manufacturing workers (Jiang & Xiao, 2023).

Therefore, while employee motivation plays a significant mediating role, the direct influences of organizational commitment, organizational justice, and reward management on turnover intention must not be overlooked.

H8: Organizational commitment negatively influences employees’ turnover intention.

H9: Organizational justice negatively influences employees’ turnover intention.

H10: Reward management negatively influences employees’ turnover intention.

The research model of this paper is shown in Figure 1.

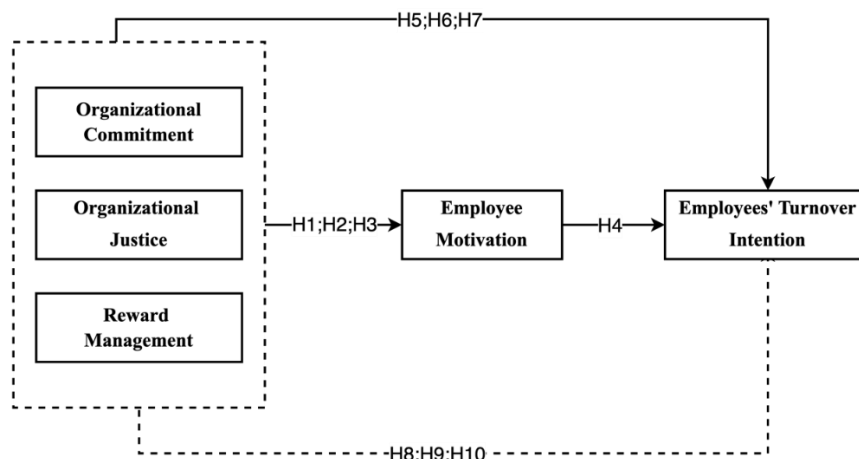


Figure 1. Research Model

3. Research Methodology

3.1. Research Design

This study employs a quantitative, explanatory research design, which is appropriate for testing theoretically grounded hypotheses and examining the causal relationships between latent variables. A cross-sectional survey method was chosen to collect standardized data from a large sample of

manufacturing employees in China. This approach is suitable for identifying patterns and testing structural relationships within a specific point in time.

To analyze the complex mediation effects and multiple interrelated constructs, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed. PLS-SEM is particularly suitable for this study due to its robustness in dealing with non-normal data, flexibility in model complexity, and predictive orientation (Hair et al., 2021). It also

accommodates models with formative and reflective constructs and is ideal for exploratory and theory-development research in organizational behavior.

3.2. Population and Sampling Technique

The target population for this study comprised full-time employees working in mid-sized and large manufacturing enterprises located in key industrial regions of China, including Guangdong, Jiangsu, Zhejiang, and Sichuan provinces. These regions were strategically selected due to their high concentration of labor-intensive manufacturing firms, rapid industrial transformation, and critical role in China's national economy.

Given the study's objective to assess the perceptions of organizational practices and their influence on employee motivation and turnover intention, a purposive sampling technique was employed. Purposive sampling, also known as judgmental sampling, is appropriate when researchers aim to collect data from individuals who possess specific knowledge or experience relevant to the research problem (Etikan et al., 2016). In this study, only employees who had worked for at least one year in their current organization were invited to participate. This inclusion criterion ensured that respondents had sufficient exposure to organizational practices and internal workplace dynamics such as commitment, justice, and reward systems, making their responses both credible and relevant.

The survey was distributed both online and in paper form, with support from HR departments in participating companies. A total of 487 valid responses were obtained. This sample size exceeds the minimum requirement for Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis. Following the “ten-times rule”—which recommends a minimum of ten times the largest number of structural paths pointing at a single construct—and results from G*Power 3.1 analysis (effect size $f^2 = 0.15$, $\alpha = 0.05$, power = 0.80), a minimum sample of 138 was required. The final sample of 487 provides strong statistical power and model stability.

The demographic profile of the respondents demonstrated a well-balanced composition. Among them, 52.6% were male and 47.4% female. The majority were aged between 26–35 years (43.7%), followed by 36–45 years (31.2%), with the remainder being either younger (18–25) or older (46 and above). In terms of educational background, 38.2% held a bachelor's degree, 26.7% held a vocational diploma, and 20.1% had completed high school, with a smaller percentage (8.3%) holding a master's degree or above. The sample also covered a variety of job functions including production (34.9%), quality control (16.0%), logistics and supply chain (13.4%), human resources (10.3%), and administration/finance (8.5%). This demographic diversity enhances the representativeness of the sample and supports the generalizability of the findings across different segments of China's manufacturing labor force.

3.3. Measurement and Instrumentation

All constructs in this study are modeled as reflective latent variables and measured using well-established instruments validated in prior research. The questionnaire was initially prepared in English, translated into Chinese using the back-translation method, and pilot-tested with 30 respondents to ensure contextual clarity and cultural appropriateness.

Organizational Commitment (OC) was measured using a 4 item scale adapted from Meyer and Allen's (1997) Affective

Commitment Scale. Example item: “I would be very happy to spend the rest of my career with this organization.”

Organizational Justice (OJ) was assessed using 5 items based on Colquitt's (2001) multidimensional justice scale, covering distributive, procedural, and interactional justice. Example item: “My organization's decisions are implemented consistently.”

Reward Management (RM) was captured using 4 items adapted from Kim and Park (2020) and Ghosh et al. (2022), covering perceptions of fairness, adequacy, and recognition. Example item: “My organization offers sufficient incentives to reward excellent performance.”

Employee Motivation (EM) was measured using 5 items from the Multidimensional Work Motivation Scale (MWMS) developed by Gagné et al. (2019), incorporating both intrinsic motivation and identified regulation. Example item: “I put effort into my work because I find it personally satisfying.”

Turnover Intention (TI) was measured with 5 items adapted from Mobley et al. (1978) and Su et al. (2021). Example item: “I often think about quitting my current job.”

All items used a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The use of validated scales enhances content validity, and adaptation to the Chinese context ensures relevance and clarity.

3.4. Reliability and Validity

To ensure the accuracy and rigor of the measurement model, both reliability and validity were evaluated:

Internal consistency reliability was assessed using Cronbach's alpha and Composite Reliability (CR). All values exceeded the threshold of 0.70, indicating satisfactory reliability.

Convergent validity was examined using Average Variance Extracted (AVE). All AVE values were above 0.50, confirming that each construct explains more than half of the variance of its indicators.

Discriminant validity was verified using two approaches:

The Fornell-Larcker criterion, where the square root of each construct's AVE exceeded its correlation with other constructs.

The HTMT (Heterotrait-Monotrait) ratio, where all values were below the conservative threshold of 0.85, indicating that constructs were empirically distinct.

These assessments collectively confirmed the robustness of the measurement model.

3.5. Data Collection Procedure

Data for this study were collected exclusively through face-to-face distribution of paper-based questionnaires. This approach was selected to ensure higher response quality and to facilitate clarification of any ambiguities during the survey process. The researchers collaborated with human resource departments in selected manufacturing enterprises to schedule on-site visits and administer the survey during designated times, such as team meetings or after-shift periods. The presence of research assistants during data collection allowed for real-time verification of completeness and adherence to instructions.

Prior to the main data collection, a pilot study involving 60 manufacturing employees from two factories in Guangdong Province was conducted to assess the clarity, cultural appropriateness, and internal consistency of the questionnaire. Feedback from the pilot participants was used to refine item wording, eliminate redundant or ambiguous expressions, and

ensure logical sequencing. The pilot data were also analyzed to verify preliminary reliability levels, with all constructs showing acceptable Cronbach's alpha values (> 0.70), thereby confirming the suitability of the instrument for full deployment.

During the main data collection phase, respondents were approached individually, informed of the study's academic purpose, and assured of anonymity and confidentiality. Participation was entirely voluntary, and written informed consent was obtained from all participants. Each completed questionnaire was screened on-site to ensure validity before inclusion in the final dataset.

A total of 487 valid responses were obtained from employees across multiple manufacturing firms. This rigorous, in-person approach resulted in a high completion rate and reduced the likelihood of missing data or response bias commonly associated with online surveys.

3.6. Data Analysis Strategy

The data analysis in this study was conducted using a two-step approach consistent with the recommended procedures for Partial Least Squares Structural Equation Modeling (PLS-SEM). All analyses were performed using SmartPLS 4.0 for structural modeling and SPSS 26.0 for preliminary statistical analysis, including descriptive statistics, normality testing, and outlier detection.

In the first stage, the measurement model was evaluated to assess the reliability and validity of the constructs. Indicator reliability was examined through outer loadings, with a threshold of 0.70 as the minimum acceptable value. Internal consistency reliability was assessed using Cronbach's alpha and Composite Reliability (CR), both of which were expected to exceed 0.70. Convergent validity was examined through the Average Variance Extracted (AVE), with a minimum threshold of 0.50, indicating that each construct explained more than half of the variance of its indicators. To assess discriminant validity, both the Fornell-Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT) were used. The square root of the AVE for each construct was required to be greater than its correlations with other constructs, and HTMT values below 0.85 indicated adequate discriminant validity.

In the second stage, the structural model was analyzed to test the hypothesized relationships between variables. Bootstrapping with 5,000 resamples was employed to calculate path coefficients, t-statistics, and p-values, which were used to determine the statistical significance of direct and indirect effects. The coefficient of determination (R^2) was

used to assess the explanatory power of the endogenous constructs, while predictive relevance (Q^2) values obtained via blindfolding procedures were used to evaluate the model's predictive capability. Additionally, effect sizes (f^2) were computed to understand the relative contribution of each exogenous variable to the endogenous constructs, with values of 0.02, 0.15, and 0.35 indicating small, medium, and large effects respectively.

To test the mediating role of employee motivation, the study followed the guidelines of Preacher and Hayes (2008) by analyzing both direct and indirect effects and computing the Variance Accounted For (VAF) to determine the strength of mediation. A VAF value between 20% and 80% indicates partial mediation, while a value above 80% suggests full mediation.

This rigorous analytical strategy ensures the robustness and credibility of the results, allowing for both the assessment of measurement quality and the examination of theoretical relationships between constructs within the proposed conceptual model.

3.7. Ethical Considerations

Ethical compliance was strictly observed throughout the research process. The study protocol was reviewed and approved by the Institutional Research Ethics Committee of the affiliated university. Participants were fully informed about the purpose, procedures, voluntary nature, and confidentiality of the study.

All data were stored securely and used solely for academic purposes. Personally identifiable information was not collected, and responses were anonymized. Respondents had the option to withdraw at any time without penalty.

4. Results

4.1. Descriptive Analysis Results

Table 1 shows the results of our descriptive and correlation analyses. The descriptive statistics indicated above-average mean scores for OC, OJ, RM, EM, and ETI, which were 4.271, 4.527, 4.437, 4.822, and 4.192, respectively. Consistent with prior studies, the skewness and kurtosis parameters were below 3.0 and 10.0, respectively (Kline, 2011). Additionally, the highest correlation among the underlying factors was 0.781, confirming the absence of high correlation and supporting the suitability of the model for subsequent statistical exploration.

Table 1. Descriptive statistics and correlation analysis

	Mean	SD	Skewness	Kurtosis	1	2	3	4	5	6
1. OC	4.271	0.693	0.714	-0.598	1					
2. OJ	4.527	0.714	0.529	-0.443	0.651	1				
3. RM	4.437	0.762	0.972	-1.124	0.693	0.581	1			
4. EM	4.822	0.810	0.764	-1.279	0.652	0.732	0.629	1		
5. ETI	4.192	0.873	-0.131	-1.593	0.583	0.653	0.632	0.651	1	

¹ Source: Authors' calculation.

4.2. Common Method Bias

To mitigate potential common method bias (CMB) during the data collection process, we implemented procedural adjustments following the recommendations of Podsakoff et al. (2003). First, the survey provided clear instructions on how

to answer the questions and urged respondents to provide their most accurate responses while ensuring confidentiality, anonymity, and voluntary participation. We also emphasized that there were no right or wrong answers. Additionally, we carefully reviewed each item to ensure clarity and conciseness, avoiding any unusual or ambiguous language. We also altered the sequence of statements to minimize the likelihood of

respondents making educated guesses (Malhotra et al., 2006). In this manner, we ensured that our measurement items were clear and comprehensible. In terms of statistical remedies for CMB, we conducted a post-hoc assessment using Harman's (1976) single-factor test. The analysis indicated that the highest variance explained by a component was only 36.71%, which is less than 50%. This finding confirms the absence of CMB in our data.

4.3. Measurement Model Results

The first stage in PLS-SEM is the assessment of the measurement model, wherein four tests are designed to verify item-level reliability, internal consistency reliability, convergent validity, and discriminant validity. First, the minimum and maximum factor loadings demonstrated in Table 2 and Figure 2 are 0.748 and 0.866, respectively, surpassing the threshold of 0.50 recommended by Hair et al. (2016) and Hair Jr et al. (2021). This result indicates that this research had adequate item-level reliability. Next, according to Rahman et al. (2020), the internal consistency reliability of each variable should be ascertained using Cronbach's alpha and composite reliability (CR), both of which should exceed the minimum threshold of 0.70 (Nunnally & Bernstein, 1994). The Cronbach's alpha and CR values shown in Table 2, Figure 2, and Figure 3 surpass this criterion, signifying that all the constructs were consistent, internally cohesive, and reliable.

Table 2. Construct validity and reliability

Items	Factor Loadings	Alpha	CR rho-c	AVE
OC1	0.777	0.786	0.861	0.609
OC2	0.793			
OC3	0.771			
OC4	0.780			
OJ1	0.748	0.840	0.887	0.610
OJ2	0.797			
OJ3	0.805			
OJ4	0.824			
OJ5	0.729			
RM1	0.751	0.785	0.861	0.608
RM2	0.803			
RM3	0.788			
RM4	0.776			
EM1	0.783	0.843	0.888	0.614
EM2	0.814			
EM3	0.781			
EM4	0.783			
EM5	0.755			
ETI1	0.780	0.882	0.914	0.679
ETI2	0.826			
ETI3	0.819			
ETI4	0.866			
ETI5	0.827			

¹ Note (s): Alpha = Cronbach's Alpha, CR = Composite reliability, AVE = Average variance extracted. ² Source: Authors' calculation.

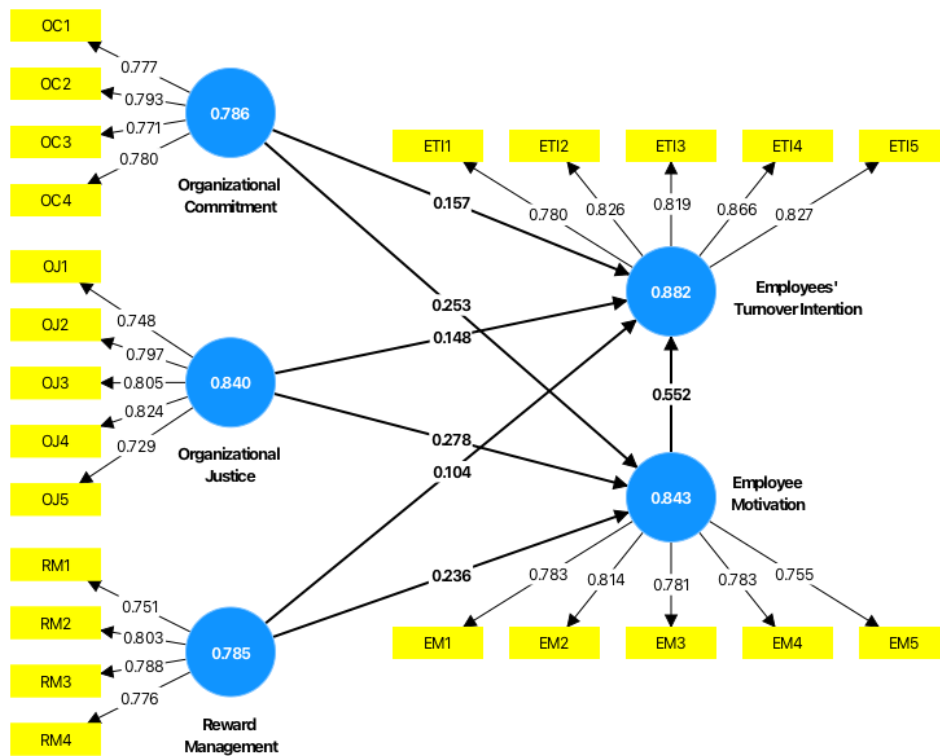


Figure 2. Factor Loadings and Cronbach's alpha

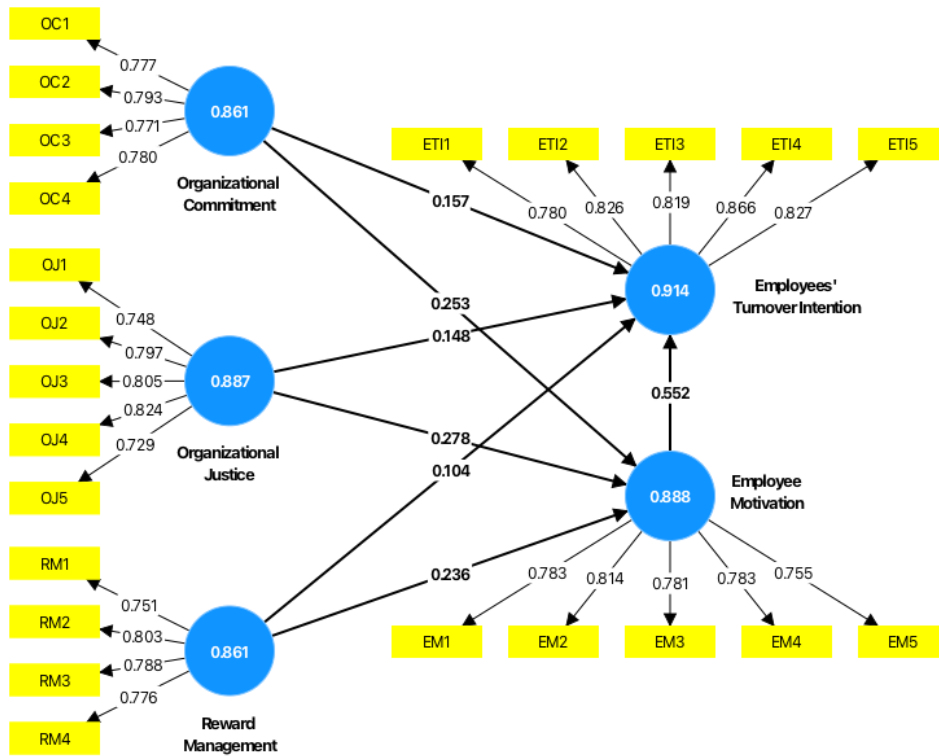


Figure 3. Factor Loadings and Composite Reliability

Third, convergent validity assesses the extent to which different items are expected to be associated with an identical construct. Table 2 and Figure 4 shows that the average variance extracted (AVE) values ranged from 0.608 to 0.679, meeting the minimum criterion of 0.50 set by Hair et al. (2021). Therefore, convergent validity was established in this study. Lastly, discriminant validity ensures that two indicators do not share a statistical identity (Hair et al., 2021). Henseler et al. (2016) recommended the heterotrait-monotrait ratio (HTMT) of correlations as an innovative method to assess discriminant validity, asserting that the traditional metric is

not suitable. They recommended setting the HTMT critical point to 0.90 for the same concepts in the theory and 0.85 for conceptually different variables. In this paper, both the HTMT criterion. Table 3 indicates that the HTMT values for all constructs were below 0.85. Both these results confirm the establishment of discriminant validity as per their respective criterion. In addition, Hair et al. (2021) suggested that the value of the Variance Inflation Factor (VIF) to evaluate multicollinearity should not exceed 5.0. The test results indicated that the VIF values were all below 5, meeting the requirement for discriminant validity (see Table 4).

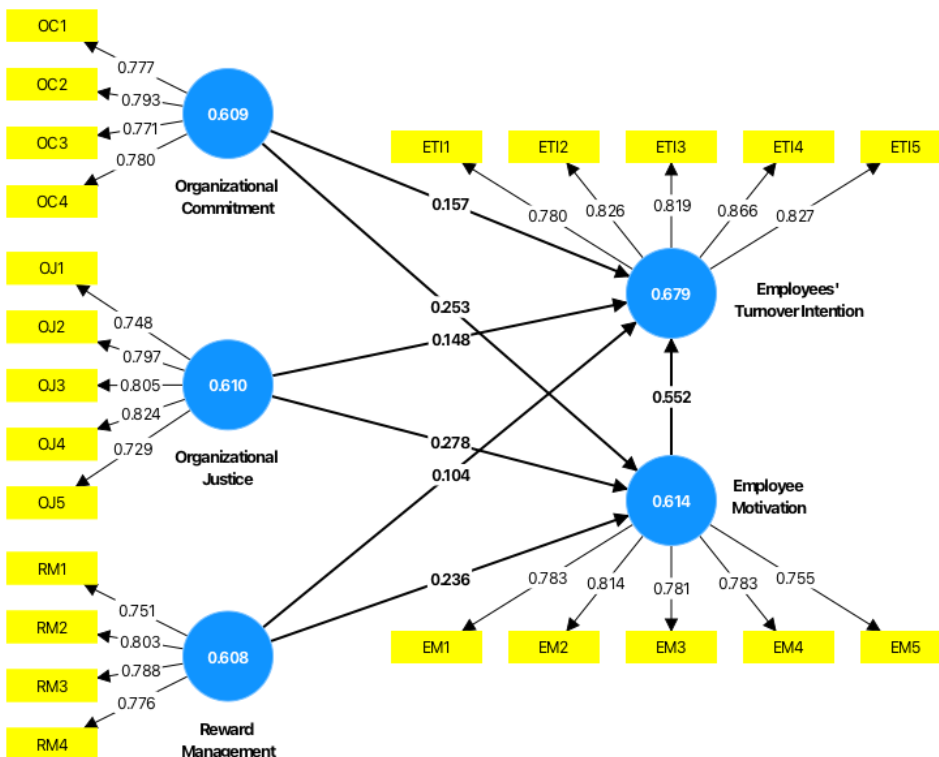


Figure 4. Factor Loadings and AVE

Table 3. HTMT criterion and VIF

	OC	OJ	RM	EM	ETI	VIF
OC						1.548
OJ	0.559					1.474
RM	0.383	0.379				1.609
EM	0.514	0.560	0.444			1.416
ETI	0.609	0.532	0.465	0.596		1.409

Table 4. Direct and indirect hypotheses testing results

NO.	Structural Path	Coefficient	T-statistics	Test result
H1	OC → EM	0.253***	4.919	Supported
H2	OJ → EM	0.278***	4.628	Supported
H3	RM → EM	0.236***	3.865	supported
H4	EM → ETI	0.552***	13.463	supported
H5	OC → ETI	0.157***	4.027	Supported
H6	OJ → ETI	0.148***	3.147	Supported
H7	RM → ETI	0.104***	2.125	supported
H8	OC → EM → ETI	0.140***	4.539	Supported
H9	OJ → EM → ETI	0.154***	4.342	Supported
H10	RM → EM → ETI	0.130***	3.821	Supported

4.4. Structural Model Results

After establishing the measurement model, we proceeded to analyze the structural model using the bootstrapping technique in Smart PLS 4.0 with 10,000 subsamples. The inner model, used to assess the proposed hypotheses, calculates both the p-value and t-value. A hypothesis is considered supported if the p-value is below 0.05 or the t-value exceeds 1.96. The results of the analysis and corresponding hypotheses are presented in Table 5 and Figure 5.

¹ Notes: ns =not significant. *p <0.05, **p <0.01, ***p <0.001 (two-tailed test). ² Source: Authors' calculation

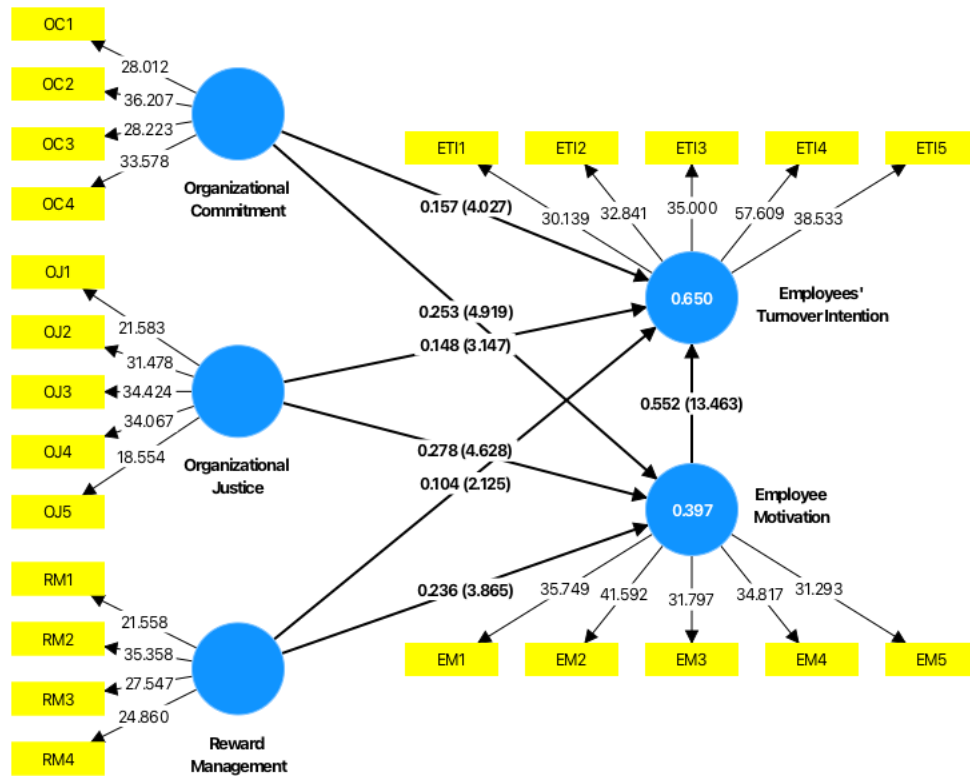


Figure 5. Structural model (Path coefficients & T values & R²)

The predictive validity of the constructs is presented in Table 5, demonstrating the ability of the independent constructs in our model to make predictions of the dependent ones. Two metrics, R² and Q², were employed to assess predictive accuracy. According to Cohen (1992), a substantial R² should exceed 0.26. The results confirmed the predictive relevance of the variables examined in this study, with all Q² exceeding zero (EM = 0.341, ETI = 0.512). The model fit was considered acceptable, with the PLS-SEM SRMR coefficient at 0.040, which is below the threshold of 0.10.

Table 5. Predictive relevance of the model

	R Square	Q ² (= 1-SSE/SSO)
EM	0.397	0.341
ETI	0.650	0.512

5. Discussion and Conclusion

5.1. Discussion of Findings

This study aimed to investigate the influence of organizational factors—namely organizational commitment, organizational justice, and reward management—on employees' turnover intention, with employee motivation acting as a mediating variable in the context of China's manufacturing industry. Using PLS-SEM analysis based on 487 valid responses, the results revealed that all ten hypotheses were supported, thereby providing comprehensive empirical evidence for the proposed research framework.

Firstly, the positive relationships between organizational commitment, justice, and reward management with employee motivation (H1–H3) confirm that employees' motivational

levels are shaped by how they perceive their organization's support, fairness, and recognition systems. This is consistent with Self-Determination Theory (Deci & Ryan, 2000), which emphasizes that work environments satisfying employees' needs for competence, autonomy, and relatedness enhance their intrinsic and identified motivation. The results echo findings from Gagné et al. (2019), who argued that organizational practices that promote value congruence and recognition improve motivational outcomes.

Secondly, employee motivation was found to have a significant negative impact on turnover intention (H4), suggesting that higher motivation translates into stronger organizational attachment and lower desire to leave. This finding aligns with Su et al. (2021), who documented that motivated employees exhibit greater persistence and loyalty, especially in demanding manufacturing settings.

Thirdly, the mediation effects of employee motivation (H5–H7) reinforce the idea that organizational factors influence turnover intention partly through motivational mechanisms. These results lend support to both Self-Determination Theory and Social Exchange Theory (Blau, 1964), highlighting that the perceived value of organizational support is internalized through motivation, which in turn determines behavioral intentions. Finally, the direct negative effects of the three organizational factors on turnover intention (H8–H10) indicate that supportive organizational environments can simultaneously impact retention both directly and indirectly through psychological mechanisms.

Collectively, these findings underscore the importance of creating motivating work environments through structural, procedural, and relational organizational investments, particularly in sectors like manufacturing where employee turnover remains a persistent challenge.

5.2. Theoretical Contributions

This study contributes to the existing literature in several important ways. First, it extends the application of Self-Determination Theory and Social Exchange Theory to the Chinese manufacturing context, providing a culturally grounded perspective on how organizational practices influence motivation and retention. While these theories have been widely applied in Western contexts, their integration into labor-intensive, collectivist work environments like China's manufacturing sector are still limited.

Second, by empirically validating the mediating role of employee motivation, this study advances the theoretical understanding of how organizational-level variables are internalized into individual-level behavioral outcomes. This bridges the macro-micro gap in organizational behavior research and underscores the psychological transmission mechanism through which HR practices affect employee retention.

Third, the study offers a comprehensive model that simultaneously examines direct and indirect effects, thereby enhancing the explanatory power of current frameworks on turnover intention.

5.3. Practical Implications

From a managerial perspective, the findings offer actionable insights for HR leaders and plant managers seeking to improve employee retention in the manufacturing sector. The strong influence of organizational commitment, justice, and reward management on employee motivation and turnover intention implies that workplace climate and HR

policies must be strategically aligned with employee values and needs.

Organizations should invest in building a fair and transparent work environment, reinforce affective commitment through leadership support and communication, and develop equitable reward systems that recognize both individual contributions and team-based achievements. Additionally, promoting motivational drivers—such as task significance, skill variety, and recognition—can serve as a buffer against turnover, particularly in monotonous production environments.

5.4. Limitations

Despite its contributions, this study is subject to several limitations. First, the cross-sectional nature of the data limits the ability to draw causal inferences. Longitudinal designs are recommended in future research to track motivational changes and turnover behavior over time.

Second, the data were collected using self-reported questionnaires, which may be prone to common method bias despite procedural and statistical controls. Future studies could incorporate supervisor ratings or objective turnover data to triangulate findings.

Third, the study focused exclusively on Chinese manufacturing firms, limiting generalizability to other cultural or industrial contexts. Future research could apply the model in other sectors such as services or technology, and compare results across countries or cultural settings.

5.5. Directions for Future Research

Building upon the findings and limitations, future research could explore additional moderating variables such as job autonomy, perceived organizational support, or leadership style to understand boundary conditions of the motivation-turnover link. Furthermore, multi-level modeling techniques could be employed to examine how organizational climate or culture at the firm level influences individual outcomes.

Finally, future studies may investigate whether digital transformation in manufacturing—such as automation and smart technologies—modifies the relationship between organizational practices and employee motivation, particularly as the nature of work evolves.

6. Conclusion

This study provides robust empirical evidence that organizational commitment, organizational justice, and reward management significantly reduce turnover intention among manufacturing employees in China, both directly and indirectly through the mediating role of employee motivation. The findings validate the relevance of motivational theory in understanding turnover behavior in emerging economy contexts and reinforce the strategic value of human-centered HR practices. By fostering motivating and fair workplaces, manufacturing enterprises can enhance employee retention, strengthen workforce stability, and sustain competitive advantage in a rapidly transforming industrial landscape.

References

- [1] Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.
- [2] Chen, Z. X., & Aryee, S. (2007). Delegation and employee work outcomes: An examination of the cultural context of

- mediating processes in China. *Academy of Management Journal*, 50(1), 226–238.
- [3] Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology*, 86(3), 386–400.
- [4] Colquitt, J. A., LePine, J. A., Wesson, M. J., & Gelfand, M. J. (2023). *Organizational behavior: Improving performance and commitment in the workplace* (7th ed.). McGraw-Hill Education.
- [5] Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874–900.
- [6] Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
- [7] Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.
- [8] Gagné, M., Forest, J., Gilbert, M. H., Aubé, C., Morin, E. M., & Malorni, A. (2019). The motivation at work scale: Validation evidence in two languages. *Educational and Psychological Measurement*, 79(3), 504–529.
- [9] Ghosh, S., Sekiguchi, T., & Fujimoto, Y. (2022). Reexamining employee motivation and retention: The moderating role of HR practices. *International Journal of Human Resource Management*, 33(3), 498–520.
- [10] Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage Publications.
- [11] Jaiswal, N. K., & Dhar, R. L. (2019). The influence of servant leadership on job performance through job satisfaction: The moderating effect of power distance. *Journal of Business Research*, 100, 254–263.
- [12] Jiang, J., & Xiao, L. (2023). Compensation fairness and employee turnover intention: The mediating role of job satisfaction. *Asia Pacific Journal of Human Resources*, 61(1), 134–155.
- [13] Kim, H., & Park, J. (2020). Reward systems and employee behavior: Mediating roles of motivation and organizational commitment. *Journal of Business Research*, 109, 95–103.
- [14] Liu, Y., Yang, J., & Zhang, R. (2021). Workforce transformation and talent retention in China's manufacturing sector: Challenges and strategies. *Technological Forecasting and Social Change*, 169, 120797.
- [15] Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application*. Thousand Oaks, CA: Sage Publications.
- [16] Meyer, J. P., Stanley, D. J., & Vandenberg, R. J. (2021). A person-centered approach to commitment profiles: Implications for employee motivation and behavior. *Journal of Vocational Behavior*, 129, 103610.
- [17] Mobley, W. H., Horner, S. O., & Hollingsworth, A. T. (1978). An evaluation of precursors of hospital employee turnover. *Journal of Applied Psychology*, 63(4), 408–414.
- [18] Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891.
- [19] Su, Z., Chen, X., & Wang, T. (2021). Linking organizational climate to turnover intention through psychological needs and work motivation: Evidence from Chinese manufacturing employees. *Current Psychology*, 40(12), 6067–6081.
- [20] Van den Broeck, A., Ferris, D. L., Chang, C. H., & Rosen, C. C. (2021). A review of self-determination theory's basic psychological needs at work. *Journal of Management*, 47(4), 875–913.
- [21] Wang, X., & Sun, J. (2022). Human resource challenges in China's advanced manufacturing industry: A strategic HRM perspective. *Management and Organization Review*, 18(1), 145–168.
- [22] Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.
- [23] Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
- [24] Gagné, M., Forest, J., Gilbert, M. H., Aubé, C., Morin, E. M., & Malorni, A. (2019). The motivation at work scale: Validation evidence in two languages. *Educational and Psychological Measurement*, 79(3), 504–529.
- [25] Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage Publications.
- [26] Su, Z., Chen, X., & Wang, T. (2021). Linking organizational climate to turnover intention through psychological needs and work motivation: Evidence from Chinese manufacturing employees. *Current Psychology*, 40(12), 6067–6081.
- [27] Ghosh, S., Sekiguchi, T., & Fujimoto, Y. (2022). Reexamining employee motivation and retention: The moderating role of HR practices. *International Journal of Human Resource Management*, 33(3), 498–520.
- [28] Van den Broeck, A., Ferris, D. L., Chang, C. H., & Rosen, C. C. (2021). A review of self-determination theory's basic psychological needs at work. *Journal of Management*, 47(4), 875–913.
- [29] Chen, Z. X., & Aryee, S. (2007). Delegation and employee work outcomes: An examination of the cultural context of mediating processes in China. *Academy of Management Journal*, 50(1), 226–238.
- [30] Meyer, J. P., Stanley, D. J., & Vandenberg, R. J. (2021). A person-centered approach to commitment profiles: Implications for employee motivation and behavior. *Journal of Vocational Behavior*, 129, 103610.
- [31] Jiang, J., & Xiao, L. (2023). Compensation fairness and employee turnover intention: The mediating role of job satisfaction. *Asia Pacific Journal of Human Resources*, 61(1), 134–155.