
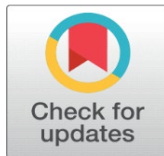


WORKFORCE STABILITY IN CERAMIC SANITARY WARE MANUFACTURING ENTERPRISES FROM FOSHAN, CHINA

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ABSTRACT

High employee turnover is a major issue for ceramic sanitary ware manufacturers in Foshan, China, due to globalization and strong competition. This study aimed to find out how person-environment fit, career growth, job satisfaction, and organizational commitment influence employees' intention to leave. It also examined whether job satisfaction serves as a link between these factors. Researchers surveyed 487 employees from production, marketing, RandD, and administrative departments. They used structural equation modeling (SEM) with nonparametric bootstrapping to analyze both direct and indirect effects, while controlling for demographic factors. The findings showed that all four factors helped retain employees, as evidenced by lower turnover intentions. The strongest effect came from job satisfaction ($\beta = 0.325$), followed by organizational commitment ($\beta = 0.261$), career growth ($\beta = 0.219$), and person environment fit ($\beta = 0.146$). Job satisfaction partly explained the links among organizational commitment, person-environment fit, career growth, and turnover, with indirect effects of 0.054, 0.058, and 0.091, respectively. The models used in the study were robust, with good validity and fit (CMIN/DF = 2.063, CFI = 0.957, TLI = 0.949, RMSEA = 0.047). The study suggests that companies should improve job satisfaction through better job design and workplace experience, and encourage long-term commitment. Supporting career growth and person-environment fit can also boost satisfaction and retention, offering practical steps for HR teams in manufacturing.

Keywords: Employee Turnover, Wworkforce Stability, Sservice Management, Job Satisfaction, Oorganizational Commitment

1. INTRODUCTION

In today's highly competitive, constantly changing business environment, the difference between successful and struggling companies is not just about technology and capital, but also about their people. When employees are committed to the company and stay, it has a positive impact on daily operations, innovation, and long-term competitiveness. Studies have shown that human resource issues are especially important in labour-intensive manufacturing. High employee turnover can disrupt production, raise training and replacement costs, and weaken organizational stability [Hancock et al. \(2013\)](#), [Ramot and Pratama \(2025\)](#). Foshan has long been the heartbeat of China's ceramic production. Few places illustrate this challenge more vividly than Foshan's ceramic sanitary ware industry. But

beneath that industrial success lies a persistent tension: workers are hard to find, harder to keep, and the pressure is only growing as the industry navigates stricter environmental regulations and the push to upgrade [Jin et al. \(2019\)](#), [Lin and Zhang \(2025\)](#).

In this environment, turnover is no longer just about individual workers making individual choices. It has become a strategic problem. One that touches enterprise performance, workforce sustainability, and the future of an entire industrial region.

The present study is grounded in Katz's Organizational Life Cycle Theory and Job Embeddedness Theory. Katz's Organizational Life Cycle Theory explains employee adaptation and development across different organizational stages, emphasizing organizational socialization, employee-organization fit, and career path development as important conditions shaping retention and departure decisions [Katz and Kahn \(1978\)](#). Job Embeddedness Theory complements this perspective by explaining why employees remain in organizations through the dimensions of links, fit, and sacrifice, thereby highlighting the importance of attachment and compatibility between employees and their work environment [Mitchell et al. \(2001\)](#). Taken together, these theories offer a meaningful lens to study why workers in ceramic sanitary ware manufacturing stay or leave. Four constructs emerge as particularly relevant: Organizational Commitment, Person-Environment Fit, Career Growth, and Job Satisfaction. Each captures a different dimension of the employee experience, and together they paint a more complete picture of what drives turnover in this context.

Four constructs emerge as particularly relevant to this investigation: Organizational Commitment, Person-Environment Fit, Career Growth, and Job Satisfaction. Each construct captures a distinct facet of the employee experience. While Organizational Commitment reflects an employee's psychological attachment to the firm [Allen and Meyer \(1990\)](#), Person-Environment Fit assesses the alignment between individual values and the manufacturing work climate [Kristof-Brown et al. \(2005\)](#). Furthermore, in the context of China's evolving labor market, Career Growth has become a decisive factor, as modern workers increasingly prioritize professional advancement over purely monetary incentives [Chen et al. \(2016\)](#).

Despite the economic significance of the Foshan manufacturing hub, empirical models that integrate these specific psychological and organizational constructs remain scarce. This study addresses this critical gap by providing an integrated analytical framework that accounts for both the worker's embedded nature and their developmental trajectory within the manufacturing life cycle. A central thread of this analysis is the mediating role of Job Satisfaction; the study investigates how satisfaction serves as a psychological bridge, linking organizational antecedents and turnover and effectively amplifying or dampening their effects. Ultimately, these findings provide actionable strategies to enhance retention, strengthen organizational performance, and contribute to the longer-term sustainability of traditional manufacturing amidst China's broader industrial transformation.

2. LITERATURE REVIEW

2.1. EMPLOYEE TURNOVER IN CERAMIC SANITARY WARE MANUFACTURING

Employee turnover presents a significant challenge across all industries, including labour-intensive manufacturing. When workers leave, it doesn't just create an empty seat on the floor; it disrupts the rhythm of production, unsettles the people who stay, and quietly chips away at a company's ability to compete over time. Existing researches pointed out moderate turnover may support workforce renewal, excessive turnover is associated with declining product quality, rising training costs, and weakened organizational stability [Zubanov and Shakina \(2023\)](#), [Hom et al. \(2017\)](#), [Fosu \(2025\)](#). These concerns are particularly salient in ceramic sanitary ware manufacturing, where production depends heavily on skilled and semi-skilled labor and where work continuity is essential for maintaining efficiency and quality standards.

Foshan provides a highly relevant empirical setting for studying this issue. According open online source, being one of China's most important ceramic sanitary ware production bases, Foshan combines historical craftsmanship with large-scale industrial production and global market integration [Foshan Home Ceramics \(2024\)](#). The sector contributes substantially to regional output, employment, and exports, while simultaneously undergoing transformation toward environmental sustainability, intelligent production, and personalized design [Lin and Zhang \(2025\)](#). However, this industrial upgrading has not reduced labor pressure. On the contrary, rising energy costs, stricter environmental regulation, labor shortages, and the increasing demand for technical adaptation have made employee retention more difficult and strategically more important [Boiral et al. \(2022\)](#), [Khalil et al. \(2023\)](#).

Existing evidence indicates that employee turnover in Foshan’s ceramic sanitary ware manufacturing enterprises is both substantial and structurally uneven [Nie and Sousa-Poza \(2017\)](#). It concentrates among production and technical workers, and it tends to happen fast. Low wages, shift fatigue, limited training, and dim career prospects push people out the door before they've barely had a chance to find their footing. The organizational consequences are significant: turnover increases recruitment and retraining expenditure, delays product development, disrupts production schedules, and undermines team cohesion and enterprise productivity [Hausknecht and Trevor \(2011\)](#). This means that when employees leave, it is rarely just a personal choice it reflects deeper issues within the organization and how it operates.

Against this background, employee turnover in ceramic sanitary ware manufacturing can be understood as the outcome of interacting organizational, environmental, and individual factors. Three antecedents appear especially relevant: Person-Environment Fit, Career Growth, and Organizational Commitment. Poor fit between employees and the work environment may reduce satisfaction and intensify withdrawal; limited career growth may weaken motivation and attachment; and low organizational commitment may reduce employees’ willingness to remain with the enterprise. Job Satisfaction is particularly important because it reflects employees’ overall evaluation of work conditions, development opportunities, and organizational experience, and may therefore explain how these antecedents translate into Employee Turnover. This logic is consistent with Katz’s Organizational Life Cycle Theory, which highlights organizational adaptation, fit, and career path development, and with Job Embeddedness Theory, which explains retention through links, fit, and sacrifice [Katz and Kahn \(1978\)](#), [Mitchell et al. \(2001\)](#). Accordingly, these perspectives provide the theoretical and empirical basis for the hypothesis development and conceptual framework presented in the next section.

2.2. HYPOTHESIS

Drawing on the above theoretical and empirical background, this study proposes that Organizational Commitment, Person-Environment Fit, and Career Growth are key antecedents of Employee Turnover in ceramic sanitary ware manufacturing enterprises. In addition, Job Satisfaction is expected to play both a direct role in reducing Employee Turnover and an indirect role by mediating the effects of these antecedent variables. Based on this reasoning, the following hypotheses and conceptual framework are developed.

- H1: Organizational commitment has a significant negative effect on employee turnover.
- H2: Person-environment fit has a significant negative effect on employee turnover.
- H3: Career growth has a significant negative effect on employee turnover.
- H4: Job satisfaction has a significant negative effect on employee turnover.
- H5: Job satisfaction mediates the relationship between organizational commitment and employee turnover.
- H6: Job satisfaction mediates the relationship between person-environment fit and employee turnover.
- H7: Job satisfaction mediates the relationship between career growth and employee turnover.

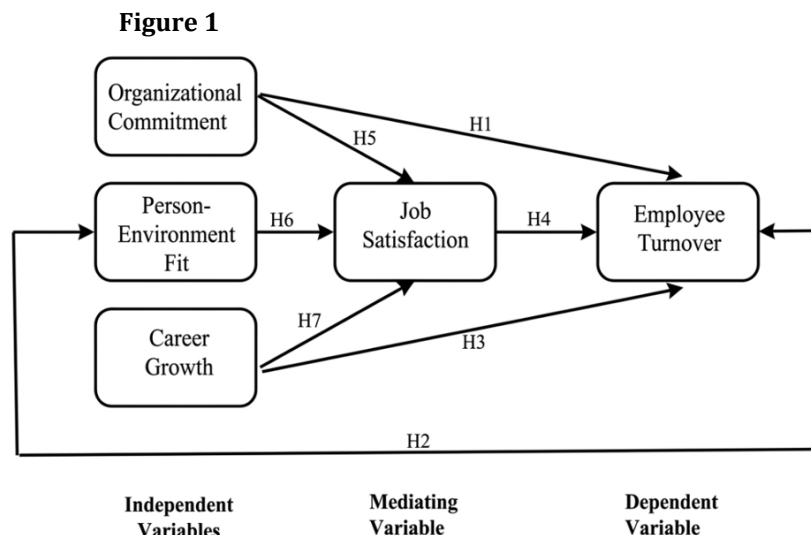


Figure 1 Conceptual Framework

Figure 1 illustrates the conceptual framework of the study. Organizational Commitment, Person-Environment Fit, and Career Growth are proposed as independent variables that affect Employee Turnover, both directly and indirectly through Job Satisfaction. In this framework, Job Satisfaction serves as the mediating variable explaining how these organizational factors influence Employee Turnover.

3. METHODOLOGY

3.1. RESEARCH DESIGN

This study adopted a quantitative research design to examine the relationships among Organizational Commitment, Person-Environment Fit, Career Growth, Job Satisfaction, and Employee Turnover in Foshan's ceramic sanitary ware manufacturing enterprises. The instrument was developed from established scales and measured all constructs using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The original questionnaire was prepared in English and then translated into Chinese to ensure clarity and comprehension for respondents in Foshan. A back-translation procedure was subsequently conducted by an independent bilingual team to verify semantic equivalence between the Chinese and original English versions. For the formal survey, a dual-mode administration strategy was adopted. Questionnaires were distributed both online and on site to improve accessibility and response quality. Online distribution was conducted through corporate email systems and internal intranet platforms, while on-site administration took place during employee breaks and training sessions, where trained research assistants were available to clarify questions when needed. This design strengthened both contextual relevance and data quality in an industrial setting.

3.2. POPULATION AND SAMPLES

The target population comprised employees working in ceramic sanitary ware manufacturing enterprises in Foshan, China, including staff from production, marketing, administration, research and development, and related functions. To ensure representativeness, eight enterprises were selected based on industry influence, market position, production capacity, employee size, and sales performance. The study employed stratified random sampling. The selected enterprises served as primary strata, and further stratification was conducted by department. Within each stratum, respondents were randomly selected with the support of the enterprises' human resource departments while maintaining anonymity. In total, 800 questionnaires were distributed. After screening and data cleaning, 487 valid responses were retained for formal analysis, exceeding commonly recommended sample-size benchmarks for structural equation modeling and providing a sufficient basis for subsequent empirical testing (Kline, 2023; Wolf et al., 2013).

3.3. DATA COLLECTION AND ANALYSIS

Data collection followed a structured multi-stage process. First, the finalized Chinese questionnaire was administered through both online and on-site channels. After collection, all responses were screened for completeness, logical consistency, and unusual response patterns. Missing values, inconsistencies, and outliers were addressed during the data preparation stage to improve the reliability of subsequent analysis. Descriptive statistics were used to summarize the sample profile and the distribution of the main variables. Pearson correlation analysis was then employed to examine bivariate relationships among the constructs. For the main inferential analysis, the study used Structural Equation Modeling (SEM) to test both direct and mediating relationships among the latent variables. Measurement quality was assessed through Cronbach's α , composite reliability, factor loadings, average variance extracted (AVE), and the Fornell-Larcker criterion. Model fit was evaluated using standard fit indices, and bias-corrected bootstrapping was applied to estimate path coefficients and mediation effects robustly under mild non-normality.

3.4. PILOT TEST

Prior to the formal survey, a pilot test was conducted to examine the psychometric adequacy of the five measurement instruments. The pilot study was carried out in two ceramic sanitary ware manufacturing enterprises in Foshan. A total of 110 employees from production, quality inspection, research and development, and administrative

positions participated in the pilot survey. After excluding responses with unusually short completion times or evident logical inconsistencies, 100 valid questionnaires were retained for analysis.

Table 1

Table 1 Pilot Test Results of Reliability and Validity						
Construct	Cronbach's α	No. of Items	KMO	Bartlett's χ^2	df	p
Person-Environment Fit	0.926	22	0.87	1393.5	231	< .001
Career Growth	0.905	23	0.861	1399.942	253	< .001
Job Satisfaction	0.903	20	0.855	1123.121	190	< .001
Organizational Commitment	0.919	26	0.855	1574.357	325	< .001
Employee Turnover	0.924	24	0.87	1555.448	276	< .001

Table 1 shows high internal consistency across all five scales, with Cronbach's α values ranging from .903 to .926. Specifically, the α coefficients were .926 for Person-Environment Fit, .905 for Career Growth, .903 for Job Satisfaction, .919 for Organizational Commitment, and .924 for Employee Turnover. All values exceeded the recommended threshold of .70, indicating that the measurement items were internally consistent and suitable for subsequent analysis.

Construct validity was examined using the Kaiser Meyer Olkin (KMO) measure and Bartlett's test of sphericity. The KMO values ranged from .855 to .870 across the five scales, exceeding the acceptable benchmark of .60 and indicating strong sampling adequacy. In addition, Bartlett's tests for all scales were statistically significant at $p < .001$, confirming that the inter-item correlations were sufficient for factor analysis. These findings demonstrate that the pilot data satisfied the requirements for factor extraction and supported the structural soundness of the measurement instruments. As all scales showed satisfactory reliability and validity, no further deletion or modification of items was required before the formal survey.

4. RESULTS AND DISCUSSION

4.1. ANALYSIS OF RESPONDENT DEMOGRAPHICS

Figure 2, demonstrates a robust, balanced sample population with a near-even gender distribution. Specifically, of the 487 respondents, male participants represent a slight majority with 254 individuals (52.2%), while female participants number 233 (47.8%). This minimal gender discrepancy of 4.4 percentage points suggests that the organizational findings are unlikely to be significantly biased toward one gender. Consequently, this balance enhances the study's statistical power and external validity.

Figure 2

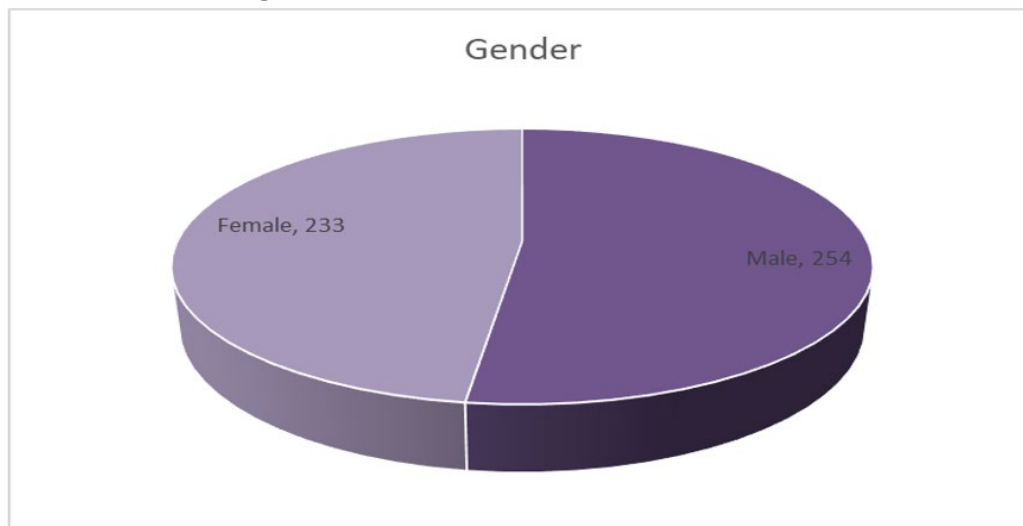


Figure 2 Gender Distribution of Respondents (N=487)

4.1.1. EDUCATIONAL ATTAINMENT AND BACKGROUND

Figure 3 presents a detailed breakdown of respondents' educational backgrounds, indicating a workforce with substantial qualifications. The largest group holds an undergraduate degree, comprising nearly 41% (n = 199) of participants. Individuals with junior college backgrounds represent 31% (n = 150). Together, these two groups constitute over 70% of the sample. Advanced academic qualifications are also present, with 13.5% (n = 66) holding a postgraduate degree and 3.9% (n = 19) possessing a doctorate. In contrast, 10.9% (n = 53) report having an education below junior college level. This range of educational attainment enables analysis of how varying levels of cognitive and specialized training affect organizational outcomes.

Figure 3

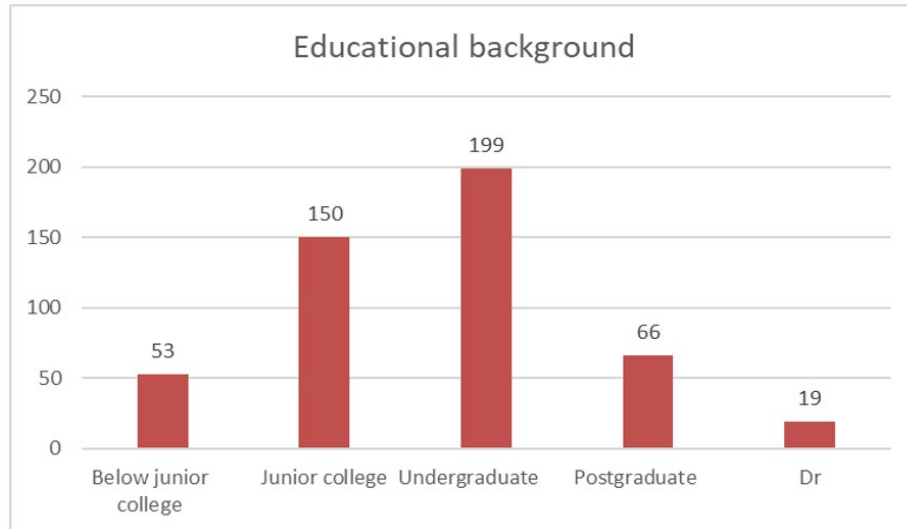


Figure 3 Educational Background and Attainment (Frequencies)

4.1.2. DISTRIBUTION OF MARITAL STATUS

Figure 4 shows that most of the 487 respondents are married. About 77.2% (n = 376) are in the Married group, while 22.8% (n = 111) are Unmarried. This strong tilt toward married participants is an important demographic detail, since marital status often relates to different life priorities, such as greater needs for work-life balance and job stability. These factors may affect organizational commitment and job satisfaction, which will be discussed later in this research.

Figure 4

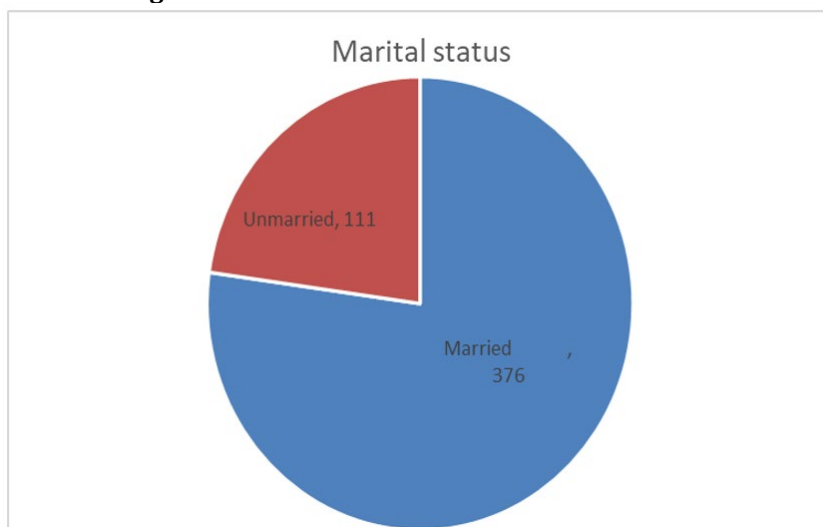


Figure 4 Distribution of Marital Status (Percentage)

4.1.3. AGE DISTRIBUTION PROFILE

Figure 5 illustrates that the participant age profile is predominantly youthful to prime working age, with the 31-35 age group representing the largest proportion (n = 154, approximately 31.6%). The broader mid-career cohort, defined as those aged 26-35, comprises nearly 46.4% of the sample (n = 226). Participants under 25 years constitute 10.5% (n = 51). In contrast, older age groups are less represented, with 41-45 years (n = 48), 46-50 years (n = 37), and 50 years and above (n = 9) showing progressively lower frequencies. This distribution suggests that the workforce is primarily focused on career advancement and skill development.

Figure 5

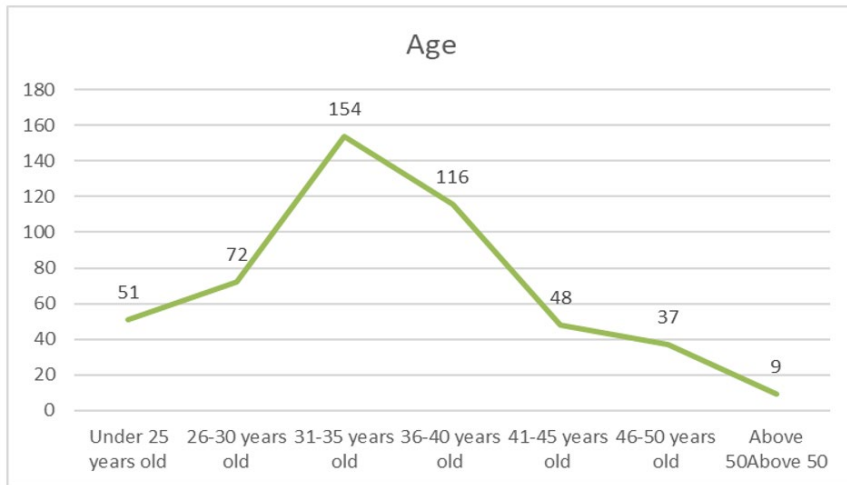


Figure 5 Area Chart of Age Distribution (Frequencies)

4.1.4. OCCUPATIONAL AND WORKING SENIORITY

The distribution of working seniority, providing a comprehensive depiction of workforce tenure, as shown in Fig. 6, indicates that the largest tenure category is 6-10 years, with 187 employees. Including the 2-5 years cohort (n = 141) and the less than 2 years cohort (n = 87), approximately 85% of the workforce possesses ten years of experience or less. Conversely, seniority declines significantly beyond the 10-year threshold, with 49 employees in the 11-15 years bracket, 16 in the 15-20 years bracket, and only 7 in the 20+ years bracket. This distribution shows that organizational knowledge is primarily concentrated in mid-career segments.

Figure 6

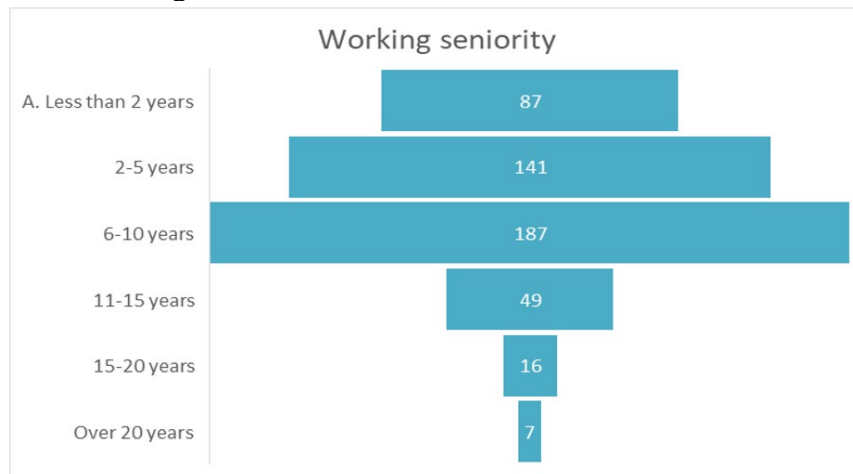


Figure 6 Pyramid of Working Seniority (Frequencies)

4.1.5. ORGANIZATIONAL STRUCTURE BY DEPARTMENT

The organizational structure is primarily concentrated in two main departments, as illustrated in Fig. 7: the Production department, the largest operational segment with 195 employees, and the Marketing department, with 148 employees. Together, these departments account for over 70% of the sample, suggesting that the study's findings will largely reflect these operational areas. In comparison, the Research and Development (RandD; n = 71) and Administration (n = 52) departments are considerably smaller. The 'Other' category (n = 21) constitutes the smallest segment. This departmental concentration should be carefully considered in subsequent analyses, as it may correspond to differing levels of job stress and satisfaction among various work functions.

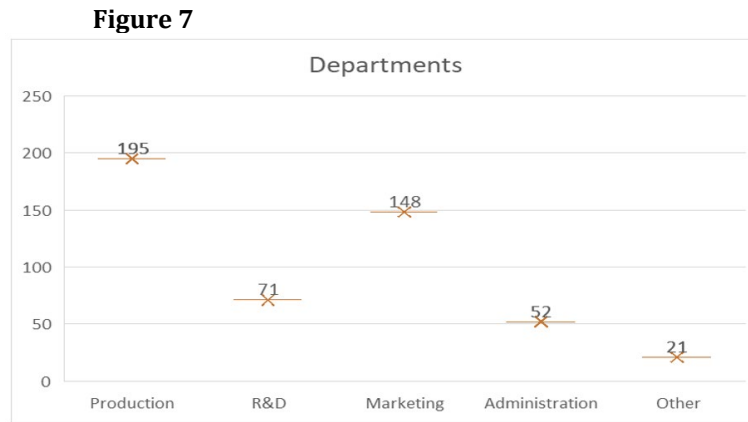


Figure 7 Comparative Distribution by Department (Frequencies)

4.2. PEARSON CORRELATION ANALYSIS

Table 2 presents the results of the Pearson correlation analysis. The relationships among the core constructs were statistically significant and generally in the low-to-moderate range. Person–Environment Fit was positively correlated with Career Growth ($r = 0.281, p < 0.01$), Job Satisfaction ($r = 0.327, p < 0.01$), and Organizational Commitment ($r = 0.313, p < 0.01$). Career Growth was also positively associated with Job Satisfaction ($r = 0.370, p < 0.01$) and Organizational Commitment ($r = 0.199, p < 0.01$), while Job Satisfaction and Organizational Commitment were positively correlated ($r = 0.301, p < 0.01$). Employee Turnover was significantly correlated with Person–Environment Fit ($r = 0.336, p < 0.01$), Career Growth ($r = 0.351, p < 0.01$), Job Satisfaction ($r = 0.418, p < 0.01$), and Organizational Commitment ($r = 0.411, p < 0.01$). These findings indicate meaningful associations among the study variables and provide preliminary support for the subsequent structural model

Table 2

Table 2 Pearson Correlation Analysis of Demographic and Organizational Variables											
Variable	1	2	3	4	5	6	7	8	9	10	11
Gender	1										
Education	-0.018	1									
Marital Status	-0.011	-0.017	1								
Age	-0.01	-0.036	0.006	1							
Seniority	-0.05	0.013	-.092*	0.048	1						
Department	-0.012	0.013	0.023	0.057	.125**	1					
P-E Fit	0.032	-0.03	.094*	0.021	-0.037	0.01	1				
Career Growth	0.058	-.111*	-0.032	0.052	-0.031	0.016	.281**	1			
Job Satisfaction	0.065	-0.074	-0.052	0.001	0.004	-0.004	.327**	.370**	1		
Org. Commitment	0.038	-0.016	0.007	0.013	-0.025	-0.019	.313**	.199**	.301**	1	
Turnover	0.06	-0.089	-0.072	0.061	0.043	-0.013	.336**	.351**	.418**	.411**	1

Note: $p < .05$; $. p < .01$

4.3. DISCRIMINANT VALIDITY

Table 3 shows that the square roots of AVE for Person–Environment Fit (0.726), Career Growth (0.737), Job Satisfaction (0.746), Organizational Commitment (0.754), and Employee Turnover (0.743) exceeded the corresponding inter-construct correlations. These results indicate that each construct was empirically distinct from the others and that the measurement model demonstrated acceptable discriminant validity.

Table 3

Table 3 Discriminant Validity (Fornell–Larcker Criterion)					
Latent variables	Person–Environment Fit	Career growth	Job satisfaction	Organizational commitment	Employee Turnover
Person–Environment Fit	0.726				
Career Growth	0.343	0.737			
Job Satisfaction	0.375	0.239	0.746		
Organizational Commitment	0.39	0.444	0.36	0.754	
Employee Turnover	0.409	0.426	0.497	0.499	0.743

Note: Diagonal Values in Bold Represent the Square Roots of the Average Variance Extracted (AVE); off-Diagonal Values are Inter-Construct Correlations.

4.4. CONFIRMATORY FACTOR ANALYSIS (CFA) AND MODEL FIT

Table 4 presents the goodness-of-fit results of the confirmatory factor analysis. The model achieved a CMIN/DF value of 2.063, which was below the recommended threshold of 3, indicating an acceptable fit between the measurement model and the observed data. The incremental fit indices were all above the recommended standard of 0.90, including NFI = 0.921, RFI = 0.906, IFI = 0.958, TLI = 0.949, CFI = 0.957, and GFI = 0.934. In addition, the RMSEA value was 0.047, which was below the acceptable cutoff of 0.08. Overall, these results demonstrate that the measurement model showed a good fit and was appropriate for subsequent structural analysis.

Table 4

Table 4 Model Fit Indices for the Confirmatory Factor Analysis (CFA)			
Fit Index	Result	Threshold	Judgment
chi ² (CMIN)	330.077	-	-
Df	160	-	-
chi ² /df (CMIN/DF)	2.063	< 3.0	Excellent Fit
NFI	0.921	> 0.90	Good Fit
RFI	0.906	> 0.90	Good Fit
IFI	0.958	> 0.90	Excellent Fit
TLI	0.949	> 0.90	Excellent Fit
CFI	0.957	> 0.90	Excellent Fit
GFI	0.934	> 0.90	Good Fit
RMSEA	0.047	< 0.08	Excellent Fit

4.5. STRUCTURAL MODEL ANALYSIS AND HYPOTHESIS TESTING

The structural model evaluates both direct and indirect relationships between antecedent variables and employee retention. Seven primary hypotheses guide this analysis, categorized as either direct effects or mediated pathways:

Direct Effect Hypotheses:

- H1: Organizational Commitment → Employee Turnover
- H2: Person-Environment Fit → Employee Turnover

- H3: Career Growth → Employee Turnover
- H4: Job Satisfaction → Employee Turnover

Mediation Effect Hypotheses:

- H5: Organizational Commitment → Job Satisfaction → Employee Turnover
- H6: Person-Environment Fit → Job Satisfaction → Employee Turnover
- H7: Career Growth → Job Satisfaction → Employee Turnover

4.5.1. (A) DIRECT EFFECT ANALYSIS

Table 5 presents the direct effect test results of the structural model. The findings show that Organizational Commitment had a significant direct effect on Employee Turnover ($\beta = 0.261, p < 0.001$), supporting H1. Person-Environment Fit also had a significant direct effect on Employee Turnover ($\beta = 0.146, p = 0.022$), supporting H2. Career Growth significantly affected Employee Turnover ($\beta = 0.219, p < 0.001$), supporting H3. In addition, Job Satisfaction had a significant direct effect on Employee Turnover ($\beta = 0.325, p < 0.001$), supporting H4. Overall, all four direct hypotheses were supported.

Table 5

Table 5 Direct Effect Test						
Hypothesis	Path	Estimate	S.E.	C.R.	P	Conclusion
H1	Employee Turnover → Organizational Commitment	0.261	0.061	4.272	***	Support
H2	Employee Turnover → Person-Environment Fit	0.146	0.064	2.297	0.022	Support
H3	Employee Turnover → Career Growth	0.219	0.062	3.553	***	Support
H4	Employee Turnover → Job Satisfaction	0.325	0.057	5.664	***	Support

Note: $p < 0.05$; $p < 0.01$; $p < 0.001$.

4.5.2. (B) MEDIATION EFFECT ANALYSIS

Table 6 presents the mediation analysis results of Job Satisfaction in the relationships between Organizational Commitment, Person-Environment Fit, Career Growth, and Employee Turnover. The indirect effects were all statistically significant. Specifically, Job Satisfaction significantly mediated the relationship between Organizational Commitment and Employee Turnover (H5: $\beta = 0.054, p < 0.001$), between Person-Environment Fit and Employee Turnover (H6: $\beta = 0.058, p = 0.002$), and between Career Growth and Employee Turnover (H7: $\beta = 0.091, p < 0.001$). The confidence intervals for all three indirect effects excluded zero, confirming the significance of the mediation paths. In addition, the total effects were all significant, and the effect ratios indicated that Job Satisfaction partially explained the influence of the three antecedent variables on Employee Turnover. Therefore, H5, H6, and H7 were all supported.

Table 6

Table 6 Mediation Effect Test					
Effect Type	Hypothesis	Estimate	Lower	Upper	P
Mediation Effect	H5	0.054	0.02	0.114	< 0.001
	H6	0.058	0.018	0.123	0.002
	H7	0.091	0.036	0.173	< 0.001
Total Effect	H5	0.378	0.239	0.527	< 0.001
	H6	0.204	0.049	0.364	0.009
	H7	0.31	0.169	0.467	< 0.001
Effect Ratio	H5	0.142	0.049	0.34	0.001
	H6	0.283	0.07	1.204	0.01
	H7	0.293	0.116	0.616	0.001

5. DISCUSSION

The findings provide strong support for the proposed retention model in Foshan's ceramic sanitary ware manufacturing enterprises. At the measurement level, the constructs demonstrated high reliability and validity, with Cronbach's α values above .93, KMO values ranging from .949 to .964, and satisfactory CFA fit indices (CMIN/df = 2.063, CFI = .957, TLI = .949, RMSEA = .047). At the structural level, Job Satisfaction, Organizational Commitment, Career Growth, and Person–Environment Fit all showed significant positive direct effects on the retention-oriented Employee Turnover construct, with coefficients of .325, .261, .219, and .146, respectively. In substantive terms, this means that Job Satisfaction was the strongest immediate predictor of retention, followed by Organizational Commitment, Career Growth, and Person–Environment Fit. That means if employers want to keep workers, they need to work on their near work attitude as opposed to the bigger organizations and context stuff. Theoretical because we find this ranking that there is no need of such as the manufacturing industry's labor intensive to rely heavily about how many structural policy, instead, it depends on what has been translated into their everyday life when it comes about as an employee, and then also the evaluation [Sari et al. \(2024\)](#).

The mediating role of Job Satisfaction is one of the most important findings of the study. The indirect effects of Organizational Commitment, Person–Environment Fit, and Career Growth on Employee Turnover through Job Satisfaction were .054, .058, and .091, respectively, and all confidence intervals excluded zero. The effect ratios further showed that Job Satisfaction accounted for about 14% of the total effect of Organizational Commitment, 28% of the effect of Person–Environment Fit, and 29% of the effect of Career Growth. This pattern indicates that Job Satisfaction is not merely another predictor in the model, but a key psychological transmission mechanism through which broader organizational conditions influence retention. In particular, Career Growth and Person–Environment Fit appear to exert a larger proportion of their influence through Job Satisfaction, whereas Organizational Commitment retains a stronger direct effect. This difference suggests that Career Growth and Person–Environment Fit may be more policy-sensitive and management-responsive variables, while Organizational Commitment may represent a deeper and slower-moving relational resource that is less easily altered by short-term interventions [Yousaf et al. \(2023\)](#). In other words, the findings suggest that there are two different types of factors that keep employees from leaving: (1) those shaped by their personal experiences at work, and (2) those rooted in the relationships they build within the organization.

Another important contribution of the study lies in its clarification of construct boundaries. The analysis showed that conceptually similar dimensions, such as Work Environment and Colleague Relationships, remained empirically distinguishable when embedded in different higher-order constructs. The Fornell–Larcker results confirmed acceptable discriminant validity, and the rotated factor structure showed that similarly labeled dimensions loaded clearly onto their intended factors. This is an important result because it suggests that growth-related resources, attitudinal evaluations, and fit-related perceptions should not be treated as interchangeable aspects of a single generalized work climate. Instead, they represent distinct but interrelated mechanisms. So this difference makes our explanation for how things work better because it explains that if an employee stays there for some reason that may be good or it's only part of what causes their retention; many other organizations also run in smaller bits and pieces across quite a number of channels. This point can be further emphasized by noting that workforce retention in manufacturing is partly a systems-integration issue: compensation systems, development systems, role allocation systems, and relational systems must work coherently rather than independently if firms are to stabilize their labor force under conditions of industrial upgrading and operational pressure [Iqbal et al. \(2025\)](#).

From a managerial perspective, the results support a layered retention strategy. Job Satisfaction should be treated as the most immediate intervention point because it showed the strongest direct effect on retention. Organizational Commitment should be cultivated as a longer-term stabilizing force through identity-building, internal communication, fairness, and shared values. Career Growth should be strengthened through more visible promotion pathways, training systems, and compensation-development linkages, while Person–Environment Fit should be improved through better job placement, role matching, and team alignment. However, an important critical implication is that these interventions should not be implemented as isolated HR practices. The results suggest that retention is likely to improve most when firms align these mechanisms into a coherent organizational architecture—for example, when training improves not only skills but also role fit, and when promotion systems reinforce both satisfaction and commitment [Zainal et al. \(2022\)](#). Think of it this way. Keeping employees from leaving isn't just a paperwork problem that HR handles behind closed doors. The model tells a bigger story: in manufacturing, retention is deeply tied to how the work actually runs day-to-

day, how services are delivered, and how operations flow. When those systems work well together, workers stay. When they don't, workers walk out the door. So the real lesson here isn't just about which factors matter most, in turn, it's about recognizing that solving turnover means fixing the whole machine, not just one part of it.

Finally, the findings also invite a more reflective interpretation. The positive path coefficients observed in the model are due to the retention-oriented coding of the Employee Turnover construct, where higher scores indicate lower turnover risk. Once this is made explicit, the structural results remain fully consistent with the original theoretical expectations of negative effects on turnover. At the same time, the cross-sectional nature of the evidence means that the results should be interpreted as supporting a theoretically coherent explanatory model rather than proving a final causal order. A useful critical extension would be to consider whether the relationships are fully unidirectional. For example, an employee who feels anchored to their job doesn't just stay, over time, staying itself changes them. The longer they remain, the more they grow into their role, the more satisfied they become, and the deeper their commitment runs. And that growing satisfaction and commitment, in turn, makes them even less likely to leave. So rather than loyalty simply being the result of satisfaction, it may also be one of the causes of it — each feeding the other in an ongoing loop.

6. CONCLUSION AND RECOMMENDATIONS

This study confirms that Job Satisfaction, Organizational Commitment, Career Growth, and Person-Environment Fit are significant predictors of Employee Turnover in Foshan's ceramic sanitary ware manufacturing enterprises. Job Satisfaction showed the strongest direct effect ($\beta = 0.325, p < 0.001$), followed by Organizational Commitment ($\beta = 0.261, p < 0.001$), Career Growth ($\beta = 0.219, p < 0.001$), and Person-Environment Fit ($\beta = 0.146, p = 0.022$). Job Satisfaction also significantly mediated the effects of Organizational Commitment, Person-Environment Fit, and Career Growth on Employee Turnover, with indirect effects of 0.054, 0.058, and 0.091, respectively. In addition, the model demonstrated good fit (CMIN/DF = 2.063, CFI = 0.957, TLI = 0.949, RMSEA = 0.047), supporting the robustness of the findings. Overall, the results indicate that Job Satisfaction is the most immediate driver of retention, while Organizational Commitment provides a more stable basis for long-term employee retention.

As the industry transitions toward intelligent production, Foshan enterprises should prioritize workforce development alongside technological advancement. Managers can support this objective by establishing transparent technical career pathways that clarify how acquiring new skills contributes to professional growth, given that career development is a key determinant of employee satisfaction. Human resources departments should update recruitment strategies to identify candidates whose values and objectives align with the organization's evolving technical requirements. Organizations should replace rigid policies with initiatives that promote sustained employee engagement and address common challenges such as physical fatigue. By shifting the emphasis from labor utilization to workforce development, Foshan's ceramic companies can attract and retain the skilled talent required for global competitiveness.

7. LIMITATIONS AND FUTURE RESEARCH

This research comes with its share of limitations. First, relying on self-reported Likert-scale responses always carries the risk of social desirability bias, where participants answer in ways they feel are expected rather than entirely honest, as well as common method variance. Second, the sample itself also presents a boundary worth acknowledging. Because of focusing on ceramic sanitary ware manufacturers in Foshan, the findings may not travel smoothly to other industries or regions. It's also worth noting that a handful of items produced only marginal loadings, which signals that the measurement instrument could benefit from further fine-tuning before it's applied more broadly. Future studies would move beyond cross-sectional snapshots and embrace longitudinal or quasi-experimental designs that can better illuminate cause and effect over time.

CONFLICT OF INTERESTS

None.

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