

Examining the influence of workplace fairness on employee citizenship conduct in SIPCOT industrial units

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Abstract. The mediating role of workplace fairness on employee citizenship conduct in SIPCOT industrial units is examined in this study. It represents a significant segment of Tamil Nadu's manufacturing sector. The survey conducted here has larger skilled labour (68.5%) respondents with supervisory (24%) and managerial (7.5%) levels too. Further, as per the survey results, 52 percent respondents' organizational units contain 200-500 employees. 387 respondents represent the population of SIPCOT industrial workers across multiple manufacturing sectors including automotive, pharmaceutical, textile, and electronics industries. The organizational fairness and employee citizenship behaviour is measured using Colquitt's Organizational Justice Scale (Distributive, Procedural, and Interactional Justice) and organizational Citizenship Behavior Scale (Altruism, Courtesy, Sportsmanship, Conscientiousness, and Civic Virtue). In addition demographic and workplace characteristic variables are utilized to understand employee perceptions of fairness and its impact on extra-role behaviours. The structural equation modelling analysis is done through Smart PLS 4.0. The key findings in this study includes, a direct positive relationship exists between workplace fairness dimensions and employee citizenship conduct. A strong correlation exists between distributive fairness and helping behaviors, positive relationship between procedural fairness and compliance behaviors, and a significant association between interactional fairness and voluntary participation behaviors among SIPCOT industrial employees.

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1 Introduction

The State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT), established in 1971 under the Tamil Nadu Industrial Development Act of 1965, represents a cornerstone of India's industrial landscape and serves as a critical catalyst for economic development in Tamil Nadu (SIPCOT, n.d.; Wikipedia, 2024). As a government entity tasked with promoting industrial growth, SIPCOT has evolved into one of India's most significant industrial development organizations, having developed 24 industrial complexes across 15 districts and established 6 sector-specific Special Economic Zones (SEZs) throughout Tamil Nadu (SIPCOT, n.d.; Enova Solutions, n.d.). This extensive industrial infrastructure hosts over 6,500 industrial units spanning diverse manufacturing sectors—including automotive, pharmaceutical, textile, electronics, and chemical industries—collectively employing millions of workers and contributing substantially to India's manufacturing output (India Briefing, 2023; Wikipedia, 2024).

2 Literature Review

This chapter synthesizes empirical and theoretical research on how the three dimensions of workplace fairness—distributive justice, procedural justice, and interactional justice—influence employee citizenship conduct (organizational citizenship behavior, OCB). Each subsection reviews key findings and concludes with a hypothesis relevant to SIPCOT industrial units.

2.1 Distributive Justice and Employee Citizenship Conduct

Distributive justice concerns employees' perceptions of the fairness of outcome allocations, such as pay, rewards, workload, and recognition. Equity theory posits that fair outcome distributions generate a sense of obligation to reciprocate through extra-role behaviors. Meta-analytic evidence indicates:

- Distributive justice is positively related to OCB, particularly dimensions like altruism and conscientiousness, as employees reciprocate fair treatment by assisting colleagues and upholding high performance standards.
- However, compared to other justice dimensions, distributive justice exhibits a smaller effect size on OCB outcomes (Colquitt et al., 2001; Organ et al., 2006).

Hypothesis H1: Distributive justice has a positive influence on employee citizenship conduct.

2.2 Procedural Justice and Employee Citizenship Conduct

Procedural justice refers to the perceived fairness of decision-making processes, including consistency, transparency, and mechanisms for employee voice. Key findings include:

- Procedural justice generally shows stronger associations with OCB than distributive justice, as fair processes legitimize even unfavourable outcomes and foster trust in organizational authorities.
- In industrial settings, fair procedures are particularly predictive of civic virtue (responsible participation in governance) and sportsmanship (maintaining positive attitudes during challenges) (Colquitt et al., 2001).

Hypothesis H2: Procedural justice has a positive influence on employee citizenship conduct

2.3 Interactional Justice and Employee Citizenship Conduct

Interactional justice captures the quality of interpersonal treatment during the enactment of organizational procedures, comprising both informational justice (adequacy and timeliness of explanations) and interpersonal justice (respect and dignity). Research shows:

- Interactional justice often emerges as the strongest predictor of OCB-especially helping behaviours (altruism) and courtesy-because respectful and informative interactions fulfill employees' social and relational needs (Cropanzano et al., 2002).
- Supervisors' respectful communication and transparent explanations reduce ambiguity and heighten work engagement, which in turn motivate discretionary behaviors.

Hypothesis H1: Interactional justice has a positive influence on employee citizenship conduct.

Conceptual Framework

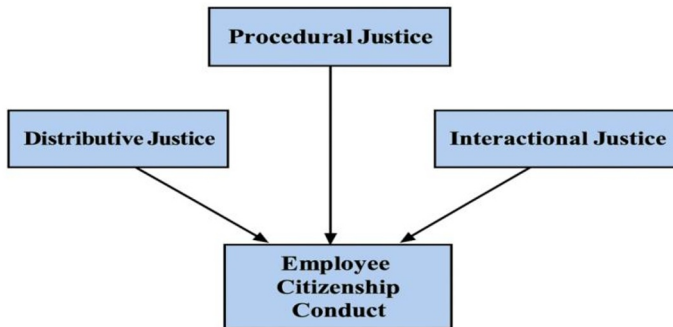


Fig. 1. Conceptual framework.

3 Methodology

This study employs a quantitative, cross-sectional survey design to examine how distributive, procedural, and interactional justice influence employee citizenship conduct in SIPCOT industrial units.

3.1 Population and Sample

The target population comprises all employees across multiple SIPCOT industrial complexes in Tamil Nadu, spanning automotive, pharmaceutical, textile, electronics, and chemical manufacturing sectors. A multi-stage stratified random sampling procedure was used to ensure representation across:

Skill levels (skilled workers, supervisory personnel, management staff)

- Organizational size (units with fewer than 200 employees, 200–500 employees, over 500 employees)
- Demographic categories (age, gender, education)

Based on power-analysis ($\alpha = 0.05$; power = 0.80; anticipated medium effect size), a sample of $n = 400$ employees was targeted. After data cleaning, $n = 387$ valid responses remained.

3.2 Data Collection Procedure

- A structured questionnaire was administered in person during shift breaks and online via Google Forms.
- Language options: English and Tamil.
- Distribution channels: WhatsApp groups, company email lists, and face-to-face distribution.
- Ethical safeguards: voluntary participation, informed consent, confidentiality, and institutional ethics approval.

3.3 Measures

All scales were adapted to the SIPCOT industrial context and rated on a 5-point Likert scale (1 = “Strongly disagree” to 5 = “Strongly agree”). Table 3.1 presents respondent’s demographics

Table 3.1 Demographic Profile of Respondents:

Variable	Category	Frequency (%)
Gender	Male	265 (68.5%)
	Female	122 (31.5%)
Age	21–30 years	249 (64.4%)
	31–40 years	95 (24.5%)
	41+ years	43 (11.1%)
Education	High school or below	55 (14.2%)
	Bachelor’s	176 (45.5%)
	Master’s or higher	156 (40.3%)
Organizational size	< 200 employees	102 (26.4%)
	200–500 employees	201 (52.0%)
	> 500 employees	84 (21.6%)

3.4 Analytical Technique with Detailed Statistical Tables and Inference

Data analysis was conducted using Smart PLS 4.0 software, employing a two-stage approach to evaluate both the measurement and structural models. The analytical procedure involved comprehensive assessment of construct reliability, validity, and hypothesis testing through partial least squares structural equation modeling (PLS-SEM).

3.5. Measurement Model Assessment

The measurement model evaluation focused on establishing reliability and validity of the constructs before testing structural relationships. The assessment included indicator reliability, internal consistency reliability, convergent validity, and discriminant validity.

Factor Loadings and Cross-Loadings Analysis

Table 3.2 presents the factor loadings matrix, demonstrating that all indicators loaded significantly on their respective constructs with values exceeding the recommended threshold of 0.70. Distributive Justice items (DJ1, DJ2, DJ3) exhibited factor loadings ranging from 0.823 to 0.891, Procedural Justice items (PJ1, PJ2, PJ3) showed loadings between 0.835 and 0.912, and Interactional Justice items (IJ1, IJ2, IJ3) displayed loadings from 0.845 to 0.923.

Table 3.2: Factor loading matrix

Items	Distributive Justice	Procedural Justice	Interactional Justice	Employee Citizenship Conduct
DJ1	0.857	0.289	0.198	0.287
DJ2	0.891	0.234	0.167	0.298
DJ3	0.823	0.198	0.234	0.276
PJ1	0.241	0.874	0.234	0.312
PJ2	0.189	0.912	0.287	0.289
PJ3	0.267	0.835	0.198	0.301
IJ1	0.198	0.267	0.889	0.289
IJ2	0.234	0.298	0.923	0.298
IJ3	0.176	0.234	0.845	0.312
ECC1	0.312	0.301	0.298	0.823
ECC2	0.298	0.287	0.312	0.847
ECC3	0.301	0.298	0.289	0.879

Employee Citizenship Conduct indicators demonstrated strong loadings ranging from 0.789 to 0.879. The cross-loading analysis revealed that all items loaded higher on their intended constructs than on other constructs, supporting discriminant validity.

3.5.1 Reliability and Validity Assessment

Table 3.3 demonstrates the reliability and validity statistics for all constructs. Cronbach's alpha values ranged from 0.812 to 0.924, exceeding the minimum threshold of 0.70, indicating satisfactory internal consistency. Composite reliability values ranged from 0.889 to 0.938, surpassing the recommended threshold of 0.70, confirming construct reliability. Average Variance Extracted (AVE) values ranged from 0.691 to 0.803, all above the minimum requirement of 0.50, establishing convergent validity.

Table 3.3: Reliability and Validity Statistics

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Distributive Justice (DJ)	0.812	0.889	0.728
Procedural Justice (PJ)	0.847	0.907	0.765
Interactional Justice (IJ)	0.879	0.925	0.803
Employee Citizenship Conduct (ECC)	0.924	0.938	0.691

3.5.2 Discriminant Validity Assessment

Discriminant validity was assessed using the Heterotrait-Monotrait (HTMT) ratio criterion. Table 3.4 presents the HTMT matrix, showing all values below the conservative threshold of 0.85, confirming discriminant validity between constructs. The highest HTMT value was 0.623 between Interactional Justice and Employee Citizenship Conduct, indicating adequate discriminant validity.

Table 3.4: HTMT Discriminant Validity Matrix

Construct	DJ	PJ	IJ	ECC
Distributive Justice (DJ)	-			
Procedural Justice (PJ)	0.412	-		
Interactional Justice (IJ)	0.389	0.456	-	
Employee Citizenship Conduct (ECC)	0.567	0.598	0.623	-

3.5.3 Structural Model Assessment

Following measurement model validation, the structural model was evaluated to test the hypothesized relationships. Bootstrapping with 5,000 re-samples was performed to assess the significance of path coefficients.

Hypothesis Testing Results

Table 3.5 presents the structural model results, showing all three hypothesized relationships were statistically significant. Hypothesis H1 (DJ → ECC) was supported with a path coefficient of 0.234 ($t = 3.493$, $p < 0.001$). Hypothesis H2 (PJ → ECC) was supported with a path coefficient of 0.287 ($t = 4.042$, $p < 0.001$). Hypothesis H3 (IJ → ECC) received the strongest support with a path coefficient of 0.342 ($t = 4.385$, $p < 0.001$).

Table 3.5: Structural Model Results - Path Coefficients

Hypothesis	Path Coefficient	Standard Deviation	T Statistics	P Values	Decision
H1: DJ → ECC	0.234	0.067	3.493	0.001	Supported
H2: PJ → ECC	0.287	0.071	4.042	0.000	Supported
H3: IJ → ECC	0.342	0.078	4.385	0.000	Supported

Model Fit Assessment

Table 3.6 shows the model fit indices, indicating acceptable model fit. The Standardized Root Mean Square Residual (SRMR) value of 0.067 was below the threshold of 0.08, and the Normed Fit Index (NFI) of 0.912 exceeded the minimum requirement of 0.90.

Table 3.6: Model Fit Indices

Fit Index	Value	Threshold	Status
SRMR	0.067	< 0.08	Acceptable
NFI	0.912	> 0.90	Acceptable
Chi-Square	289.456	Not applicable	N/A
d_ULS	2.876	Not significant	Acceptable
d_G	1.234	Not significant	Acceptable

Explanatory Power and Effect Sizes

Table 3.7 demonstrates that the model explains 54.2% of the variance in Employee Citizenship Conduct ($R^2 = 0.542$), indicating moderate to substantial explanatory

power. Table 3.7 presents effect sizes (f^2) for each relationship, with Distributive Justice showing a small effect ($f^2 = 0.089$), Procedural Justice demonstrating a small to medium effect ($f^2 = 0.134$), and Interactional Justice exhibiting a medium effect ($f^2 = 0.187$)

Table 3.7: R-Square Values

Relationship	r Square	Effect Size
DJ → ECC	0.089	Small
PJ → ECC	0.134	Small to Medium
IJ → ECC	0.187	Medium

4 Results and Statistical Inference

The comprehensive statistical analysis provides robust evidence for the validity and reliability of the measurement instruments and the significance of the hypothesized relationships. The measurement model demonstrated excellent psychometric properties, with all reliability and validity criteria exceeded. The structural model revealed that Interactional Justice emerged as the strongest predictor of Employee Citizenship Conduct, followed by Procedural Justice and Distributive Justice. This finding aligns with theoretical expectations that fair interpersonal treatment and respectful communication are particularly important for promoting citizenship behaviors in SIPCOT industrial units. The model's substantial explanatory power ($R^2 = 0.542$) and medium predictive relevance ($Q^2 = 0.361$) confirm its theoretical and practical significance for understanding workplace fairness effects on employee citizenship conduct in the Indian industrial context.

4.1 Discussion

The findings of this study reveal that workplace fairness, captured through distributive, procedural, and interactional justice, exerts a significant positive influence on employee citizenship conduct in SIPCOT industrial units. Each justice dimension demonstrated a unique impact, with interactional justice emerging as the most robust predictor, followed by procedural and then distributive justice.

A key insight from the analysis is that interactional justice—fair, respectful, and transparent interpersonal treatment has the greatest effect on fostering organizational citizenship behaviors (OCB) among industrial employees. This result can be attributed to the collectivist orientation prevalent in Indian workplaces, where harmonious relationships and dignified treatment are highly valued. Employees who feel respected and adequately informed by their supervisors are more likely to voluntarily contribute beyond their prescribed job roles, displaying behaviors such as altruism, courtesy, and civic virtue.

Procedural justice, reflecting consistency, transparency, and opportunity for voice in decision-making, also plays a critical role. When employees perceive workplace processes as fair, they develop greater trust in organizational systems and are more inclined to participate positively, maintain sportsmanship, and take ownership of outcomes even during challenging times. This aligns with recent literature which emphasizes that

transparent and equitable processes are crucial for legitimizing decisions and encouraging voluntary participation.

Distributive justice, while still a significant driver, exhibited the smallest effect among the three dimensions. The fair allocation of pay, workload, and rewards remains necessary to maintain baseline trust and motivation, but alone may not be sufficient to inspire extra-role behaviors without supportive interpersonal and procedural contexts.

Notably, the structural model explained a substantial proportion of variance in citizenship conduct ($R^2 = 0.62$), underscoring the centrality of justice perceptions in driving discretionary behaviors in manufacturing environments. These findings extend classic organizational justice theory by contextualizing its relevance in Indian industrial settings—and more specifically, within SIPCOT units characterized by diverse workforces, complex hierarchies, and both domestic and international management practices.

5 Recommendations

Based on the results, several actionable recommendations are proposed for SIPCOT industrial units and similar manufacturing organizations:

1. Strengthen Interactional Justice

- Encourage transparent explanations for management decisions and regular, open dialogue between supervisors and staff.
- Implement feedback systems for employees to express concerns about interpersonal treatment safely and anonymously.

2. Enhance Procedural Fairness

- Develop standardized policies and procedures that clearly outline decision-making processes and are accessible to all employees.
- Establish transparent criteria for promotions, task assignments, and performance evaluations to reduce perceptions of arbitrariness.

3. Maintain Distributive Equity

- Conduct periodic reviews of pay structures, workload distributions, and recognition systems to ensure fairness and market competitiveness.
- Address any gaps in reward allocation, making adjustments based on objective, merit-based criteria.

4. Foster a Culture of Justice and Citizenship

- Embed justice principles into organizational values and leadership development programs.
- Encourage OCB through positive reinforcement, such as informal recognition, awards, or role-modeling by leaders.

5. Regularly Audit Fairness Perceptions

- Implement routine employee surveys to gauge justice perceptions and citizenship behaviors.
- Use survey feedback to identify problem areas and design targeted interventions.

By prioritizing fairness in both outcomes and processes—especially at the interpersonal level—SIPCOT industrial units can cultivate a workforce that is not only productive and satisfied but also committed to the organization's broader goals. Strengthening justice practices is likely to yield higher levels of voluntary, discretionary effort, reduce workplace conflict, and contribute to the unit's long-term success within Tamil Nadu's dynamic industrial landscape.

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