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## The Effects of Justice Climate and Service Climate on Employee Service Behavior through Work Engagement: Evidence from a Business-to-Business Food and Beverage Distributor in Indonesia

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**Abstract:** This study examines the effects of justice climate and service climate on employee service behavior, with work engagement as a mediator, among employees of an Indonesian business-to-business food and beverage distributor. Data from 50 employees of PT Dinamika Sumber Makmur's foodservice segment were analyzed using Partial Least Squares Structural Equation Modeling in SmartPLS 4. Justice climate had a strong, significant positive effect on work engagement but no significant direct effect on employee service behavior. Service climate had no significant effect on either work engagement or employee service behavior, whereas work engagement positively and significantly affected employee service behavior. Work engagement fully mediated the relationship between justice climate and employee service behavior through indirect-only mediation but did not mediate the service climate relationship. Unlike earlier hospitality-based findings, the results indicate that the influence of organizational climate dimensions depends on industry and organizational context. The study extends Job Demands-Resources and Social Exchange Theory to Indonesia's business-to-business food and beverage distribution sector and highlights organizational justice and employee engagement as practical levers for service quality.

**Keywords:** justice climate, service climate, work engagement, employee service behavior B2B distribution.

### INTRODUCTION

Indonesia's consumer foodservice sector has continued to expand following the COVID-19 pandemic. According to Agriculture and Agri-Food Canada (2025), the sector was valued at approximately USD 29.2 billion in 2024 and had grown at an annual rate of approximately 9.6 percent since 2020, with all subsectors surpassing their pre-pandemic levels. The sector is projected to grow by 5.2 percent annually and reach approximately USD 36.8 billion by 2029. This consumer foodservice estimate is used because it corresponds most closely to the hotel, restaurant, cafe, catering, bakeshop, and entertainment customers served by DSM's foodservice segment.

PT Dinamika Sumber Makmur (DSM) is an Indonesian importer and distributor of food and beverage (F&B) products serving three market pillars: large-scale food, beverage, and

bakery manufacturers; modern and traditional retail; and foodservice operators such as hotels, restaurants, cafes, catering companies, bakeshops, and entertainment venues. While the industrial and retail pillars have historically anchored DSM's growth through stable demand and long-term contractual relationships, the foodservice segment is more dynamic and service-intensive, requiring employees who can respond quickly to changing customer needs (Kloutsiniotis & Mihail, 2020; Asante et al., 2022). In B2B foodservice distribution, success depends not only on supply reliability but on employees who take initiative, anticipate problems, and adapt to customers' operational rhythms - behaviors that overlap conceptually with intrapreneurial proactivity, opportunity recognition, and initiative-taking (Huang et al., 2021; Ye et al., 2023), even though the present study does not measure intrapreneurship as a separate construct.

Despite the segment's growth potential, DSM faces a deteriorating service-quality problem. Aggregated internal company complaint logs and customer-churn records covering 2023-2025 show that foodservice customer complaints rose 70 percent over two years, from 50 cases in 2023 to 85 cases in 2025. Delayed responses increased from 15 to 28 cases, lack of proactivity or initiative from 11 to 21 cases, and ineffective communication from 8 to 15 cases. Over the same period, 18 of 198 active foodservice customers stopped transacting in 2023, 25 of 210 in 2024, and 32 of 215 in 2025, corresponding to churn rates of 9.1, 11.9, and 14.9 percent. The stated reasons recorded in the company's churn data classified service quality and employee interaction as the primary reason for 10 of 18 churn cases in 2023 (56 percent), 15 of 25 in 2024 (60 percent), and 22 of 32 in 2025 (69 percent). These records are reported only in aggregate to protect company and customer confidentiality (PT Dinamika Sumber Makmur internal data, 2025).

Employee service behavior (ESB), conceptualized here as service-oriented organizational citizenship behavior (OCB) - discretionary behavior that exceeds formal job requirements to benefit customers and the organization (Organ, 1988; Bettencourt et al., 2001) - is therefore central to DSM's competitiveness. A growing body of literature identifies organizational climate as a key antecedent of such behavior. Justice climate, the shared perception of how fairly an organization treats its members (Ambrose & Schminke, 2009), has been shown to shape service-oriented OCB both directly and through work engagement (Kloutsiniotis & Mihail, 2020; Tsai et al., 2022; Rahman & Karim, 2022). Service climate, employees' shared perception of the practices, procedures, and behaviors that are expected, supported, and rewarded with regard to customer service (Schneider et al., 1998), has similarly been linked to service-oriented OCB, often via work engagement (Alqhaiwi & Luu, 2024; Asante et al., 2022; Kloutsiniotis & Mihail, 2020). Work engagement - a positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption (Schaufeli et al., 2002) - is theorized, under the Job Demands-Resources (JD-R) framework (Bakker & Demerouti, 2007) and Social Exchange Theory (Blau, 1964), to be the psychological mechanism that translates organizational resources such as justice and service climate into extra-role service behavior.

Even so, three gaps remain. First, most prior evidence on this model comes from hospitality firms and public-sector organizations outside Indonesia - Greek hotels (Kloutsiniotis & Mihail, 2020), Jordanian public organizations (Alqhaiwi & Luu, 2024), Taiwanese multi-industry employees (Tsai et al., 2022), and Bangladeshi universities (Rahman & Karim, 2022) - leaving its applicability to Indonesian F&B distribution largely untested. Second, almost no study has examined this model in a B2B distribution context, whose relational dynamics (long-term, operationally complex, less consumer-facing) differ from B2C hospitality settings. Third, the mediating role of work engagement shows inconsistent empirical support: Kloutsiniotis and Mihail (2020) found partial mediation across all paths, while Rahman and Karim (2022) found mediation for some justice dimensions but not others, suggesting the mechanism may be context-dependent.

Against this backdrop, the present study tests the effects of justice climate and service climate on employee service behavior, with work engagement as a mediator, among DSM employees serving foodservice customers. The conceptual model adapts Kloutsiniotis and Mihail's (2020) framework to the B2B F&B distribution context in Indonesia. The study aims to: (1) test the effects of justice climate and service climate on ESB; (2) test the effects of justice climate and service climate on work engagement; (3) test the effect of work engagement on ESB; and (4) test the mediating role of work engagement in the justice climate-ESB and service climate-ESB relationships. The paper is expected to extend the generalizability of the JD-R and social-exchange-based model of service behavior to a new industry and relational context, and to provide DSM and comparable F&B distributors with an evidence base for strengthening organizational climate and employee engagement as levers of service quality.

### **Justice Climate**

Justice climate is conceptually defined as a shared perception of the extent to which an organization treats its members fairly, encompassing distributive, procedural, interpersonal, and informational dimensions of fairness (Ambrose & Schminke, 2009; Ambrose et al., 2021). In this study, the construct was measured from individual employee responses and was not aggregated to a workgroup level using rwg, ICC(1), or ICC(2). Accordingly, the empirical results are interpreted as employees' individual perceptions of the justice climate rather than as a formally validated group-level climate.

### **Service Climate**

Service climate refers to employees' perceptions of the practices, procedures, and behaviors that are expected, supported, and rewarded by the organization with respect to customer service and service quality (Schneider et al., 1998). It encompasses customer orientation, managerial support, recognition of service quality, service resources, and use of customer feedback. As with justice climate, service climate was analyzed at the individual-response level in this study; no workgroup-level aggregation statistics were calculated. The findings therefore concern perceived service climate at the employee level.

### **Work Engagement**

Work engagement is a positive, fulfilling, work-related state of mind characterized by vigor (high energy and mental resilience), dedication (a strong sense of significance, enthusiasm, and pride), and absorption (full concentration and engrossment in work) (Schaufeli et al., 2002). Under the JD-R theory, engagement arises when job resources - organizational, social, or psychological features of the job that help employees achieve goals, reduce demands, or stimulate growth - are sufficiently available (Bakker & Demerouti, 2007; Bakker & de Vries, 2021).

### **Employee Service Behavior**

Employee service behavior (ESB) is used in this article as an overarching label for the service behavior examined. Empirically, however, ESB is operationalized entirely through Bettencourt et al.'s (2001) service-oriented organizational citizenship behavior scale, as adapted by Kloutsiniotis and Mihail (2020). The measured domain is therefore limited to discretionary, extra-role service behaviors comprising loyalty, service delivery, and participation, rather than all possible forms of employee behavior during service delivery. Within this boundary, ESB extends beyond compliance with SOPs and minimum service standards to include employee-initiated problem-solving and participation in service improvement.

## Theoretical Foundations and Hypothesis Development

The hypothesized relationships draw on three complementary theoretical perspectives: Social Exchange Theory (Blau, 1964), which explains how positive treatment from the organization generates a felt obligation to reciprocate through extra-role behavior; the Job Demands-Resources (JD-R) theory (Bakker & Demerouti, 2007; Bakker & de Vries, 2021), which explains how job resources such as justice and service climate fuel motivational processes that build engagement; and the Norm of Reciprocity (Gouldner, 1960), which explains why engaged employees voluntarily extend themselves for customers and colleagues. **Justice climate and employee service behavior.** When employees collectively perceive that the organization treats them fairly - in outcome distribution, decision-making procedures, and interpersonal conduct - they develop a shared sense of obligation to reciprocate through voluntary, customer-benefiting behavior (Ambrose et al., 2021). Kloutsiniotis and Mihail (2020) found justice climate positively predicted service-oriented OCB among Greek hotel employees; Tsai et al. (2022), applying the Theory of Planned Behavior, found organizational justice shaped work attitudes that in turn drove service-oriented OCB intentions among Taiwanese employees; and Rahman and Karim (2022) found all four justice dimensions positively related to OCB among Bangladeshi university faculty. Based on this convergence of evidence:

H1: Justice climate has a positive effect on employee service behavior.

**Justice climate and work engagement.** Under JD-R theory, justice climate functions as an organizational resource that signals fair recognition of employee contributions, fostering the psychological safety and trust needed for employees to invest energy (vigor), commitment (dedication), and focus (absorption) in their work (van Roekel et al., 2024). Kloutsiniotis and Mihail (2020) found justice climate positively predicted work engagement in a hospitality setting, while Rahman and Karim (2022) found organizational justice dimensions enhanced faculty engagement, albeit with varying strength across dimensions. Accordingly:

H2: Justice climate has a positive effect on work engagement.

**Service climate and employee service behavior.** Service climate signals that the organization values and rewards excellent service, encouraging employees to align their behavior with this expectation and, through social exchange, to reciprocate perceived organizational commitment to service quality with extra-role service behaviors such as advocacy and proactive problem-solving (Schneider et al., 1998). Kloutsiniotis and Mihail (2020) found a positive effect of service climate on service-oriented OCB among hotel employees; Asante et al. (2022) showed service climate to be the central mechanism linking HR practices to service interaction quality in high-contact service industries; and Alqhaiwi and Luu (2024) found service climate strengthened the translation of job resources into service behavior in Jordanian public organizations. Hence:

H3: Service climate has a positive effect on employee service behavior.

**Service climate and work engagement.** A strong service climate provides contextual resources - role clarity and motivational support - that help employees manage job demands more effectively (Bakker & Demerouti, 2007); when the organization consistently demonstrates commitment to service quality through training, recognition, and feedback, employees gain clarity and confidence that increase their energy, dedication, and absorption at work (Schneider et al., 1998). Kloutsiniotis and Mihail (2020) found service climate positively predicted work engagement among Greek hotel employees; Alqhaiwi and Luu (2024) found similar effects in Jordanian public organizations; and Asante et al. (2022) linked service-oriented high-performance work systems to engagement via service climate. Thus:

H4: Service climate has a positive effect on work engagement.

**Work engagement and employee service behavior.** Engaged employees - high in vigor, dedication, and absorption - tend to exceed formal role expectations and contribute extra effort to organizations and customers alike; under the Norm of Reciprocity (Gouldner, 1960), their emotional investment in work translates into a voluntary search for solutions, support for colleagues, and creative improvement of service quality (van Roekel et al., 2024). Kloutsiniotis and Mihail (2020), Rahman and Karim (2022), and Alqhaiwi and Luu (2024) each found significant positive effects of work engagement on service-oriented OCB across hospitality, higher-education, and public-sector settings, while Luan et al. (2022) linked engagement-driven service behavior directly to customer satisfaction outcomes. Therefore:

H5: Work engagement has a positive effect on employee service behavior.

**Mediating role of work engagement.** Integrating Social Exchange Theory and JD-R theory, justice climate and service climate are theorized to build work engagement through a motivational pathway, with engaged employees then translating that psychological state into extra-role service behavior - positioning work engagement as a transmitting mechanism between organizational climate and individual service behavior. Kloutsiniotis and Mihail (2020) found partial mediation by work engagement in both the justice climate-OCB and service climate-OCB relationships, while Rahman and Karim (2022) found mediation to be selective across justice dimensions and Alqhaiwi and Luu (2024) confirmed the mediating role of engagement between job resources and service behavior. This variation across contexts underscores the need to test the mechanism in a new setting:

H6: Work engagement mediates the effect of justice climate on employee service behavior.

H7: Work engagement mediates the effect of service climate on employee service behavior.

### Conceptual Framework

Figure 1 presents the conceptual framework tested in this study. Justice climate and service climate are positioned as antecedents of work engagement and employee service behavior, with work engagement also examined as a mediator.

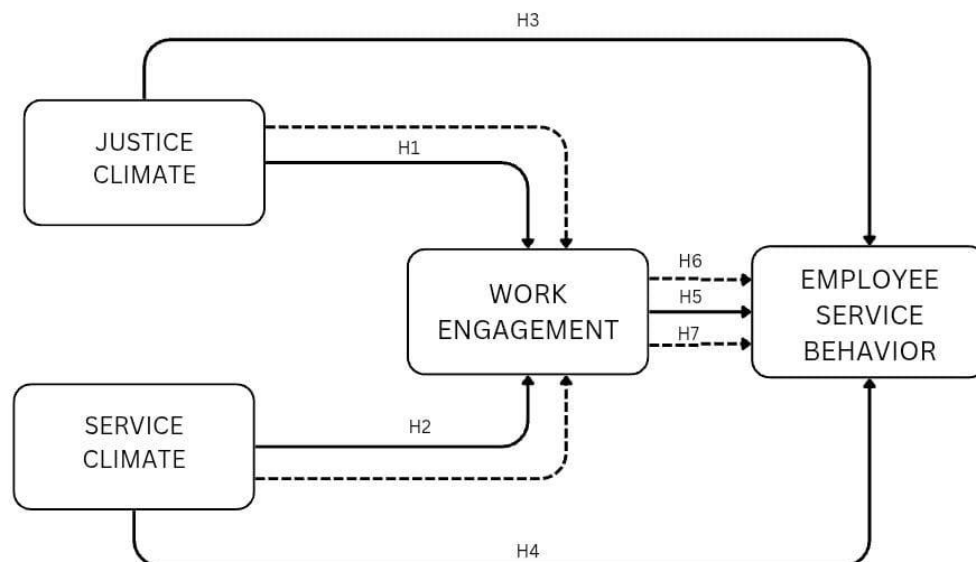


Figure 1. Conceptual Framework

### METHODS

This study used a quantitative, explanatory, cross-sectional design to test hypothesized structural relationships among justice climate, service climate, work engagement, and ESB, derived from theory and prior empirical findings (Hair et al., 2022). Because all variables were

measured at one point in time, the estimated paths are interpreted as theory-based associations and do not establish causal effects (Kloutsiniotis & Mihail, 2020).

### **Setting Population and Sample**

The study was conducted at PT Dinamika Sumber Makmur (DSM), a Jakarta-headquartered F&B importer and distributor serving corporate customers across Indonesia, including foodservice clients such as hotels, restaurants, cafes, catering companies, bakeshops, and entertainment venues. DSM was selected because internal data documented a substantive, worsening service-behavior problem in its foodservice segment (see Introduction). The target population comprised all DSM employees directly involved in serving foodservice customers - sales representatives, customer service staff, logistics coordinators, and operational staff who interact regularly with foodservice clients - estimated at 50 employees based on internal company records.

The eligible population consisted of 50 employees, and 50 valid responses were obtained. The achieved sample therefore represents total sampling, or a census of the identified eligible population, with a 100 percent response rate. The earlier simple-random-sampling and Slovin rationale was removed because no subset of the eligible population was ultimately analyzed. Because the population size fixed the maximum available sample at 50 and no a priori statistical power analysis was conducted, the sample size should be considered when interpreting non-significant paths and the generalizability of the findings.

### **Variables and Measurement**

The study involved two exogenous (independent) variables - justice climate (X1) and service climate (X2) - one mediating variable, work engagement (Z), and one endogenous (dependent) variable, employee service behavior (Y). All constructs were measured with instruments adapted from validated prior scales.

Justice climate was initially measured with 12 items from Ambrose and Schminke (2009), as adapted by Kloutsiniotis and Mihail (2020); 7 items were retained (JC1, JC2, JC5, JC8, JC9, JC10, and JC12), while JC3, JC4, JC6, JC7, and JC11 were removed. Service climate started with 15 items from Schneider et al. (1998), as adapted by Kloutsiniotis and Mihail (2020); 7 were retained (SC2, SC4, SC9, SC10, SC11, SC13, and SC15), while SC1, SC3, SC5, SC6, SC7, SC8, SC12, and SC14 were removed. Work engagement started with the 9-item UWES (Schaufeli & Bakker, 2004); 8 items were retained (WE1-WE6, WE8, and WE9), and WE7 was removed. ESB started with 9 service-oriented OCB items from Bettencourt et al. (2001), as adapted by Kloutsiniotis and Mihail (2020); 6 were retained (ESB1, ESB4, ESB5, ESB6, ESB8, and ESB9), while ESB2, ESB3, and ESB7 were removed.

Justice climate, service climate, and work engagement items were rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Because ESB captures behavioral frequency rather than attitude, it was measured with a five-point Behavioral Observation Scale (Latham & Wexley, 1977; 1 = never to 5 = always), consistent with Kloutsiniotis and Mihail (2020) and related studies. The questionnaire also collected respondent demographic data (gender, age, education, position, and tenure) and was distributed online.

### **Data Analysis**

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS 4. PLS-SEM was selected to estimate the hypothesized structural relationships, explain variance in the endogenous constructs, and evaluate the reflective measurement model with fewer distributional assumptions than covariance-based SEM (Hair et al., 2022). This analytical choice does not by itself overcome the limits of the cross-sectional design or the small sample.

The measurement model was evaluated through: (1) individual indicator reliability, with outer loadings of at least 0.70 preferred and indicators between 0.40 and 0.70 considered in conjunction with construct reliability and convergent validity; (2) Composite Reliability and Cronbach's alpha of at least 0.70; (3) Average Variance Extracted (AVE) of at least 0.50; and (4) discriminant validity using the Heterotrait-Monotrait Ratio (HTMT) criterion below 0.85 (Henseler et al., 2015; Hair et al., 2022).

## RESULTS AND DISCUSSION

### Results

#### Respondent Profile

A total of 50 respondents participated: 29 (59%) were male, and 21 (41%) were female. The largest age group was 35-44 years (17 respondents, 34%), followed by 25-34 years (15, 30%), 45-54 years (12, 24%), under 25 years (5, 10%), and over 54 years (1, 2%). Most respondents held a bachelor's degree (34, 68%), followed by diploma-level education (10, 20%), a master's degree (5, 10%), and senior-secondary education (1, 2%). Managers formed the largest position category (22, 44%), followed by staff (11, 22%), supervisors (9, 18%), senior managers or department heads (5, 10%), and directors (3, 6%). Regarding tenure, 21 respondents (42%) had worked at DSM for 1-2 years, 18 (36%) for more than 2 years, and 11 (22%) for less than 1 year (Table 1).

**Table 1. Respondent Profile (N = 50)**

| Characteristic | Category                    | n  | %   |
|----------------|-----------------------------|----|-----|
| Gender         | Male                        | 29 | 59% |
|                | Female                      | 21 | 41% |
| Age            | < 25 years                  | 5  | 10% |
|                | 25-34 years                 | 15 | 30% |
|                | 35-44 years                 | 17 | 34% |
|                | 45-54 years                 | 12 | 24% |
|                | > 54 years                  | 1  | 2%  |
| Education      | Senior secondary            | 1  | 2%  |
|                | Diploma (D1/D2/D3)          | 10 | 20% |
|                | Bachelor's (S1)             | 34 | 68% |
|                | Master's (S2)               | 5  | 10% |
| Position       | Director                    | 3  | 6%  |
|                | Senior Manager / Dept. Head | 5  | 10% |
|                | Manager                     | 22 | 44% |
|                | Supervisor                  | 9  | 18% |
|                | Staff                       | 11 | 22% |
| Tenure         | < 1 year                    | 11 | 22% |
|                | 1-2 years                   | 21 | 42% |
|                | > 2 years                   | 18 | 36% |

Source: SmartPLS 4 Output (2026)

## Measurement Model

Convergent validity. Following the initial estimation, indicators with loadings below 0.50 that reduced measurement quality were removed, producing the retained sets reported above and in Table 2. Outer loadings ranged from 0.749 to 0.892 for JC, 0.644 to 0.749 for SC, 0.638 to 0.822 for WE, and 0.620 to 0.800 for ESB. Several retained indicators remained below 0.70, including SC2 (0.698), SC15 (0.644), WE2 (0.675), WE6 (0.638), WE8 (0.651), ESB5 (0.620), and ESB6 (0.628). They were retained because each construct met the reported construct-level requirements for AVE (at least 0.50) and Composite Reliability (at least 0.70), while retaining the measurement coverage represented in the adapted scales. Item-by-item AVE and CR values after hypothetical deletion were not preserved in the thesis output and are therefore not reconstructed here. This limitation should be considered when evaluating the retained low-loading indicators.

**Table 2. Outer Loadings by Construct and Indicator**

| Construct                 | Indicator | Outer Loading |
|---------------------------|-----------|---------------|
| Justice Climate           | JC1       | 0.776         |
|                           | JC2       | 0.758         |
|                           | JC5       | 0.749         |
|                           | JC8       | 0.764         |
|                           | JC9       | 0.892         |
|                           | JC10      | 0.810         |
|                           | JC12      | 0.824         |
| Service Climate           | SC2       | 0.698         |
|                           | SC4       | 0.721         |
|                           | SC9       | 0.749         |
|                           | SC10      | 0.743         |
|                           | SC11      | 0.749         |
|                           | SC13      | 0.741         |
|                           | SC15      | 0.644         |
| Work Engagement           | WE1       | 0.739         |
|                           | WE2       | 0.675         |
|                           | WE3       | 0.746         |
|                           | WE4       | 0.745         |
|                           | WE5       | 0.822         |
|                           | WE6       | 0.638         |
|                           | WE8       | 0.651         |
| Employee Service Behavior | WE9       | 0.745         |
|                           | ESB1      | 0.722         |
|                           | ESB4      | 0.771         |
|                           | ESB5      | 0.620         |
|                           | ESB6      | 0.628         |
|                           | ESB8      | 0.800         |

| Construct | Indicator | Outer Loading |
|-----------|-----------|---------------|
|           | ESB9      | 0.702         |

Source: SmartPLS 4 Output (2026)

**Reliability.** All constructs exceeded the 0.70 threshold on both Cronbach's alpha and Composite Reliability, confirming internal consistency (Table 3).

**Table 3. Construct Reliability and Convergent Validity**

| Construct                       | Cronbach's Alpha | CR (rho_a) | CR (rho_c) | AVE   |
|---------------------------------|------------------|------------|------------|-------|
| Employee Service Behavior (ESB) | 0.804            | 0.815      | 0.858      | 0.504 |
| Justice Climate (JC)            | 0.906            | 0.922      | 0.924      | 0.636 |
| Service Climate (SC)            | 0.848            | 0.852      | 0.883      | 0.521 |
| Work Engagement (WE)            | 0.868            | 0.872      | 0.897      | 0.522 |

Source: SmartPLS 4 Output (2026)

**Discriminant validity.** All HTMT values were below the prespecified 0.85 criterion (Table 4), ranging from 0.407 (SC-ESB) to 0.821 (SC-JC). The comparatively high JC-SC (0.821) and JC-WE (0.819) values indicate substantial conceptual proximity. Even so, the constructs remain theoretically distinct: justice climate concerns perceived fairness, service climate concerns organizational support and expectations for service quality, and work engagement concerns employees' vigor, dedication, and absorption. The values support discriminant validity under the selected criterion while warranting cautious interpretation of their empirical distinctiveness.

**Table 4. Discriminant Validity Using HTMT**

| Construct Pair | HTMT  |
|----------------|-------|
| JC ↔ ESB       | 0.504 |
| SC ↔ ESB       | 0.407 |
| SC ↔ JC        | 0.821 |
| WE ↔ ESB       | 0.684 |
| WE ↔ JC        | 0.819 |
| WE ↔ SC        | 0.676 |

Source: SmartPLS 4 Output (2026)

## Structural Model

**Collinearity.** All VIF values were below the 3.3 threshold, ranging from 2.188 to 3.243, indicating no problematic multicollinearity, although the JC → ESB path (VIF = 3.243) was noted as comparatively high (Table 5).

**Table 5. Collinearity Statistics**

| Path     | VIF   |
|----------|-------|
| JC → ESB | 3.243 |
| JC → WE  | 2.188 |
| SC → ESB | 2.216 |
| SC → WE  | 2.188 |

| Path     | VIF   |
|----------|-------|
| WE → ESB | 2.335 |

Source: SmartPLS 4 Output (2026)

**Coefficient of determination.** Justice climate, service climate, and work engagement jointly explained 37.0 percent of the variance in ESB ( $R^2 = 0.370$ ; adjusted  $R^2 = 0.329$ ), a moderate-to-weak level of explanatory power, with the remaining 63.0 percent attributable to factors outside the model. Justice climate and service climate jointly explained 57.2 percent of the variance in work engagement ( $R^2 = 0.572$ ; adjusted  $R^2 = 0.554$ ), a moderate level of explanatory power (Table 6).

**Table 6. Coefficient of Determination**

| Endogenous Construct            | R-square | R-square adjusted |
|---------------------------------|----------|-------------------|
| Employee Service Behavior (ESB) | 0.370    | 0.329             |
| Work Engagement (WE)            | 0.572    | 0.554             |

Source: SmartPLS 4 Output (2026)

**Effect size.** Using the conventional f-squared guidelines of 0.02, 0.15, and 0.35 for small, medium, and large effects (Cohen, 1988; Hair et al., 2022), justice climate exerted a large effect on work engagement ( $f^2 = 0.482$ ), while work engagement exerted a medium effect on ESB ( $f^2 = 0.204$ ). Justice climate's direct effect on ESB ( $f^2 = 0.006$ ), service climate's effect on ESB ( $f^2 = 0.002$ ), and service climate's effect on work engagement ( $f^2 = 0.013$ ) were below the 0.02 threshold.

**Table 7. Effect Size**

| Path     | f-square | Category |
|----------|----------|----------|
| JC → ESB | 0.006    | None     |
| JC → WE  | 0.482    | Large    |
| SC → ESB | 0.002    | None     |
| SC → WE  | 0.013    | None     |
| WE → ESB | 0.204    | Medium   |

Source: SmartPLS 4 Output (2026)

Following evaluation of the measurement and structural models, nonparametric bootstrapping in SmartPLS 4 was used to assess the hypothesized paths. The procedure followed the thesis specification of 5,000 bootstrap subsamples, two-tailed testing at the 5 percent significance level, and a 95 percent confidence-interval criterion for indirect effects. The retained thesis output reports path coefficients, t-statistics, and p-values; confidence-interval bounds were not available for reproduction in this article. Figure 1 presents the final model and the reported path results.

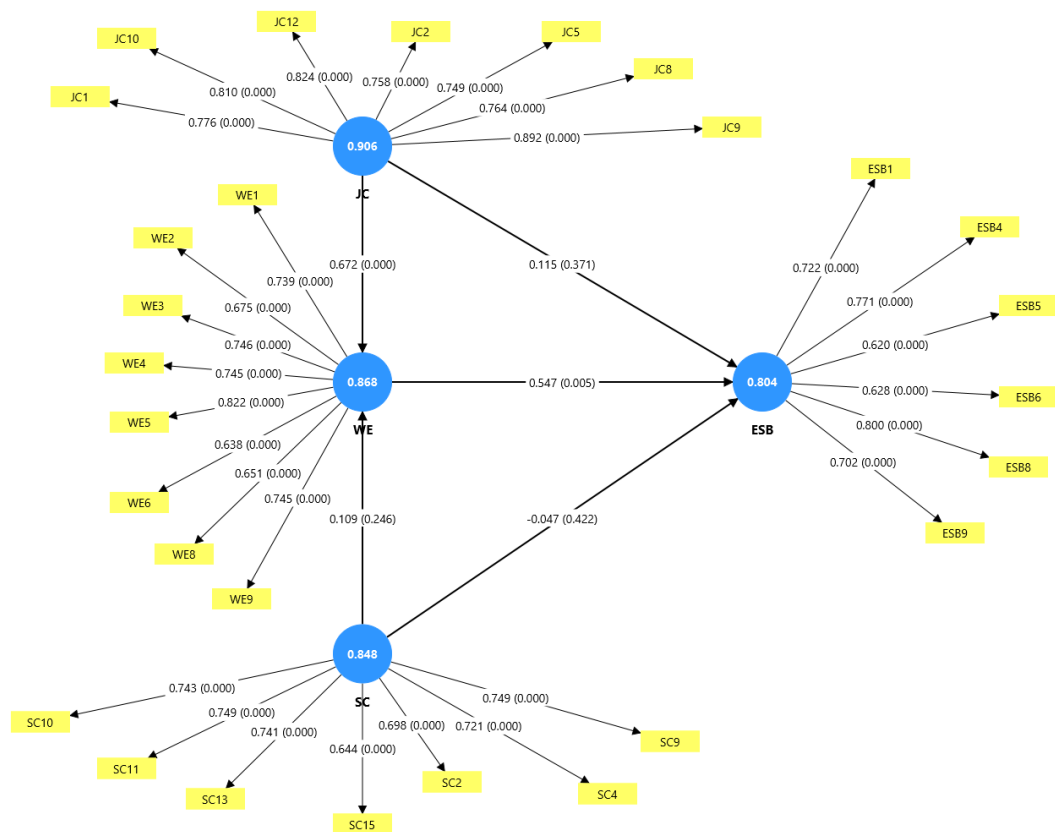


Figure 2. Measurement and Structural Model

**Hypothesis testing (path coefficients).** Table 8 summarizes the structural path results. Justice climate had a significant positive effect on work engagement ( $\beta = 0.672$ ,  $t = 5.291$ ,  $p < 0.001$ ), supporting H2. Service climate had no significant effect on work engagement ( $\beta = 0.109$ ,  $t = 0.686$ ,  $p = 0.246$ ), so H4 was not supported. Justice climate had a positive but non-significant direct effect on ESB ( $\beta = 0.115$ ,  $t = 0.329$ ,  $p = 0.371$ ), so H1 was not supported. Service climate had a small, negative, and non-significant effect on ESB ( $\beta = -0.047$ ,  $t = 0.196$ ,  $p = 0.422$ ), so H3 was not supported. Work engagement had a significant positive effect on ESB ( $\beta = 0.547$ ,  $t = 2.591$ ,  $p = 0.005$ ), supporting H5.

Table 8. Path Coefficients and Hypothesis Testing

| Hypothesis / Path        | $\beta$ (O) | t-statistic | p-value | Result        |
|--------------------------|-------------|-------------|---------|---------------|
| H2: JC $\rightarrow$ WE  | 0.672       | 5.291       | < 0.001 | Supported     |
| H4: SC $\rightarrow$ WE  | 0.109       | 0.686       | 0.246   | Not supported |
| H1: JC $\rightarrow$ ESB | 0.115       | 0.329       | 0.371   | Not supported |
| H3: SC $\rightarrow$ ESB | -0.047      | 0.196       | 0.422   | Not supported |
| H5: WE $\rightarrow$ ESB | 0.547       | 2.591       | 0.005   | Supported     |

Source: SmartPLS 4 Output (2026)

**Mediation (specific indirect effects).** The indirect association from justice climate through work engagement to ESB was significant ( $\beta = 0.368$ ,  $t = 2.378$ ,  $p = 0.009$ ), supporting H6. Together with the non-significant direct path, this statistical pattern is classified as indirect-only mediation within the tested model. It indicates that the observed association between justice climate and ESB was transmitted through work engagement in this sample; it does not establish a causal mechanism or rule out other pathways. The indirect path from service climate

through work engagement to ESB was not significant ( $\beta = 0.060$ ,  $t = 0.537$ ,  $p = 0.296$ ), so H7 was not supported (Table 9).

**Table 9. Specific Indirect Effects**

| Hypothesis / Path                         | $\beta$ (O) | t-statistic | p-value | Mediation Type       |
|-------------------------------------------|-------------|-------------|---------|----------------------|
| H6: JC $\rightarrow$ WE $\rightarrow$ ESB | 0.368       | 2.378       | 0.009   | Indirect-only (full) |
| H7: SC $\rightarrow$ WE $\rightarrow$ ESB | 0.060       | 0.537       | 0.296   | No mediation         |

Source: SmartPLS 4 Output (2026)

**Predictive assessment.** These results were produced by PLSpredict rather than blindfolding. For work engagement, all indicator-level  $Q^2$ predict values were positive (0.153-0.334), and the PLS-SEM RMSE was lower than the linear-model benchmark for all eight retained indicators. For ESB,  $Q^2$ predict was positive for ESB1, ESB4, and ESB6 but negative for ESB5 (-0.027), ESB8 (-0.108), and ESB9 (-0.052). Nevertheless, the PLS-SEM RMSE was lower than the linear-model benchmark for five of the six ESB indicators; ESB1 was the exception. The negative  $Q^2$ predict values indicate that predictions for those indicators did not outperform the naive indicator-average benchmark, so predictive performance for ESB is mixed rather than uniformly adequate.

Overall, of the seven hypotheses tested, three were supported (H2, H5, H6) and four were not supported (H1, H3, H4, H7). The pattern indicates that justice climate shapes employee service behavior only indirectly, through work engagement, while service climate did not significantly influence either work engagement or ESB in this sample.

## Discussion

1. Justice climate and work engagement (H2, supported). The strong, significant path from justice climate to work engagement ( $\beta = 0.672$ ) confirms that perceived organizational fairness functions as a job resource capable of elevating employees' psychological engagement, consistent with JD-R theory (Bakker & Demerouti, 2007) and with Kloutsiniotis and Mihail's (2020) finding that organizational justice is a principal determinant of work engagement in service settings. Within DSM, the large effect size ( $f^2 = 0.482$ ) - the single strongest relationship in the model - suggests that fairness in decision-making, procedural consistency, objective reward allocation, and open supervisor-employee communication are unusually central to how DSM employees experience their work, more so than any other resource captured in this model.
2. Service climate and work engagement (H4, not supported). Service climate showed no significant association with work engagement ( $\beta = 0.109$ ,  $p = 0.246$ ), diverging from Kloutsiniotis and Mihail (2020). One possible interpretation is that employees may place greater motivational value on other work resources than on service-climate signals. The suggestion that distribution accuracy, operational efficiency, or sales targets receive greater emphasis is plausible in a B2B distributor, but it was not tested using KPI or job-description data in this study and should not be treated as an established explanation.
3. Justice climate and ESB (H1, not supported - indirect association only). Justice climate did not have a significant direct association with ESB ( $\beta = 0.115$ ,  $p = 0.371$ ), but its indirect association through work engagement was significant. This pattern is consistent with, but does not causally prove, the reciprocity process proposed by Social Exchange Theory. Explanations involving sales targets, delivery accuracy, or logistics coordination were not directly measured and therefore remain possible contextual interpretations rather than demonstrated causes of the result.
4. Service climate and ESB (H3, not supported). Service climate showed no significant direct association with ESB ( $\beta = -0.047$ ,  $p = 0.422$ ). This differs from findings in hospitality settings such as Kloutsiniotis and Mihail's (2020) Greek hotel sample. The difference may

reflect industry and relational context, but it may also arise from sample characteristics, measurement, organizational structure, or other omitted variables. The present cross-sectional, single-company design cannot determine which explanation accounts for the divergence.

5. Work engagement and ESB (H5, supported). Work engagement had a significant positive effect on ESB ( $\beta = 0.547$ ,  $t = 2.591$ ,  $p = 0.005$ ) and the second-largest effect size in the model ( $f^2 = 0.204$ ), confirming that engagement is a key psychological driver of service behavior, consistent with JD-R theory and with Kloutsiniotis and Mihail (2020). Practically, this indicates that DSM should treat engagement-building as a direct lever for improving service quality, not merely a secondary HR outcome.
6. Mediating role of work engagement (H6 supported, H7 not supported). The significant indirect association between justice climate and ESB through work engagement ( $\beta = 0.368$ ,  $p = 0.009$ ), combined with a non-significant direct path, meets the statistical definition of indirect-only mediation (Zhao et al., 2010; Legate et al., 2024). In this tested model and sample, work engagement was the supported intervening pathway; the cross-sectional evidence does not establish that it is the sole causal route. The service climate indirect path was not significant ( $\beta = 0.060$ ,  $p = 0.296$ ), so no mediation was supported for H7.

Overall, the results differ from Kloutsiniotis and Mihail (2020), where both justice climate and service climate were significantly related to work engagement and service-oriented OCB in Greek hospitality firms. Industry and relational context may contribute to this difference, but the divergence could also reflect sample composition, measurement, organizational structure, or other unmeasured factors. It should therefore be interpreted as a contextual possibility rather than confirmation that industry alone caused the different pattern.

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

Based on the results of the seven hypothesis tests, the following conclusions are drawn:

1. Justice climate did not have a significant direct effect on employee service behavior; therefore, H1 was not supported.
2. Justice climate had a strong, positive, and significant effect on work engagement; therefore, H2 was supported.
3. Service climate did not have a significant direct effect on employee service behavior; therefore, H3 was not supported.
4. Service climate did not have a significant effect on work engagement; therefore, H4 was not supported.
5. Work engagement had a positive and significant effect on employee service behavior; therefore, H5 was supported.
6. Work engagement significantly mediated the relationship between justice climate and employee service behavior through indirect-only mediation; therefore, H6 was supported.
7. Work engagement did not mediate the relationship between service climate and employee service behavior; therefore, H7 was not supported.

Collectively, these findings show that justice climate was associated with employee service behavior through work engagement, whereas service climate had no significant direct or indirect association in the tested model. The results support work engagement as the intervening pathway for justice climate in this sample without establishing that it is the only causal mechanism operating within DSM.

### **Theoretical Implications**

The findings are consistent with JD-R theory in showing that the measured organizational resources differed in their associations with work engagement. Justice climate had a strong association with engagement, whereas service climate did not. The indirect-only pattern is also consistent with a Social Exchange Theory interpretation in which perceived fairness relates to service behavior through engagement. Given the cross-sectional design, these findings refine the contextual application of the theories without establishing causal processes.

### **Managerial Implications**

The evidence directly supports managerial attention to justice climate and work engagement at DSM. Consistent policies, transparent decisions, equitable treatment, clear reward criteria, and constructive supervisor-employee relationships are practical areas aligned with the measured justice construct. Recommendations concerning role clarity, service resources, cross-functional coordination, and escalation processes were not directly tested in the model; they should be treated as practical extensions for managerial consideration rather than demonstrated effects of this study.

### **Limitations**

The small, single-company sample, cross-sectional design, and reliance on self-reported data limit generalizability and causal interpretation. Although justice climate and service climate were conceptually framed as shared constructs, the analysis used individual responses without workgroup aggregation or rwg, ICC(1), and ICC(2) assessment. The results must therefore be interpreted as relationships involving employees' individual perceptions of climate, creating a construct-level mismatch with the group-level definitions. No a priori statistical power analysis was conducted, and item-deletion effects on AVE and CR were not preserved.

### **Recommendations**

Future research should use larger multi-company samples, conduct power analysis before data collection, apply longitudinal and multilevel designs, justify aggregation statistically, and incorporate supervisor, peer, or customer assessments.

### **Author Contributions**

Santoso contributed to the study conceptualization, data collection, data analysis, and preparation of the initial manuscript. Martinus Tukiran contributed to supervision, methodological guidance, critical review, and manuscript refinement. Both authors reviewed and approved the final manuscript.

### **AI Disclosure Statement**

During preparation of this manuscript, the author used ChatGPT to assist with template formatting, language editing, and translation of the abstract. The author reviewed and revised the output and accepts full responsibility for the content of the publication.

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## REFERENCES

- Agriculture and Agri-Food Canada. (2025). Sector trend analysis – Foodservice profile – Indonesia. *Government of Canada*. <https://agriculture.canada.ca/en/international-trade/reports-and-guides/sector-trend-analysis-foodservice-profile-indonesia>
- Alqhaiwi, Z. O., & Luu, T. (2024). Workplace spirituality and service-oriented performance via work engagement in public organizations: The moderating role of service climate. *Public Management Review*, 26(10), 2819–2846. <https://doi.org/10.1080/14719037.2023.2239245>
- Ambrose, M. L., Rice, D. B., & Mayer, D. M. (2021). Justice climate and workgroup outcomes: The role of coworker fair behavior and workgroup structure. *Journal of Business Ethics*, 172(1), 79–99. <https://doi.org/10.1007/s10551-019-04348-9>
- Ambrose, M. L., & Schminke, M. (2009). The role of overall justice judgments in organizational justice research: A test of mediation. *Journal of Applied Psychology*, 94(2), 491–500. <https://doi.org/10.1037/a0013203>
- Asante, D., Tang, C., Kwamega, M., & Asante, E. A. (2022). In pursuit of service encounter quality: Will service-oriented high-performance work systems benefit high-contact service industries? *Journal of Retailing and Consumer Services*, 68, 103037. <https://doi.org/10.1016/j.jretconser.2022.103037>
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Bakker, A. B., & de Vries, J. D. (2021). Job Demands-Resources theory and self-regulation: New explanations and remedies for job burnout. *Anxiety, Stress, & Coping*, 34(1), 1–21. <https://doi.org/10.1080/10615806.2020.1797695>
- Bettencourt, L. A., Gwinner, K. P., & Meuter, M. L. (2001). A comparison of attitude, personality, and knowledge predictors of service-oriented organizational citizenship behaviors. *Journal of Applied Psychology*, 86(1), 29–41. <https://doi.org/10.1037/0021-9010.86.1.29>
- Blau, P. M. (1964). Exchange and power in social life. *John Wiley & Sons*.
- Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). *Lawrence Erlbaum Associates*.
- Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25(2), 161–178. <https://doi.org/10.2307/2092623>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.). *SAGE Publications*.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43, 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Huang, L., Lin, S.-M. Y., & Hsieh, Y.-J. (2021). Cultivation of intrapreneurship: A framework and challenges. *Frontiers in Psychology*, 12, 731990. <https://doi.org/10.3389/fpsyg.2021.731990>
- Kloutsiniotis, P. V., & Mihail, D. M. (2020). The effects of high-performance work systems in employees' service-oriented OCB. *International Journal of Hospitality Management*, 90, 102610. <https://doi.org/10.1016/j.ijhm.2020.102610>
- Latham, G. P., & Wexley, K. N. (1977). Behavioral observation scales for performance appraisal purposes. *Personnel Psychology*, 30(2), 255–268. <https://doi.org/10.1111/j.1744-6570.1977.tb02092.x>
- Legate, A. E., Ringle, C. M., & Hair, J. F. (2024). PLS-SEM: A method demonstration in the R statistical environment. *Human Resource Development Quarterly*, 35(4), 501–529. <https://doi.org/10.1002/hrdq.21517>

- Luan, Y., Lv, M., & Wang, L. (2022). The spillover effect of life satisfaction on customer satisfaction: The mediating role of service-oriented organizational citizenship and the moderating role of competition climate. *Behavioral Sciences*, 12(8), 276. <https://doi.org/10.3390/bs12080276>
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington Books.
- Rahman, M. H. A., & Karim, D. N. (2022). Organizational justice and organizational citizenship behavior: The mediating role of work engagement. *Heliyon*, 8(5), e09450. <https://doi.org/10.1016/j.heliyon.2022.e09450>
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25(3), 293–315. <https://doi.org/10.1002/job.248>
- Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3(1), 71–92. <https://doi.org/10.1023/A:1015630930326>
- Schneider, B., White, S. S., & Paul, M. C. (1998). Linking service climate and customer perceptions of service quality: Test of a causal model. *Journal of Applied Psychology*, 83(2), 150–163. <https://doi.org/10.1037/0021-9010.83.2.150>
- Tsai, K.-C., Chou, T.-H., Kittikowit, S., Hongsuchon, T., Lin, Y.-C., & Chen, S.-C. (2022). Extending theory of planned behavior to understand service-oriented organizational citizen behavior. *Frontiers in Psychology*, 13, 839688. <https://doi.org/10.3389/fpsyg.2022.839688>
- van Roekel, H., Wigger, E. F. J., Veldkamp, B. P., & Bakker, A. B. (2024). What is work engagement? A text mining approach using employees' self-narratives. *Applied Psychology*, 73(3), 1071–1102. <https://doi.org/10.1111/apps.12501>
- Ye, D., Xie, W.-L., & Zheng, L. (2023). Unleashing intrapreneurial behavior: Exploring configurations of influencing factors among grassroots employees. *Behavioral Sciences*, 13(9), 724. <https://doi.org/10.3390/bs13090724>
- Zhao, X., Lynch, J. G., Jr., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197–206. <https://doi.org/10.1086/651257>