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**DATA-DRIVEN EVALUATION OF DIVERSITY AND INCLUSION POLICIES: A POLICY-ORIENTED COMPARATIVE STUDY OF EMPLOYEE ENGAGEMENT AND RETENTION IN MUMBAI SMES USING DIGITAL ANALYTICS**

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**ABSTRACT**

*Diversity and Inclusion (D&I) policies are increasingly recognized as strategic drivers of organizational sustainability rather than symbolic compliance mechanisms. While multinational corporations have institutionalized structured inclusion frameworks supported by analytics, small and medium enterprises (SMEs) in emerging economies frequently operate with informal or undocumented practices. This study provides a comprehensive data-driven and policy-oriented evaluation of D&I policies within Mumbai-based SMEs and examines their impact on employee engagement and retention intention.*

*Primary data were collected from 312 employees across 40 SMEs using a structured 31-item Likert-scale questionnaire. After screening, 298 valid responses were retained for analysis. The study employed advanced statistical modelling techniques, including reliability analysis, Confirmatory Factor Analysis (CFA), Structural Equation Modelling (SEM), bootstrapped mediation analysis, and multi-group comparison. Results indicate that D&I policy perception significantly predicts employee engagement ( $\beta = 0.69, p < 0.001$ ), which in turn strongly predicts retention intention ( $\beta = 0.75, p < 0.001$ ). Engagement partially mediates the D&I-retention relationship. SMEs with structured D&I policies demonstrate significantly higher engagement and retention levels than those without formal frameworks.*

*The study contributes to interdisciplinary social science research by integrating organizational behaviour theory, HR analytics, and policy evaluation frameworks. It proposes a Digital D&I Policy Monitoring Model tailored for SMEs to strengthen evidence-based inclusion governance.*

**Keywords:** *Diversity and Inclusion; Employee Engagement; Retention Intention; SMEs; HR Analytics; Structural Equation Modelling; Policy-Oriented Research; Digital Governance; Mumbai*

**1. INTRODUCTION****1.1 Context and Rationale**

Workforce diversity in India has expanded significantly due to globalization, urbanization, demographic transitions, increased female workforce participation, inter-state migration, and generational workforce shifts. Mumbai, as the financial capital of India, reflects this demographic heterogeneity within its SME ecosystem.

SMEs account for a substantial share of employment in the Indian economy. Despite their economic significance, SMEs often operate with informal human resource systems. Diversity and Inclusion policies, when present, are typically reactive rather than strategic.

Simultaneously, workforce expectations are evolving. Employees increasingly value fairness, inclusion, recognition, and participatory decision-making. Organizations that fail to institutionalize inclusive practices risk disengagement and turnover.

While diversity rhetoric has expanded, empirical measurement of D&I policy effectiveness in Indian SMEs remains limited.

This study addresses the critical question:

Do structured and digitally monitored D&I policies significantly enhance employee engagement and retention intention in Mumbai SMEs?

**1.2 Interdisciplinary Framing**

**This research integrates four domains:**

1. Human Resource Management
2. Organizational Behaviour
3. Public Policy Evaluation
4. Data Analytics

Such integration aligns with capacity-building objectives in social science research and strengthens both theoretical and practical contributions.

### **1.3 Problem Statement**

Despite increasing discourse around workplace diversity, empirical evaluation of structured D&I policies in SMEs is scarce. Many SMEs lack formal inclusion frameworks and systematic monitoring tools. Consequently, policy impact remains undocumented and poorly understood.

#### **There is insufficient quantitative evidence to determine:**

- Whether D&I policy perception enhances engagement
- Whether engagement mediates retention intention
- Whether SMEs with structured D&I policies outperform those without
- Whether digital analytics strengthens policy implementation

Therefore, a rigorous, data-driven, policy-oriented evaluation is required.

### **1.4 Research Objectives**

1. To examine the structural presence and perception of D&I policies in Mumbai SMEs.
2. To test the impact of D&I policy perception on employee engagement.
3. To evaluate the influence of engagement on retention intention.
4. To assess the mediating role of engagement.
5. To conduct multi-group comparative analysis between structured and non-structured D&I SMEs.
6. To develop a digital inclusion policy monitoring framework for SMEs.

## **2. REVIEW OF LITERATURE**

### **2.1 Theoretical Foundations**

#### **2.1.1 Social Exchange Theory (Blau, 1964)**

Social Exchange Theory posits that employees reciprocate perceived organizational support with loyalty and positive behaviours. Structured D&I policies enhance perceived fairness and support.

#### **2.1.2 Organizational Support Theory (Eisenberger et al., 1986)**

Perceived organizational support fosters emotional attachment and engagement.

#### **2.1.3 Equity Theory (Adams, 1965)**

Employees evaluate fairness in resource distribution. Perceived inequity leads to dissatisfaction and withdrawal.

#### **2.1.4 Resource-Based View (Barney, 1991)**

Inclusive human capital represents a strategic intangible asset that enhances competitive advantage.

### **2.2 Diversity and Inclusion Policies**

#### **D&I policies encompass:**

- Equal opportunity recruitment
- Anti-discrimination frameworks
- Inclusive leadership practices
- Grievance redressal mechanisms
- Flexible work arrangements

Research demonstrates that inclusive climates enhance collaboration and innovation (Shore et al., 2011; Nishii, 2013).

### **2.3 Employee Engagement**

Kahn (1990) conceptualized engagement as the harnessing of employees' selves to their work roles. Engaged employees display emotional commitment, absorption, and discretionary effort (Saks, 2006).

### **2.4 Retention Intention**

Retention intention reflects the psychological decision to remain within an organization. It predicts actual turnover behaviour (Hom et al., 2017).

## 2.5 Digital Analytics in HR Governance

### The integration of digital tools enables:

- Real-time engagement monitoring
- Predictive turnover modelling
- Policy benchmarking
- Data-driven decision-making

## 2.6 Research Gap

### Existing literature predominantly focuses on large corporations. There is limited:

- SEM-based empirical testing in SME contexts
- Policy-oriented quantitative evaluation
- Comparative analysis of structured vs non-structured SMEs
- Integration of digital monitoring frameworks

## 3. CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

### Proposed Structural Model:

D&I Policy Perception → Employee Engagement → Retention Intention

Engagement acts as mediator.

Multi-group comparison: Structured vs Non-Structured SMEs.

### Hypotheses

**H1:** D&I policy perception positively influences employee engagement.

**H2:** Employee engagement positively influences retention intention.

**H3:** Employee engagement mediates the relationship between D&I perception and retention intention.

**H4:** SMEs with structured D&I policies report significantly higher engagement.

**H5:** SMEs with structured D&I policies report significantly higher retention intention.

## 4. RESEARCH METHODOLOGY

### 4.1 Research Design

This study adopts a quantitative, explanatory, cross-sectional comparative research design. The purpose is to test hypothesized causal relationships between Diversity & Inclusion (D&I) policy perception, employee engagement, and retention intention within SMEs.

A policy-oriented evaluation framework is incorporated to examine how structured inclusion governance translates into measurable behavioural outcomes. Advanced statistical modelling is used to strengthen inferential validity.

### 4.2 Population and Sampling

#### Target Population

Employees working in registered SMEs located in the Mumbai Metropolitan Region.

#### Sampling Approach

Stratified purposive sampling was employed to ensure representation from SMEs with structured D&I frameworks and those without formal policies.

#### Sample Size

Total responses collected: 312

Valid responses after screening: 298

**Group distribution:**

- SMEs with structured D&I policies: 152 respondents
- SMEs without formal D&I policies: 146 respondents

The sample size exceeds the minimum requirement for Structural Equation Modelling (10 respondents per estimated parameter), ensuring adequate statistical power.

**4.3 Instrument Development**

**The structured questionnaire consisted of 31 items across five constructs:**

1. D&I Policy Perception (8 items)
2. Managerial Support for Inclusion (5 items)
3. Employee Engagement (9 items)
4. Retention Intention (5 items)
5. Digital Monitoring Perception (4 items)

Responses were recorded using a 5-point Likert scale.

Items were positively worded to minimize response confusion and maintain consistency.

**4.4 Data Screening and Assumptions Testing**

**Data were screened for:**

- Missing values (<2%, handled via mean substitution)
- Outliers (z-scores within acceptable limits)
- Normality (skewness and kurtosis between -2 and +2)

No severe multicollinearity was detected (VIF < 3).

**5. MEASUREMENT MODEL ASSESSMENT (CFA)**

Confirmatory Factor Analysis was conducted to validate construct dimensionality.

**5.1 Model Fit Indices**

Chi-square/df = 2.05

Comparative Fit Index (CFI) = 0.96

Tucker-Lewis Index (TLI) = 0.95

Root Mean Square Error of Approximation (RMSEA) = 0.057

Standardized Root Mean Square Residual (SRMR) = 0.043

All indices meet recommended thresholds, indicating strong model fit.

**5.2 Reliability and Validity****Internal Consistency****Cronbach's Alpha:**

- D&I Policy Perception = 0.91
- Engagement = 0.89
- Retention Intention = 0.88
- Managerial Support = 0.86
- Digital Monitoring = 0.84

**Convergent Validity**

Average Variance Extracted (AVE) > 0.50

Composite Reliability (CR) > 0.70

**Discriminant Validity**

The square root of AVE for each construct exceeded inter-construct correlations.

Thus, the measurement model demonstrates strong psychometric properties.

## 6. STRUCTURAL MODEL (SEM)

The structural model was tested to evaluate hypothesized relationships.

### 6.1 Direct Effects

D&I → Engagement

$\beta = 0.69, p < 0.001$

Engagement → Retention

$\beta = 0.75, p < 0.001$

D&I → Retention

$\beta = 0.22, p < 0.05$

These results support H1 and H2.

### 6.2 Model Explained Variance

$R^2$  Engagement = 0.48

$R^2$  Retention = 0.60

Thus, 60% of variance in retention intention is explained by engagement and D&I perception.

## 7. MEDIATION ANALYSIS

Bootstrapping (5000 resamples) was performed.

Indirect Effect (D&I → Engagement → Retention):

$\beta = 0.52$

95% Confidence Interval did not include zero.

This confirms partial mediation.

Thus, H3 is supported.

Employee engagement functions as the psychological mechanism translating inclusion policy perception into retention behaviour.

## 8. MULTI-GROUP COMPARATIVE ANALYSIS

Independent sample t-tests and multi-group SEM were conducted.

### 8.1 Engagement

Structured SMEs Mean = 4.16

Non-Structured SMEs Mean = 3.33

Difference significant at  $p < 0.001$

### 8.2 Retention Intention

Structured SMEs Mean = 4.25

Non-Structured SMEs Mean = 3.36

Difference significant at  $p < 0.001$

Multi-group SEM showed stronger path coefficients in structured D&I SMEs.

H4 and H5 are supported.

## 9. DISCUSSION

The findings provide robust empirical evidence that structured D&I policies significantly enhance employee engagement and retention in Mumbai SMEs.

Engagement emerges as the central mediating mechanism, reinforcing Social Exchange Theory and Organizational Support Theory.

The stronger relationships observed in structured SMEs highlight the importance of formal codification rather than informal practices.

Digital monitoring enhances transparency, consistency, and evidence-based governance.

This study extends inclusion research into SME contexts and demonstrates the value of advanced analytics in policy evaluation.

## 10. POLICY IMPLICATIONS

**For SME Owners:** Institutionalize written D&I frameworks and digital tracking systems.

**For HR Managers:** Implement quarterly engagement surveys and predictive retention dashboards.

**For Policymakers:** Encourage SME inclusion reporting standards and analytics adoption.

**For Researchers:** Advance interdisciplinary modelling in HR policy studies.

## 11. LIMITATIONS

- Cross-sectional design limits causal inference.
- Self-reported data may introduce response bias.
- Study limited to Mumbai SMEs.

## 12. FUTURE RESEARCH

- Longitudinal studies to examine retention over time.
- Cross-city comparative analysis.
- Moderation analysis including gender and tenure.
- Qualitative follow-up interviews for deeper insight.

## 13. CONCLUSION

This study provides strong quantitative evidence that structured and digitally monitored Diversity & Inclusion policies significantly enhance employee engagement and retention in Mumbai SMEs.

Advanced statistical modelling confirms mediation and comparative advantages of structured frameworks.

The research contributes to interdisciplinary scholarship and offers a practical digital inclusion governance model for SMEs in emerging economies.

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**APPENDIX A**

**Structured Questionnaire**

**Research Title:** Data-Driven Evaluation of Diversity and Inclusion Policies: A Policy-Oriented Comparative Study of Employee Engagement and Retention in Mumbai SMEs Using Digital Analytics

**Instructions:**

**Please indicate your level of agreement with the following statements using the scale below:**

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

**Section A: Demographic Information**

1. Gender: Male / Female / Other

2. Age: 18–25 / 26–35 / 36–45 / 46+

3. Education Level: Graduate / Postgraduate / Other

4. Work Experience: <2 years / 2–5 years / 6–10 years / 10+ years

5. Does your organization have a formal D&I policy? Yes / No

**Section B: Diversity & Inclusion Policy Perception (DIPP)**

1. My organization has a clearly documented D&I policy.

2. The D&I policy is communicated effectively to all employees.

3. The organization promotes equal opportunities for all employees.

4. Recruitment processes are fair and unbiased.

5. Promotion decisions are based on merit and transparency.

6. Discrimination complaints are handled promptly.

7. Leadership actively supports inclusion initiatives.

8. D&I policies are regularly reviewed and updated.

**Section C: Managerial Support for Inclusion (MSI)**

1. My manager treats all team members fairly.

2. My manager encourages diverse viewpoints.

3. My manager addresses inclusion-related concerns seriously.

4. My manager supports flexible work arrangements when needed.

5. My manager creates a psychologically safe environment.

**Section D: Employee Engagement (EE)**

1. I feel enthusiastic about my work.

2. I am proud to work for this organization.

3. I am motivated to perform beyond expectations.

4. I feel emotionally connected to my organization.

5. I am willing to recommend this organization as a good workplace.

6. My work gives me a sense of purpose.

7. I feel valued at my workplace.

8. I am committed to achieving organizational goals.

9. I feel energized when I am at work.

**Section E: Retention Intention (RI)**

1. I intend to continue working in this organization.

2. I do not plan to leave this organization soon.

3. I see a long-term career here.

4. I feel secure in my job.

5. I would decline a similar offer from another company.

**Section F: Digital Monitoring & Analytics (DM)**

1. My organization uses digital tools to monitor inclusion metrics.

2. HR analytics are used for decision-making.

3. Employee feedback is collected through digital platforms.

4. Data is used to improve diversity initiatives.