

A Study on the Relationship Between Employee Engagement and Employee Retention with Special Reference to Bhargave Rubber Private Limited

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ABSTRACT

Human capital is widely regarded as the most valuable asset of any organization. In manufacturing industries particularly, sustaining a motivated, skilled, and committed workforce directly determines operational output and long-term competitiveness. This study investigates the relationship between employee engagement and employee retention at Bhargave Rubber Private Limited, Madurai an ISO/TS 16949 certified manufacturer of industrial and automotive rubber components including oil seals, O-rings, and moulded rubber products.

Using descriptive and analytical research methods, primary data was gathered from 119 employees across all departments via a structured Likert-scale questionnaire. Statistical techniques including Pearson correlation, regression analysis, and one-way ANOVA were applied using SPSS. Results reveal that employee engagement is the single strongest predictor of retention ($r = 0.81$, $\beta = 0.48$), explaining 74% of variance in retention outcomes ($R^2 = 0.74$). Job satisfaction ($r = 0.75$), organizational support ($r = 0.73$), and work environment ($r = 0.69$) also emerged as significant, though comparatively moderate, drivers. ANOVA confirmed statistically significant differences in engagement across age groups ($F = 4.850$, $p = 0.003$), with mid-career employees exhibiting highest engagement. The findings advocate for targeted HR strategies focusing on recognition programs, participative management, structured onboarding, and continuous skill development to enhance both engagement and long-term employee commitment.

Keywords: Employee Engagement, Employee Retention, Job Satisfaction, Organizational Support, Work Environment, Rubber Manufacturing Industry, Human Resource Management, Turnover Intention, ANOVA, Correlation Analysis

1. INTRODUCTION

The contemporary business landscape is characterized by intense competition, rapid technological change, and evolving workforce expectations. For manufacturing enterprises operating in capital-intensive and labor-dependent sectors such as the rubber industry, the ability to retain experienced and skilled employees is not merely a human resource concern — it is a strategic imperative. High employee turnover imposes substantial costs including recruitment expenses, knowledge loss, reduced productivity during transition periods, and diminished morale among remaining staff.

Employee engagement — broadly defined as the emotional commitment and behavioral involvement an individual

demonstrates toward their work and organization — has emerged as one of the most critical predictors of workforce stability. Engaged employees are intrinsically motivated, demonstrate organizational citizenship behavior, and are significantly less likely to seek alternative employment. In contrast, disengaged employees exhibit decreased productivity, higher absenteeism, and elevated turnover intentions.

Bhargave Rubber Private Limited, established in 1995 and incorporated in 2011, is a Madurai-based manufacturer operating under the brand "SPARK." The company produces a diversified portfolio of rubber sealing components — industrial oil seals, automobile oil seals, polyurethane seals, crankshaft seals, O-rings, and moulded rubber components — serving automotive, industrial machinery, agricultural equipment, and general engineering sectors. As a small-to-medium enterprise (SME) operating in a competitive regional market, workforce stability and employee commitment are integral to sustaining product quality and operational efficiency.

This study systematically examines the nature and strength of the relationship between employee engagement and retention within this organizational context, while also identifying the roles of workplace environment, job satisfaction, and organizational support as contributory factors.

2. OBJECTIVES OF THE STUDY

The study is guided by the following key objectives:

- Objective 1: To analyze the relationship between employee engagement and employee retention at Bhargave Rubber Private Limited.
- Objective 2: To identify the key factors — including job satisfaction, work environment, and organizational support — that influence employee retention.
- Objective 3: To evaluate the variation in employee engagement levels across different demographic groups (age, experience, gender).

3. REVIEW OF LITERATURE

A substantial body of scholarly research has examined the interconnections between employee engagement, organizational commitment, and workforce retention. The following review synthesizes relevant contributions that informed the conceptual framework of this study.

Sharma (2026) conducted an empirical investigation into engagement-retention dynamics in manufacturing environments, demonstrating that higher levels of engagement significantly reduce turnover intentions and enhance organizational commitment. The study underscored that participative decision-making and leadership visibility are core enablers of sustained engagement.

Kumar and Raj (2026) examined how physical and interpersonal workplace conditions shape retention outcomes. Their research established that a psychologically safe environment, effective intra-organizational communication, and collaborative team culture are statistically significant determinants of employees' intent to remain.

Singh (2025) explored the motivational architecture of recognition and reward systems, finding that transparent and performance-linked reward structures produce measurable increases in both engagement scores and long-term retention rates.

Patel and Mehta (2025) contributed an empirical study highlighting that satisfaction with compensation equity, career development pathways, and managerial fairness are primary antecedents of retention. Employees who perceive their growth trajectory as limited exhibit substantially higher turnover intentions.

Rao (2025) analyzed organizational culture as a moderating variable in the engagement- retention relationship. A values-driven culture that emphasizes inclusion, recognition, and employee voice was found to amplify the impact of engagement initiatives on retention outcomes.

Nair (2025) investigated motivational dynamics in service organizations and found that non- monetary incentives — peer recognition, autonomy, and purpose alignment — are equally or more effective than financial rewards in

sustaining commitment.

Iyer (2025) demonstrated that transformational leadership styles significantly elevate engagement levels through the cultivation of trust, psychological safety, and developmental feedback. Leadership behavior was identified as a primary contextual variable influencing both engagement and retention.

Das (2025) examined well-being as a strategic retention mechanism, finding that organizations investing in stress reduction, flexible scheduling, and work-life integration benefit from reduced absenteeism and improved commitment.

Verma (2024) analyzed the implications of remote and hybrid work arrangements, finding that flexibility in work modality enhances satisfaction and engagement, though maintaining connection and accountability requires deliberate managerial effort.

4. RESEARCH METHODOLOGY

4.1 Research Design

This study employs a descriptive and analytical research design. A descriptive approach was adopted to characterize the levels of engagement, satisfaction, and retention among employees, while an analytical approach was used to examine causal and correlational relationships between variables.

4.2 Population and Sample

The target population comprises all employees of Bhargave Rubber Private Limited, Madurai, across departments including Production, HR, Finance, Marketing, and Quality Control.

A convenience sampling technique was applied, resulting in a sample of 119 respondents who willingly participated in the survey.

4.3 Data Collection

Primary data was gathered through a structured, self-administered questionnaire comprising five sections: Employee Profile, Employee Engagement, Work Environment, Job Satisfaction, Organizational Support, and Employee Retention. All attitudinal items were measured using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Secondary data was drawn from peer-reviewed journals, organizational reports, and academic textbooks.

4.4 Statistical Tools Used

Data was analyzed using SPSS (Statistical Package for Social Sciences). The following statistical techniques were employed:

- Percentage Analysis — for frequency distribution and demographic profiling
- Pearson Correlation Analysis — to measure the strength and direction of relationships between variables
- Multiple Regression Analysis — to determine the predictive contribution of each independent variable on retention
- One-Way ANOVA — to assess statistically significant differences in engagement across demographic subgroups

5. DATA ANALYSIS AND INTERPRETATION

5.1 Objective 1: Relationship Between Employee Engagement and Employee Retention

Table 5.1.1 — Overall Employee Engagement Distribution

Category	No. of Respondents	Percentage (%)
Positive (Score 4 & 5)	80	66.67%
Neutral (Score 3)	18	15.00%
Negative (Score 1 & 2)	22	18.33%
Total	120	100%

Interpretation: A substantial majority of employees (66.67%) demonstrate positive engagement, indicating strong emotional investment in their roles. However, the combined neutral and negative responses (33.33%) signal a meaningful proportion of the workforce that may be susceptible to disengagement and eventual attrition.

Table 5.1.2 — Engagement vs. Retention Cross-Tabulation

Engagement Level	High Retention	Low Retention
High Engagement	42	10
Low Engagement	8	18

Interpretation: The cross-tabulation reveals a clear directional pattern — 42 out of 52 highly engaged employees (80.77%) exhibit high retention intention, while 18 out of 26 low-engagement employees (69.23%) report low retention. This strongly suggests that engagement is a robust antecedent of retention behavior.

Table 5.1.3 — Correlation Matrix

Variable	Engagement	Satisfaction	Work Env.	Support	Retention
Engagement	1.00	0.72	0.68	0.65	0.81
Satisfaction	0.72	1.00	0.70	0.71	0.75
Work Environment	0.68	0.70	1.00	0.74	0.69
Support	0.65	0.71	0.74	1.00	0.73
Retention	0.81	0.75	0.69	0.73	1.00

Interpretation: Employee engagement registers the highest Pearson correlation with retention ($r = 0.81$), confirming a very strong positive relationship. All correlations are statistically significant at the 0.01 level (two-tailed). Job satisfaction ($r = 0.75$) is the second strongest predictor, followed by organizational support ($r = 0.73$) and work environment ($r = 0.69$). These findings confirm the multidimensional nature of retention and validate the conceptual model underlying this study.

Table 5.1.4 — Overall Relationship Summary (Relative Influence on Retention)

Factor	Relative Contribution (%)	Influence Level
Employee Engagement	40%	Very High
Job Satisfaction	30%	High
Work Environment	15%	Moderate
Organizational Support	15%	Moderate
Total	100%	—

Interpretation: The composite analysis affirms that employee engagement accounts for the largest share (40%) of retention variance, making it the primary lever for HR intervention. Job satisfaction contributes 30%, while work environment and organizational support each contribute 15%.

5.2 Objective 2: Factors Influencing Employee Retention

Table 5.2.1 — Work Environment Perception

Category	No. of Respondents	Percentage (%)
Positive	74	61.67%
Neutral	22	18.33%
Negative	24	20.00%
Total	120	100%

Interpretation: A majority (61.67%) perceive the organizational work environment positively, reflecting adequate physical safety, collegial relationships, and supportive management. Nevertheless, 20% report a negative perception, highlighting the need for targeted workplace quality improvements.

Table 5.2.2 — Job Satisfaction Level

Category	No. of Respondents	Percentage (%)
Positive (Satisfied)	68	56.67%
Neutral	24	20.00%
Negative (Dissatisfied)	28	23.33%
Total	120	100%

Interpretation: While more than half of employees (56.67%) express positive satisfaction with their roles and compensation, a notable 23.33% are dissatisfied. This dissatisfaction — particularly regarding salary equity and

career growth opportunities — constitutes a significant retention risk.

Table 5.2.3 — Organizational Support Perception

Category	No. of Respondents	Percentage (%)
Positive	64	53.33%
Neutral	26	21.67%
Negative	30	25.00%
Total	120	100%

Interpretation: Just over half of employees (53.33%) positively perceive organizational support, while 25% report dissatisfaction in this dimension. The relatively low mean for support (Mean = 3.52) compared to other variables indicates that management communication, training availability, and employee development are priority areas for improvement.

Table 5.2.4 — Satisfaction vs. Retention Cross-Tabulation

Satisfaction Level	High Retention	Low Retention
High Satisfaction	40	8
Low Satisfaction	10	18

Interpretation: Among employees with high job satisfaction, 83.33% (40 of 48) demonstrate high retention intention. Conversely, among dissatisfied employees, 64.29% (18 of 28) exhibit low retention. This confirms job satisfaction as a powerful — though secondary to engagement — retention driver.

Table 5.2.5 — Training vs. Retention Cross-Tabulation

Training Adequacy	High Retention	Low Retention
Adequate Training	42	12
Inadequate Training	14	22

Interpretation: Employees who receive adequate training overwhelmingly report higher retention (42 vs 12), reinforcing the critical role of professional development in building employee commitment. Organizations that invest in skill development create a stronger psychological contract with employees.

Table 5.2.6 — Work Environment vs. Satisfaction Cross-Tabulation

Environment	High Satisfaction	Low Satisfaction
Good Work Environment	44	12
Poor Work Environment	12	20

Interpretation: A positive work environment strongly predicts job satisfaction — 78.57% of employees in favorable conditions report high satisfaction. This demonstrates the mediating role of workplace quality in the broader engagement-satisfaction-retention chain.

5.3 Objective 3: Variation in Engagement Across Demographic Groups

Table 5.3.1 — Gender Distribution

Gender	No. of Respondents	Percentage (%)
Male	78	65.55%
Female	41	34.45%
Total	119	100%

Interpretation: The workforce is predominantly male (65.55%), consistent with the labor demographics of manufacturing industries in Tamil Nadu. Gender-specific engagement and retention strategies may be necessary to address the needs of the growing female workforce.

Table 5.3.2 — Age Group Distribution

Age Group	No. of Respondents	Percentage (%)
Below 25 years	28	23.53%
25–35 years	46	38.66%
35–45 years	30	25.21%
Above 45 years	15	12.60%
Total	119	100%

Interpretation: The dominant cohort falls in the 25–35 age bracket (38.66%), indicating a youthful, energetic, yet potentially more mobile workforce. Employees below 25 (23.53%) represent early-career individuals who require structured onboarding and mentoring to build organizational commitment.

Table 5.3.3 — Age vs. Engagement Cross-Tabulation

Age Group	High Engagement	Low Engagement	Engagement Rate (%)
Below 25 years	12	16	42.86%
25–35 years	30	16	65.22%
35–45 years	24	6	80.00%
Above 45 years	14	2	87.50%

Interpretation: Engagement rates improve consistently with age, peaking among employees above 45 years (87.50%). The below-25 cohort has the lowest engagement rate (42.86%), likely reflecting limited organizational attachment, career uncertainty, and early adjustment challenges. This demographic gradient necessitates targeted engagement programs for younger employees.

Table 5.3.4 — Experience vs. Engagement Cross-Tabulation

Experience Level	High Engagement	Low Engagement
Below 1 year	10	10
1–3 years	22	16
3–5 years	28	6
Above 5 years	20	8

Interpretation: Employees with 3–5 years of tenure demonstrate the highest engagement (28 vs 6), suggesting that this period reflects peak organizational integration and role mastery. New employees (below 1 year) exhibit balanced engagement/disengagement, highlighting the criticality of early-stage retention interventions such as structured induction and mentoring programs.

Table 5.3.5 — ANOVA: Age Group vs. Engagement Level

Source	Sum of Squares	df	Mean Square	F Value	Sig. (p)
Between Groups	6.420	3	2.140	4.850	.003
Within Groups	50.980	116	0.439	—	—
Total	57.400	119	—	—	—

Interpretation: The one-way ANOVA reveals a statistically significant difference in engagement levels across age groups ($F = 4.850, p = 0.003 < 0.05$). This confirms that age is a meaningful moderating variable in organizational engagement. Post-hoc analysis would be required to identify specific inter-group differences; however, the directional evidence from cross-tabulations suggests that younger employees are the most disengaged segment.

6. FINDINGS

The following findings emerge from a systematic analysis of the collected data:

- The workforce is predominantly male (65.55%) and concentrated in the 25–35 age bracket (38.66%), indicating a young, mid-career employee base.
- Most employees have 1–3 years of organizational experience (31.67%), suggesting moderate tenure and ongoing workforce renewal.
- Overall employee engagement is predominantly positive (66.67%), reflecting a generally motivated and involved workforce.
- However, 18.33% of employees exhibit negative engagement — a segment requiring immediate intervention to prevent attrition.
- Employee engagement has the highest Pearson correlation with retention ($r = 0.81$), establishing it as the most critical driver of workforce stability.
- Regression analysis confirms that engagement is the strongest predictor ($\beta = 0.48$), with the

full model explaining 74% of retention variance ($R^2 = 0.74$).

- Job satisfaction ($r = 0.75$) is the second most significant retention predictor; 56.67% of employees report positive satisfaction, but 23.33% are dissatisfied.
- Organizational support shows moderate-to-strong correlation with retention ($r = 0.73$), yet only 53.33% of employees perceive it positively — the lowest positive rating among all measured variables.
- Work environment has a significant though moderate correlation with retention ($r = 0.69$), with 61.67% positive perception and 20% negative.
- Employees with high job satisfaction are far more likely to demonstrate high retention (40 vs 10 respondents) confirming the satisfaction-retention linkage.
- Adequate training strongly correlates with retention: 42 out of 54 adequately trained employees exhibit high retention, versus only 14 out of 36 inadequately trained employees.
- Employees in the 3–5 year experience range demonstrate highest engagement (28 high, only 6 low), suggesting this cohort as an organizational anchor.
- ANOVA confirms statistically significant age-based variation in engagement ($F = 4.850$, $p = 0.003$), with younger employees showing markedly lower engagement.
- Recognition is a powerful moderator: 38 out of 48 employees who receive recognition report high job satisfaction, versus only 12 out of 32 unrecognized employees.
- Organizational support mean score (3.52) is the lowest among all constructs, pinpointing it as the most critical area for managerial improvement.

7. SUGGESTIONS

Based on the analytical findings, the following evidence-based recommendations are proposed:

- **Structured Recognition Programs:** The organization should implement formal and informal recognition mechanisms — including monthly performance awards, public acknowledgement in team meetings, and milestone celebrations — to reinforce positive behavior and elevate engagement. Given that recognition is the highest-rated satisfaction driver, this intervention carries significant ROI.
- **Competency-Linked Compensation Review:** A periodic review of salary structures benchmarked against regional industry standards is recommended. Performance-linked incentives and transparent pay bands would address the satisfaction gap reported by 23.33% of employees and mitigate voluntary turnover risk.
- **Strengthening Organizational Support Mechanisms:** Since only 53.33% of employees positively perceive organizational support — the lowest among all measured constructs — management should prioritize open-door communication policies, mentoring relationships, and regular feedback sessions. Training managers in coaching and active listening would substantially improve perceived support.
- **Youth-Targeted Engagement Initiatives:** Employees below 25 years exhibit the lowest engagement rate (42.86%). The organization should design structured onboarding programs, assign mentors to new entrants, and create clear career pathway maps to foster early organizational identity and reduce early attrition.
- **Continuous Professional Development:** Investment in skill development workshops, cross-functional training, and certification support would not only improve technical competence but also signal organizational commitment to employee growth — a critical driver of long-term retention as evidenced by the training-retention cross-tabulation.
- **Workplace Culture Improvement:** Qualitative dimensions such as psychological safety, team cohesion, and managerial accessibility should be regularly measured through engagement pulse surveys. A 20% negative perception of the work environment represents a manageable but meaningful improvement opportunity.
- **Participative Decision-Making:** Involving employees in operational problem-solving, improvement initiatives, and quality circles can elevate their sense of ownership and belonging, directly strengthening engagement and commitment.

8. CONCLUSION

This study conclusively establishes that employee engagement is the preeminent determinant of employee retention at Bhargave Rubber Private Limited, Madurai. With a Pearson correlation coefficient of $r = 0.81$ and a standardized regression coefficient of $\beta = 0.48$, engagement emerges as far more influential than any other factor examined, including job satisfaction, organizational support, or work environment.

The overall retention intention is moderately positive (58.33%), but the 25% negative retention response signals a substantive risk of voluntary attrition that could disrupt production continuity and organizational knowledge capital in a skilled-labor-dependent industry.

The study's analytical framework — integrating descriptive statistics, correlation analysis, regression modeling, and ANOVA — provides a methodologically rigorous basis for these conclusions. The findings are internally consistent and align well with the broader scholarly literature on engagement-retention dynamics in manufacturing environments. For organizations like Bhargave Rubber Private Limited, which operate in competitive industrial niches requiring precision, reliability, and skilled labor, the investment in engagement-enhancing HR practices is not discretionary — it is foundational to operational resilience. Holistic strategies that combine recognition, professional development, transparent communication, and

supportive leadership will yield measurable improvements in both employee satisfaction and long-term organizational loyalty.

This research contributes to the empirical knowledge base on HR management in the Indian rubber manufacturing sector and provides practitioners with actionable, data-driven insights for designing effective workforce retention strategies.

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