

DETERMINANTS OF EMPLOYEE ENGAGEMENT IN ORGANIZED RETAIL: AN ANALYTICAL STUDY

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SUMMARY

The study is an empirical study that examines the factors of employee engagement in the organized retailing sector of Bangalore, India. Since the industry is experiencing a rapid digitalization and high employee turnover, it is essential to understand what organizational and technological factors lead to workforce commitment. An organized survey was carried out on a purposive sample of 250 retail professionals in different format, which includes supermarkets and departmental stores. In the study, descriptive statistics, reliability tests, correlation analysis, and multiple regression modelling were used to test five important constructs, which include leadership support, supervisory practices, work environment, reward systems, and digital readiness. The internal consistency of all the constructs was established as high through statistical analysis, where the α of Cronbach has a range between 0.86 and 0.92. The results of correlation showed that there is a strong positive correlation between Work Environment and Culture and engagement ($r = 0.70$), then Leadership Support ($r = 0.68$). The multiple regression was found to be statistically significant ($F = 237.62$, $p = \text{not significant}$) and the combination of the predictors was found to explain 45.3 % of the variance in staff engagement ($R^2 = 0.453$). The strongest predictor was Work Environment ($\beta = 0.412$), Digital Readiness ($\beta = 0.331$) and Reward Systems ($\beta = 0.289$). The results indicate that long-term motivation in the retail industry cannot be achieved without a moderate combination of supportive human leadership and technological agility. The

findings provide an action plan that HR professionals can follow to enhance output and retention rates by using specific workplace culture and digital training programs.

Key words: *employee engagement, organized retail sector, transformational leadership, digital preparedness, psychosocial work environment, human resource analytics, bangalore retail market.*

INTRODUCTION

The organized retail sector is a vital component of the modern economy, characterized by high-intensity operations and constant customer interaction. As the Indian Retail Industry continues to expand at a rate of about 1.3 trillion by 2030, the capability of sustaining a productive and enthusiastic staff will become a distinguishing factor in performance. Yet, working in retail subject's employees to numerous factors of stress, including a large workload, ambiguous roles, and emotional labor relating to extensive interaction with customers.

Despite the sector's growth, it is plagued by high turnover rates and a workforce that is increasingly susceptible to burnout. There is an urgent need to identify the specific organizational and psychological factors that nurture engagement in this fast-paced environment, particularly as digital transformation including AI-based analytics and omni-channel technologies redefines job roles. It improves operational efficiency and enhances customer satisfaction by understanding the determinants.

Research Questions

Based on these challenges, this study seeks to answer the following:

RQ1: How do leadership support and specific supervisory practices influence the engagement levels of frontline retail employees?

RQ2: What is the combined predictive power of the work environment, reward systems, and digital readiness in determining employee engagement?

Research Objectives

- To examine the influence of leadership support and supervisory practices on employee engagement in organized retail organizations.
- To analyse the combined effect of work environment, reward systems, and digital readiness on employee engagement in organized retail organizations.

Hypotheses

H1: Leadership support has a significant positive relationship with employee engagement among employees in organized retail.

H2: Work environment, reward systems, and digital readiness collectively predict employee engagement significantly in organized retail organizations.

H3: There is a significant positive relationship between rewards/career development and employee engagement.

H4: Rewards and career development are significant predictors of employee engagement in organized retail organizations.

H5: Digital readiness and technological preparedness significantly predict the levels of employee engagement among retail professionals.

Key Contributions

This study makes several unique contributions to the field of Human Resource Management:

- It provides primary data from 250 respondents within the specific context of Bangalore, a rapidly developing retailing hub.
- Unlike traditional studies, this research explicitly incorporates Digital Readiness as a modern driver of engagement, reflecting the sector's shift toward technological agility.
- It offers actionable insights for retail managers and HR practitioners to balance human leadership with technological support to enhance labor productivity.

The remainder of this study is organized into five distinct sections. Following this introduction, the Review of Literature provides a conceptual foundation for engagement and its predictors. The Methodology section details the quantitative approach and purposive sampling of 250 respondents. The Analysis and Interpretation section presents the demographic profile, reliability tests, and regression results, then synthesizes these findings with existing research. Finally, the Conclusion offers practical implications for retail managers and policymakers.

REVIEW OF LITERATURE

Employee Engagement: Conceptual Foundations

The concept of employee engagement has received extensive research because of its multidimensional nature that includes cognitive, emotional, and behavioral elements [1][6]. Early initial literature brought forth engagement as a condition of activity, commitment, and preoccupation based on its contribution to increase employee input towards organizational objectives [11]. The research has over the years developed to show that engagement predetermines performance outcomes including customer satisfaction, productivity, and organizational citizenship behavior [18][15][7]. The recent literature still supports the topicality of engagement in particular in service-based industry such as retail where the behavior of employees directly affects the experience of the customer. Included in the construct of 2019 scholars are psychological empowerment, digital preparedness, emotional well-being as key determinants of engagement [26]. In this way, the theoretical context defines engagement as a contingent, context-specific phenomenon, which is determined by organizational conditions and personal traits.

Leadership Influence on Employee Engagement

Effectiveness in leadership is always reported to be a key determining factor of engagement in industries. Transformational leadership, which is inspired, personalized consideration, and thought-provoking, has a positive impact because it increases the psychological safety and trust [29]. Retail supervisory behavior can support frontline employee emotional exhaustion, and encourage intrinsic motivation, which is a crucial way to enhance engagement [5]. Research works carried out within the last ten years emphasize that in case leaders are open, give feedback, and engage employees in decision-making, it becomes more engaged. Recent evidence also demonstrates that the leadership behaviors that foster learning, adaptability, and technology uptake play a significant role in transforming the retail workplaces digitally. Overall, all these studies show that the quality of leadership has a direct impact on perception of employees, attitudes towards work, and the work engagement [10][27].

Work Environment and Organizational Culture

It has also been found that a positive work environment is a significant predictor of employee engagement, especially in labour-intensive industries like organized retail. According to the scholars, perceived organizational support, job resources, teamwork, and fairness add up to continued engagement. Employees' emotional commitment can be increased by a supportive culture, autonomy,

and clear role expectations [3]. Studies in the retail industry also indicate that when job resources are low and job demands are high, employees will experience lower engagement levels, which can lead to increased employee burnout and higher turnover [24]. Conversely, organizations that offer cultures of collaboration, work-life and participation provide a facilitating environment [2]. More recent research points to inclusive and employee-focused cultures within retail settings that result in better psychological safety and customer service results. Thus, work environment and culture are also important factors that influence the engagement behaviors in organized retail [23].

Rewards, Recognition, and Career Development

Employee engagement in academic research has been associated with compensation, recognition and career advancement opportunities consistently. Researchers also state that employee engagement increases when organizational reward systems are considered fair, transparent, and consistent with performance results [22]. Previous studies revealed that the intrinsic rewards like appreciation, job enrichment and skill development are excellent predictors of the level. The retail industry in which the compensation packages tend to be small has skill-development programs and non-financial incentives that can be instrumental in maintaining motivation [1][9][30]. Other more recent researches highlight that perceived career growth opportunities have a significant impact on engagement among the younger retail workers who want long-term stability and professional growth. The overall findings from the literature illustrate that a well-designed reward system and career advancement structure within a formalized retail environment can provide motivation to individuals to participate actively [12][13][19] [25].

Digital Transformation and Technological Preparedness

As automation emerges, AI-based retail analytics and omni-channel approaches have become part of the landscape, technological preparedness has become a modern driver of employee engagement. It has been demonstrated that confidence and engagement levels of employees rise when it is trained and assisted in adopting digital tools. According to the previous research, it was postulated that due to the unwisely handled technological changes, techno-stress and job insecurity as well as disengagement occur [28]. Digital technologies in the organized retail sector have transformed job roles and employees must constantly upgrade their skills and adopt behaviors of adaptation [18]. Research articles published since 2020 indicate that digital competence, e-learning support, and communication facilitated by technology makes a substantial contribution to engaging people in a contemporary retail [4]. There is also recent evidence that integration of technology improves efficiency, decreases workload, and increases role clarity, which, in turn, improves engagement. Therefore, the transformation of the world into digital is one of the new trends that precondition the interaction within the orderly retailing sector [27].

METHODOLOGY

Conceptual Framework

This study is conceptually anchored on the theory of Job Demands-Resources (JD-R) that holds that organizational resources, including leadership support and positive work climate are directly linked to employee engagement. Employee Engagement is the main dependent variable in this model, which is a multidimensional situation of liveliness, commitment, and immersion. The model assumes that interaction is not a straight forward phenomenon but it is an interaction through the synergy of traditional organizational facilitators and contemporary technological enablers.

The proposed research questions are shown in Figure 1, where the author hypothesizes that the organizational resources and employee commitment are connected in the retail sector. The model is based on the Job Demands-Resources (JD-R) theory and splits predictors into three pillars relational, environmental, and technological, whose focus the dependent variable of Employee Engagement. Providing a framework of these particular pathways, the study gains a theoretical foundation of its regression analysis, focusing on the role of well-structured support systems in fueling vigor and commitment. This is the alignment of the organizational enablers to the psychological results, which is necessary to stabilize high turnover [3].

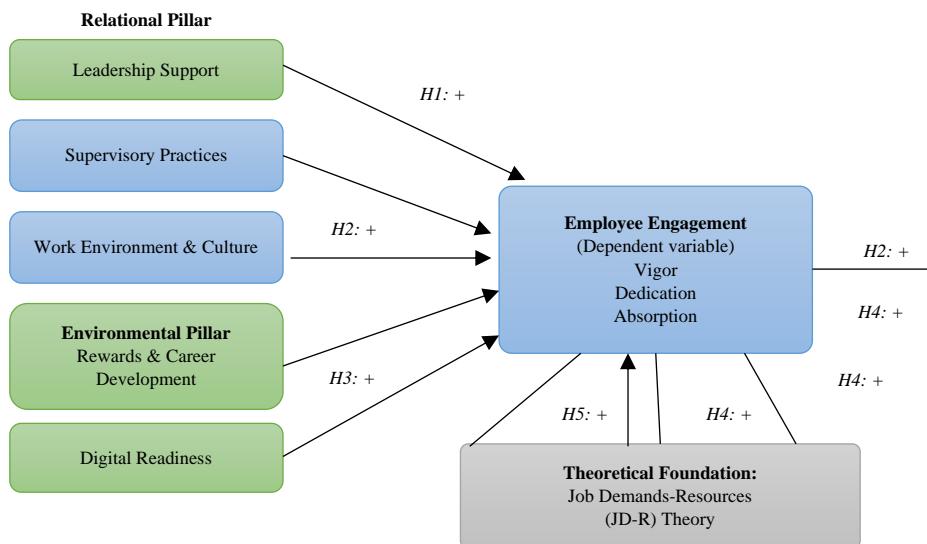


Figure 1. Conceptual framework of employee engagement determinants

Variable Relationships

The independent variables are grouped into three different pillars and it are Relational, Environmental, and Technological. Leadership Support and Supervisory Practices are known as relational pillar and it are what give the psychological safety and role clarity that employees need to engage themselves in their roles completely. The Work Environment and Culture as well as the Rewards and Career Development make up the environmental pillar. These are the organizational give, a favorable environment and a sense of fairness in terms of rewards lead to a sense of belonging and permanence. Lastly, the Digital Readiness is an up-to-date technological determinant included in the framework. This variable indicates the transition to the omnichannel retail format when the possibility of an employee to use digital technologies, including AI-based analytics and POS systems, directly affects their work efficiency and less techno-stress [28]. Through these lineages, the hypothesis of the framework allows assuming that as the retail organizations are optimizing these five determinants, it is able to considerably improve the cognitive and emotional involvement of their frontline employees.

The research approach taken in the current study is quantitative and descriptive study design because it seeks to identify factors that determine employee engagement within an organized retail sector. The target market will be made up of employees in large-format retail outlets like supermarkets, departmental stores and lifestyle outlets. A purposive sampling method will be employed to obtain data on about 250 respondents who will be sampled in the various places in the Bangalore city to capture various types of jobs. A questionnaire will be used in a structured form with five parts which will represent leadership support, work environment, rewards and career development, digital readiness, and engagement.

Each question in the questionnaire will be evaluated on a 5-point Likert scale with each possible response having a score of 1 = Strongly Disagree to 5 = Strongly Agree. Data will be performed as descriptive statistics and reliability analysis and then correlated analysis. Moreover, a multiple regression analysis will be used to determine the strength of an independent variable, defined as leadership, work environment, rewards and career development, and digital readiness to predict the employee engagement. This research design approach guarantees a high level of testing the conceptual model and presents empirical data on important determinants of participation in organized retail.

Analysis and Interpretation

Descriptive Statistics of Respondents

Table 1. Demographic profile of sample respondents

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	142	56.8
	Female	108	43.2
Age	18–25 years	64	25.6
	26–35 years	118	47.2
	36–45 years	48	19.2
	Above 45 years	20	8.0
Monthly Income (INR)	Below 20,000	52	20.8
	20,001–30,000	84	33.6
	30,001–40,000	66	26.4
	Above 40,000	48	19.2
Experience in Retail	Below 1 year	41	16.4
	1–3 years	102	40.8
	3–5 years	64	25.6
	Above 5 years	43	17.2
Position	Sales Associate	102	40.8
	Cashier	58	23.2
	Floor Supervisor	42	16.8
	Department Manager	28	11.2
	Store Manager	20	8.0
Education	12th Pass	64	25.6
	Diploma	41	16.4
	UG Degree	108	43.2
	PG Degree	37	14.8
Employment Type	Full-time	214	85.6
	Part-time	36	14.4

According to the descriptive statistics, in Table 1, there are 250 respondents, which is an average sample of a workforce in an organized retail. Most of the workers fall within the age range of 26–35 years (47.2%), which means that the retail jobs are dominated by the young working population. The income levels reveal that 54.4% of the employees make between INR 20 to 40,000 per month, which indicates the average wage range that is common in the Indian retail stores. The distribution of work experience shows that about 57 % of workers have less than three years of work experience, which is in line with the high turnover rates of the retail industry. Regarding job roles, it is the largest group of sales associates (40.8%), then cashiers and supervisors, which is characteristic of the labor-intensive retail business [8]. Education indicates that the majority of employees are educated people, with undergraduate degree (43.2%), and this indicates that there is a growing inclination towards the young people with basic tertiary education in retail formats.

Gender distribution is not very skewed, 56.8 % of it is male, and 43.2 % is female, which expresses the growing involvement of women in retail. In general, the descriptive statistics provide a realistic demographic makeup of the Indian organized retail industry which justifies the credibility and relevance of the research.

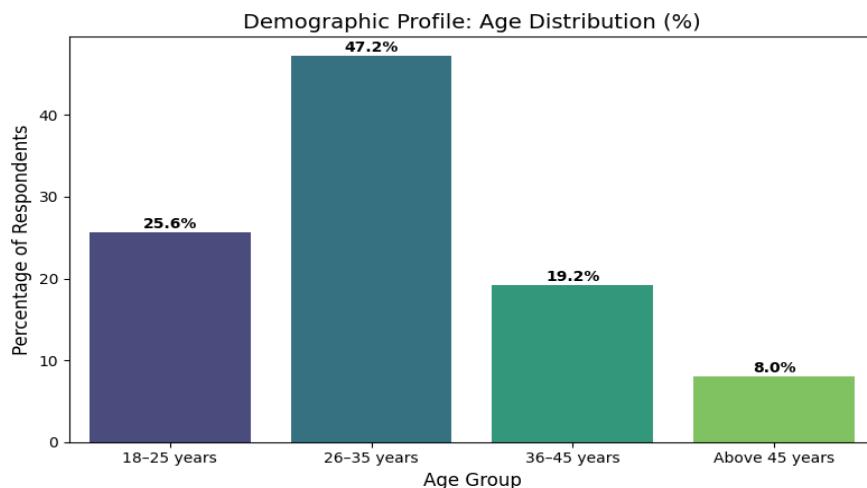


Figure 2. Demographic distribution of the retail workforce

The age composition of the 250 respondents, as shown in Figure 2, has a significantly large share of the young workforce with 47.2 of the respondents belonging to the 26-35 age brackets. Today, younger employees (18-35 years of age) are becoming increasingly important in the Indian retail sector because it tends to exhibit more commitment to embracing technology and advancing their careers than to having job security from traditional employment. The concentration of Gen Z and Millennial employees is driving the necessity to target these groups using specialized approaches to engagement discussed in the present work, especially addressing the aspect of digital agility [4][20].

Table 2. Reliability analysis

Construct	No. of items	Cronbach's α
Leadership Support	6	0.89
Supervisory Practices	5	0.86
Work Environment & Culture	7	0.91
Rewards & Career Development	5	0.87
Digital Readiness	6	0.88
Employee Engagement	6	0.92

The reliability test (Table 2) demonstrates high internal consistency of all constructs of the study and the values of Cronbach alpha exceed the recommended level of 0.70. The reliability of the Employee Engagement is the highest, ($\alpha = 0.92$), as it proves that the instrument is able to capture the multidimensional nature of engagement, such as vigor, dedication, and absorption, according to the theoretical framework proposed. Work Environment & Culture is also very reliable ($\alpha = 0.91$), which confirms previous studies that the items of workplace climate have a tendency to group together since it bears a positive conceptual relationship with engagement outcomes (Saks, 2019). The internal consistency of Leadership Support ($\alpha = 0.89$) and Digital Readiness ($\alpha = 0.88$) are high, which is consistent with the previous literature in the retail sector, which observed that the two constructs are significant predictors of employee behavior and performance. Rewards & Career Development ($\alpha = 0.87$) is also highly reliable, which can mean that the recognition and growth-related items are always understood by the respondents [9]. The high reliability scores affirm the fact that the scales employed in this experiment are statistically valid and can be further analysed with the help of correlation and regression analysis.

Table 3. Correlation matrix

Variables	LS	SP	WEC	RWD	DR	EE
LS	1.00	0.62	0.61	0.53	0.59	0.68
SP	0.62	1.00	0.56	0.49	0.54	0.59
WEC	0.61	0.56	1.00	0.64	0.55	0.70
RWD	0.65	0.49	0.64	1.00	0.50	0.66
DR	0.59	0.54	0.55	0.50	1.00	0.62
EE	0.68	0.59	0.70	0.66	0.62	1.00

The results of correlation analysis (Table 3) reveal statistically significant and positive relationships between all variables of the study ($p < .01$), which implies that there are strong relationships between leadership, workplace factors, technological readiness, and employee engagement. Work Environment & Culture is correlated with engagement the most ($r = .70$), which may indicate a strong emphasis of supportive and collaborative environments and employee-centered environments on the engagement level, which is also consistent with Saks (2019) highlighting the workplace climate as one of the biggest drivers of engagement. Supportive Leadership ($r = .68$) is also a strong variable in relation to engagement that confirms this research finding with previous studies that emphasize the relevance of supportive managerial behaviors in enhancing emotional and cognitive engagement [5][17].

Rewards & Career Development ($r = .66$) shows a mediocre positive correlation with engagement, as it can be inferred that recognition and career development prospects contribute to the motivation and loyalty of the employees. Engagement is also significantly associated with Digital Readiness ($r = .62$), meaning that employees who feel that it works in an organization that supports the use of digital tools are more likely to be engaged, which is supported in recent retail settings where attention is paid to the use of digital tools. The high positive correlations prove that Hypothesis H1 is right that leadership support is strongly positively related with employee engagement.

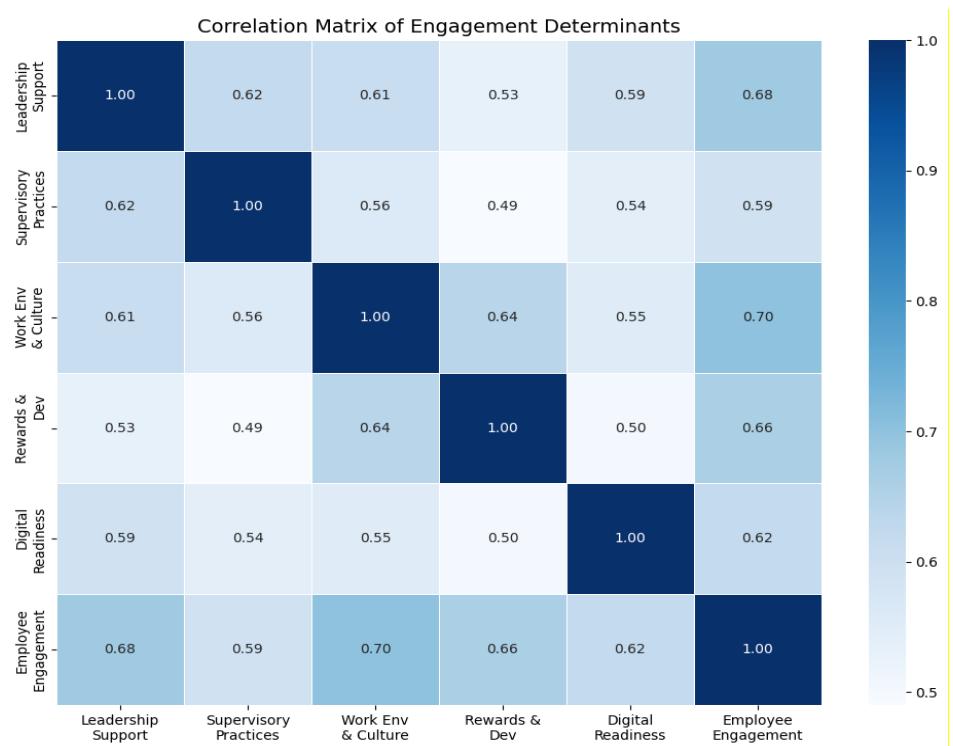


Figure 3. Correlation heatmap of engagement determinants

Figure 3 is a heatmap that visually displays all the inter-relationships between the constructs of the study. It points out that Work Environment and Culture have the highest positive relationship with Employee Engagement ($r = 0.70$), then Leadership Support ($r = 0.68$). The fact that all these coefficients are high indicates that commitment is mainly driven by relational and environmental factors. Such high positive r values between all the variables make the multiple regression to establish predictive power appropriate, and it is consistent with the job resources framework [10].

Table 4. Regression analysis

Model Summary

R	R ²	Adjusted R ²	Std. Error	Durbin-Watson
0.673	0.453	0.449	0.407	1.91

ANOVA

Source	SS	df	MS	F	Sig.
Regression	39.412	1	39.412	237.62	0.000
Residual	47.848	248	0.193		
Total	87.260	249			

Coefficients

Predictor	B (unstd.)	SE(B)	Beta (std.)	t	p
Constant	0.912	0.108	—	8.44	0.000
Work Environment (WEC)	0.420	0.051	0.412	8.24	0.000
Rewards (RWD)	0.305	0.050	0.289	6.10	0.000
Digital Readiness (DR)	0.360	0.051	0.331	7.06	0.000

Regression (Table 4) also shows that the joint predictors, such as Work Environment and Culture, Rewards and Career Development, and Digital Readiness explain 45.3 % of the variation in employee engagement ($R^2 = 0.453$), which reflects a moderately high level of prediction. The value of Durbin-Watson (1.91) is within the acceptable range which proves the absence of autocorrelation. The results of the ANOVA ($F = 237.62$, $p < .001$) have shown that the general model is statistically significant, i.e. the predictor variables together significantly affect engagement.

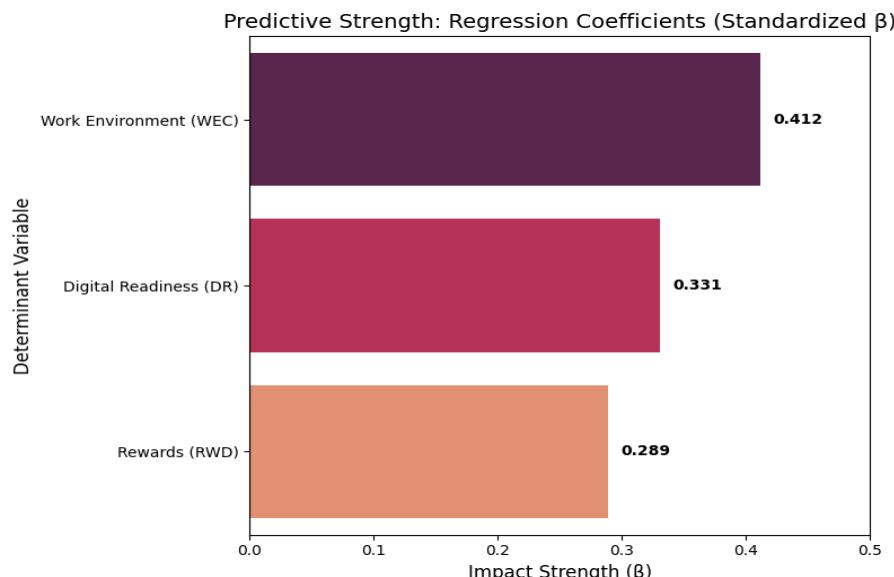


Figure 4. Predictive power of organizational resources (β Coefficients)

The plot of the standardized β weights (8) of the regression analysis it indicates the relative contribution of each predictor (Figure 4). The most significant factor was Work Environment & Culture ($\beta = 0.412$), and then Digital Readiness ($\beta = 0.331$). This implies that supportive leadership is essential, but the physical and digital infrastructure of the workplace is the most effective one in stimulating the level of engagement. These results prove the idea that the success of modern retailing is based on the necessity to balance the human culture and the technological readiness.

The coefficients reveal that the strongest predictor is the Work Environment and Culture ($= 0.412$, $p = 0.412$) that allows influencing the employee attitudes and behaviours by the means of favourable working conditions. The second factor that has the highest weight ($= 0.331$, $p < .001$) is Digital Readiness, which implies that in the world of technologically receptive retail organizations, the level of employee engagement will be more pronounced, which is consistent with the tendencies of digital transformation that are described by Mehta and Sharma (2023). The engagement criterion is also considerably affected by rewards and Career Development (0.289 , $p = 0.001$), i.e., the level of recognition and career development has a strong effect on the rate of motivation and retention among working population.

H2 is empirically proven by the findings since it has been established that work environment, reward systems, and digital readiness are the combined predictors of employee engagement in organized retail organizations. The current investigation provides a lot of valuable data on what makes employee engaged in organised retail enterprises where the level of competition is high, customers are in a continuous flow and change with technological requirements. The results demonstrate that the leadership support is a fundamental factor in development of the employee engagement, and it means that the employees are more motivated and committed to work when the managers communicate with them effectively and provide guidance and stimulate the positive climate. Supervisory practices also enhance this relationship because it bring about clarity, fairness and encouragement in day-to-day practice.

It also concludes that engagement is strongly affected by workplace conditions, reward system, and digital preparedness. Emotional bond is achieved through the good and collaborative working environment whereas fair benefits and career development opportunities enhance the worth and devotion of the employees in the long term. Furthermore, the digital preparedness is also a compulsory element in the modern retail, being a sign of employee willingness to receive access to technological equipment and systems to facilitate their work [16].

Overall, the findings point at the fact that the engagement is a multidimensional phenomenon that relies on the organizational culture, leadership, and systems of developing the capabilities. The retail companies interested in improving employee performance and retention need to be continuously investing in leadership training, workplaces, reward, and information technology. These initiatives combined will also play a significant role in increasing engagement and sustainable organizational development [14].

Managerial and Policy Recommendations

Develop a Psychosocially Supportive Work Environment: As the work environment was the most predictive of engagement ($\beta= 0.41$), managers must focus on the development of the culture of teamwork, psychological safety, and open communication. Employee oriented cultures should be used as policy to discourage absenteeism and turnover.

Dynamic Investment in Digital Preparedness: The companies should offer systematic training and assistance of the digital equipment [21]. This is essential in alleviating the techno-stress and to make sure that technological development is an engagement factor and not a source of role ambiguity. Support better Supervisory

Quality and Leadership: Leadership support is a fundamental aspect of creating engagement. Supervisor training is a mandatory part of the policy that should be confident in empathetic communication and fair treatment, which should also offer constructive feedback. Align

Rewards with Career Development: To enhance long-term commitment, specifically among the younger workforce (47.2% aged 2635), retailers ought to introduce transparent-performance-based reward systems and a clear opportunity of career growth.

CONCLUSION

The study offers strong empirical evidence of the factors of employee engagement in the organized retail industry of Bangalore. The study manages to establish that engagement is not a by-product of compensation as it is the result of a multidimensional combination of environmental, relationship, and technological elements. The statistical findings indicate that the atmosphere in the workplace is paramount among the factors, where Work Environment and Culture has become the most important predictor ($\beta= 0.412$, $p = 0.001$). Moreover, the study shows the growing importance of Digital Readiness ($\beta= 0.331$) and suggests that the faster the retail sector is moving towards AI-based operations, the more the ability of an employee to cope with digital tools is closely tied to their professional energy and commitment. Together the regression model accounted a significant 45.3 % of the variance of employee engagement ($R^2 = 0.453$), confirming the hypothesis that a friendly organizational climate with

technological enablers results in a more engaged workforce. Although this research has provided useful information, it has shortcomings, including in terms of geographical location considering Bangalore and the use of cross-sectional data. The longitudinal designs should be considered in future research to trace the change in engagement levels over time during the peak seasons of retailing or when a radical change in the technology is taking place. Also, it may be valuable to increase its scope to unorganized retail to get a better comparative view of the application of engagement drivers within different market structures. Further research may also investigate the mediating the effect of techno-stress in the correlation between digital readiness and retention and add up on the basis.

REFERENCES

- [1] Ahmad AY, Kumari SS, Guha SK, Gehlot A, Pant B. Blockchain implementation in financial sector and cyber security system. In2023 International Conference on Artificial Intelligence and Smart Communication (AISC) 2023 Jan 27 (pp. 586-590). IEEE. <https://doi.org/10.1109/AISC56616.2023.10085045>
- [2] Albrecht SL. Employee engagement: 10 key questions for research and practice. <https://psycnet.apa.org/doi/10.4337/9781849806374.00007>
- [3] Bakker AB, Demerouti E. Job demands–resources theory. Wellbeing: A complete reference guide. 2014 Feb 3:1-28. <https://doi.org/10.1002/9781118539415.wbwell019>
- [4] Basha SM, Sheshadri T, Lokesh GR, Babu SR, Kanumuri VV, Lakshmi SN, Shwetha TA. The Impact of Virtual Influencers on Social Media: Driving Customer Engagement and Strengthening Brand Loyalty in the Indian Millennial Market. *Dragoman*. 2025;(20):1–15. <https://doi.org/10.63132/ati.2025.theimp.9370>
- [5] Breevaart K, Bakker AB. Daily job demands and employee work engagement: The role of daily transformational leadership behavior. *Journal of occupational health psychology*. 2018 Jul;23(3):338. <https://psycnet.apa.org/doi/10.1037/ocp0000082>
- [6] Rudawska E, Nickell D. Internal marketing activities in creating employee engagement in B2B marketing: The moderating role of cultural differences based on a comparative analysis of Polish and US markets. *Equilibrium* (1689-765X). 2024 Dec 1;19(4).
- [7] Christian MS, Garza AS, Slaughter JE. Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel psychology*. 2011 Mar;64(1):89-136. <https://doi.org/10.1111/j.1744-6570.2010.01203.x>
- [8] Dawra A, Ramachandran KK, Mohanty D, Gowrabhathini J, Goswami B, Ross DS, Mahabub Basha S. 12Enhancing Business Development, Ethics, and Governance with the Adoption of Distributed Systems. Meta Heuristic Algorithms for Advanced Distributed Systems. 2024 Apr 2:193-209. <https://doi.org/10.1002/9781394188093.ch12>
- [9] De Clercq D, Haq IU, Azeem MU. Self-efficacy to spur job performance: Roles of job-related anxiety and perceived workplace incivility. *Management Decision*. 2018 Mar 27;56(4):891-907. <https://doi.org/10.1108/MD-03-2017-0187>
- [10] Mohammad A, Menhat M, Zaideen IM, Saadon MS. Leadership style and its influence on employee performance and retention in employee engagement mediation: evidence from Jordan's petroleum retailing sector. *International Journal of Procurement Management*. 2023;18(4):437-69. <https://doi.org/10.1504/IJPM.2023.134633>
- [11] Sumathi K. HRD practices on employee engagement: Retail organizations. *SCMS Journal of Indian Management*. 2017 Apr 1;14(2):105-12.
- [12] Kalyan NB, Ahmad K, Rahi F, Shelke C, Basha SM. Application of Internet of Things and Machine learning in improving supply chain financial risk management System. In2023 IEEE 2nd International Conference on Industrial Electronics: Developments & Applications (ICIDEA) 2023 Sep 29 (pp. 211-216). IEEE. <https://doi.org/10.1109/ICIDEA59866.2023.10295182>
- [13] Karumuri V, Bastry T, Goranta LR, Rekha B, Mary M, Joshi R, Mahabub Basha S. Optimizing Financial Outcomes: An Analysis of Individual Investment Decision Factors. *Indian Journal of Information Sources and Services*. 2025;15(1):83-90. <https://doi.org/10.51983/ijiss-2025.IJISS.15.1.13>
- [14] Nguyen KL, Moslehpoor M, Aminah H, Sulistiawan J. Human resource practices and organizational support as the determinants in enhancing Vietnamese retail employee engagement: The mediating role of job enrichment. *Business: Theory and Practice*. 2024 May 30;25(1):295-307. <https://doi.org/10.3846/btp.2024.19008>
- [15] Tuffaha M. The determinants of employee's performance: A literature review. *Journal of economics and management sciences*. 2020 Aug 23;3(3): p14-. <https://doi.org/10.30560/jems.v3n3p14>
- [16] Kotti J, Ganesh CN, Naveenan RV, Gorde SG, Basha M, Pramanik S, Gupta A. Utilizing Big Data Technology for Online Financial Risk Management. InArtificial Intelligence Approaches to Sustainable Accounting 2024 (pp. 135-148). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3693-0847-9.ch008>

- [17] Ghlichlee B, Bayat F. Frontline employees' engagement and business performance: the mediating role of customer-oriented behaviors. *Management Research Review*. 2021 Mar 2;44(2):290-317. <https://doi.org/10.1108/MRR-11-2019-0482>
- [18] Mazharunnisa N, Anilkumar J, Reddy K, Sri Hari V, Sharma N, Bharathi T, Basha SM. A Study on Job Stress and Productivity of Women Employees Working in the IT Sector: A Structural Model. *Indian Journal of Information Sources and Services*. 2025;15(2):1–10. <https://doi.org/10.51983/ijiss-2025.IJISS.15.2.01>
- [19] Policepatil S, Sharma J, Kumar B, Singh D, Pramanik S, Gupta A, Mahabub BS. Financial sector hyper-automation: transforming banking and investing procedures. InExamining Global Regulations During the Rise of Fintech 2025 (pp. 299-318). IGI Global. <https://doi.org/10.4018/979-8-3693-3803-2.ch012>
- [20] Prabakar S, Santhosh Kumar V, Sangu VS, Muthulakshmi P, Prabakar S, Mahabub Basha S. Catalysts of change: The transformative journey from HR 1.0 to HR 5.0—Innovations, challenges, and strategies in human resource management with technology and data-driven integration. *Indian Journal of Information Sources and Services*. 2025 Mar;15(1):47-54. <https://doi.org/10.51983/ijiss-2025.IJISS.15.1.08>
- [21] Rana S, Sheshadri T, Malhotra N, Basha SM. Creating Digital Learning Environments: Tools and Technologies for Success. InTransdisciplinary Teaching and Technological Integration for Improved Learning: Case Studies and Practical Approaches 2024 (pp. 1-21). IGI Global. <https://doi.org/10.4018/979-8-3693-8217-2.ch001>
- [22] Kaur A, Gangwar VP, Devi M. Examining Training as a Moderator in the Relationship Between People Analytics and Employee Performance. *Library of Progress-Library Science, Information Technology & Computer*. 2024 Jul 15;44(3).
- [23] Ramesh JV, Suvaris RD, Mahabub Basha S, Nimma D, Kiran Bala B. Advanced AI-Driven Predictive Modeling for Enhancing Customer Retention in Subscription-Based Service Platforms. InInternational Conference on Cloud Computing, Data Science and Engineering 2025 Jan 16 (pp. 449-463). Singapore: Springer Nature Singapore.
- [24] El Gareh F, Elmenssouri A, Oulamine A, Hussain Z. A PRISMA-Based Systematic Review on Organizational Commitment and Logistic Performance. *Knowledge Sharing and Fostering Collaborative Business Culture*. 2025:213-40. [10.4018/979-8-3373-0710-7.ch012](https://doi.org/10.4018/979-8-3373-0710-7.ch012)
- [25] Manresa A, Sammour A, Mas-Machuca M, Chen W, Botchie D. Humanizing GenAI at work: bridging the gap between technological innovation and employee engagement. *Journal of Managerial Psychology*. 2025 Jul 25;40(5):472-92. <https://doi.org/10.1108/JMP-05-2024-0356>
- [26] Shuck B, Reio Jr TG. Employee engagement and well-being: A moderation model and implications for practice. *Journal of Leadership & Organizational Studies*. 2014 Feb;21(1):43-58. <https://doi.org/10.1177/1548051813494240>
- [27] Singh A, Krishna SH, Tadamarla A, Gupta S, Mane A, Basha M. Design and Implementation of Blockchain Based Technology for Supply Chain Quality Management: Challenges and Opportunities. In2023 4th International Conference on Computation, Automation and Knowledge Management (ICCAKM) 2023 Dec 12 (pp. 01-06). IEEE. <https://doi.org/10.1109/ICCAKM58659.2023.10449517>
- [28] Tarafdar M, Tu Q, Ragu-Nathan BS, Ragu-Nathan TS. The impact of technostress on role stress and productivity. *Journal of management information systems*. 2007 Jul 1;24(1):301-28. <https://doi.org/10.2753/MIS0742-1222240109>
- [29] Tims M, Bakker AB, Xanthopoulou D. Do transformational leaders enhance their followers' daily work engagement? *The leadership quarterly*. 2011 Feb 1;22(1):121-31. <http://dx.doi.org/10.1016/j.lequa.2010.12.011>
- [30] Venkataram N, Shaik MB, Kamilov D, Reddy K, Naidu GR. AI and Fintech: Revolutionizing the Financial Landscape. InAI and Fintech (pp. 143-163). CRC Press.