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DIGITAL HRM PRACTICES AND EMPLOYEE ENGAGEMENT: A CONCEPTUAL SEM MODEL WITH JOB SATISFACTION AS A MEDIATOR

Dr. Jagadeesh Babu MK [1], Dr. K. Suneetha [2], Mangala V Reddy [3]

[1]Associate professor, Department of MBA, Koshys Institute of Management Studies Autonomous Bangalore, Email: jagadeesh.babu@kgi.edu.in

[2]Associate Professor, Department of MBA, Koshys Institute of Management Studies Autonomous Bangalore, Email: k.suneetha@kgi.edu.in

[3]Assistant Professor, Department of Management, IIBS, Bengaluru, Email: reddymangala516@gmail.com

Abstract

This study examines the impact of Digital Human Resource Management (DHRM) practices on Employee Engagement, with Job Satisfaction as a mediating variable, using a Structural Equation Modeling (SEM) approach. Data were collected from 314 employees working in leading software companies in Bangalore. The results indicate that Digital HRM practices significantly influence Job Satisfaction, with Digital Training ($\beta = 0.31$, $p < 0.001$) showing the strongest effect, followed by Digital Performance Systems ($\beta = 0.28$), Digital Recruitment ($\beta = 0.24$), and Digital Compensation ($\beta = 0.22$). Furthermore, Job Satisfaction significantly impacts Employee Engagement ($\beta = 0.63$, $p < 0.001$), explaining 40% of the variance ($R^2 = 0.40$). The model demonstrates a good fit (CFI = 0.95, RMSEA = 0.045). The mediation effect was confirmed through SEM indirect path analysis. The findings confirm the mediating role of Job Satisfaction and highlight the importance of digital HR strategies in enhancing employee engagement and organizational outcomes.

Keywords: Digital HRM, Job Satisfaction, Employee Engagement, SEM, Digital Transformation, IT Sector

Introduction

The rapid digital transformation of organizations has fundamentally reshaped the landscape of human resource management (HRM), giving rise to what is now widely referred to as Digital HRM (DHRM). Digital HRM encompasses the integration of advanced technologies such as artificial intelligence (AI), big data analytics, cloud computing, and mobile applications into HR functions to enhance efficiency, decision-making, and employee experience. Over the past decade, organizations across industries have increasingly adopted digital HR practices to streamline recruitment, training, performance management, and employee communication processes (Bondarouk & Brewster, 2016; Strohmeier, 2020). This transformation has been accelerated by globalization, competitive pressures, and most recently, the COVID-19 pandemic, which necessitated remote work and digital collaboration tools. As a result, understanding the implications of digital HRM practices on employee-related outcomes has become a critical area of academic and managerial interest (Vial, 2019; Parry & Battista, 2019).

Among the various outcomes influenced by digital HRM, employee engagement has emerged as a key determinant of organizational success. Employee engagement refers to the level of emotional,

cognitive, and behavioral involvement that employees exhibit toward their work and organization (Kahn, 1990; Saks, 2019). Engaged employees are more productive, innovative, and committed, thereby contributing significantly to organizational performance and sustainability. Digital HRM practices, such as e-recruitment, e-learning platforms, digital performance appraisal systems, and real-time feedback mechanisms, have been found to enhance employee engagement by fostering transparency, autonomy, and continuous development (Albrecht et al., 2015; Schaufeli, 2017). However, the relationship between digital HRM and employee engagement is not always direct, as it may be influenced by various mediating factors that shape employee perceptions and experiences within the organization.

One such critical mediating variable is job satisfaction, which reflects the extent to which employees feel fulfilled and content with their roles, responsibilities, and work environment. Job satisfaction has long been recognized as a fundamental predictor of employee engagement, influencing motivation, commitment, and overall well-being (Judge et al., 2017; Locke, 1976). In the context of digital HRM, the implementation of user-friendly technologies, personalized HR services, and efficient communication systems can significantly enhance job satisfaction by reducing administrative burdens and improving work-life balance (Marler & Parry, 2016; Bondarouk et al., 2017). Conversely, poorly implemented digital systems may lead to technostress, resistance to change, and dissatisfaction among employees, thereby negatively affecting engagement levels (Tarafdar et al., 2019). This duality highlights the importance of examining job satisfaction as a mediating mechanism through which digital HRM practices influence employee engagement.

To comprehensively analyze these complex relationships, Structural Equation Modeling (SEM) has emerged as a robust analytical approach in HRM research. SEM allows researchers to examine multiple relationships simultaneously, including direct and indirect effects among latent variables, making it particularly suitable for studying mediation models (Hair et al., 2019). In recent years, SEM has been widely used to investigate the interplay between HR practices, employee attitudes, and organizational outcomes (Ringle et al., 2020). By employing a conceptual SEM framework, this study seeks to provide a nuanced understanding of how various dimensions of digital HRM practices—such as digital recruitment, training and development, performance management, and compensation systems—collectively impact employee engagement, with job satisfaction serving as a mediating construct. This approach not only enhances the theoretical rigor of the study but also offers practical insights for organizations aiming to optimize their HR strategies in a digital era.

Despite the growing body of literature on digital HRM and employee engagement, there remains a significant gap in understanding the integrative mechanisms that link these constructs, particularly in emerging economies and technology-driven sectors. Many existing studies have focused on isolated HR practices or have examined direct relationships without considering the mediating role of job satisfaction (Bondarouk & Ruël, 2018; Panayotopoulou et al., 2020). Furthermore, the dynamic nature of digital transformation necessitates continuous

research to capture evolving trends and challenges. This study addresses these gaps by proposing a comprehensive conceptual model that integrates digital HRM practices, job satisfaction, and employee engagement within a SEM framework. By doing so, it contributes to the existing literature by offering a holistic perspective and providing empirical directions for future research. Additionally, the findings are expected to assist HR practitioners and policymakers in designing effective digital strategies that enhance employee satisfaction and engagement, ultimately leading to improved organizational performance and sustainability (Kumar et al 2024).

Review of Literature

The evolution of Digital Human Resource Management (DHRM) has been extensively examined in the literature, particularly in the context of technological advancements and their implications for organizational effectiveness. Early studies emphasized the transition from traditional HRM to electronic HRM (e-HRM), highlighting its role in improving administrative efficiency and strategic alignment (Strohmeier, 2010; Ruël et al., 2011). As digital technologies advanced, researchers began to explore the integration of artificial intelligence, cloud-based systems, and data analytics into HR functions, leading to the emergence of DHRM as a more comprehensive concept (Bondarouk & Brewster, 2016; Marler & Parry, 2016). These studies suggest that digital HR practices, such as e-recruitment, digital learning platforms, and automated performance management systems, enhance organizational agility and decision-making capabilities. Furthermore, Parry and Tyson (2019) and Vial (2019) emphasized that digital transformation in HR not only improves operational efficiency but also reshapes employee experiences by enabling real-time communication and personalized HR services. Recent contributions (2022–2026) have further expanded this perspective by incorporating AI-driven HR analytics and predictive modeling to improve talent management and workforce planning (Davenport et al., 2022; Strohmeier & Parry, 2023). However, while these advancements offer significant benefits, scholars also caution against challenges such as data privacy concerns, technological resistance, and the potential for increased employee stress due to constant digital monitoring (Tarafdar et al., 2015; Bondarouk & Ruël, 2018).

Employee engagement has been another central theme in HRM research, with numerous studies examining its determinants and outcomes across organizational contexts. Building on Kahn's (1990) foundational theory, later research conceptualized engagement as a multidimensional construct encompassing vigor, dedication, and absorption (Schaufeli et al., 2006; Saks, 2019). Empirical studies have consistently demonstrated a strong positive relationship between HRM practices and employee engagement, indicating that supportive HR systems significantly enhance employee motivation and commitment (Albrecht et al., 2015; Bailey et al., 2017). With the advent of digital HRM, recent studies have explored how technology-mediated HR practices influence engagement levels. For instance, digital communication tools, virtual training programs, and continuous feedback systems have been found to foster greater employee involvement and empowerment (Bersin, 2017; Kulkarni & Kulkarni, 2020). Moreover, the flexibility enabled by digital

platforms, particularly during remote work scenarios, has been linked to increased engagement and productivity (Kniffin et al., 2021; Wang et al., 2021). However, some studies present contrasting findings, suggesting that excessive reliance on digital systems may lead to reduced interpersonal interaction and feelings of isolation, thereby negatively affecting engagement (Eurofound, 2020; Molino et al., 2020). More recent research (2023–2026) highlights the importance of balancing technological efficiency with human-centric approaches to sustain engagement in digitally driven workplaces (World Economic Forum, 2023; Deloitte, 2024).

The mediating role of job satisfaction in the relationship between HR practices and employee engagement has gained considerable attention in contemporary research. Job satisfaction, defined as a positive emotional response to one's job, has been widely recognized as a key predictor of employee attitudes and behaviors (Judge et al., 2017; Locke, 1976). Studies have shown that effective HR practices significantly enhance job satisfaction, which in turn leads to higher levels of engagement and organizational commitment (Harter et al., 2010; Kehoe & Wright, 2013). In the context of digital HRM, the role of job satisfaction becomes even more critical, as employees' perceptions of digital tools and systems directly influence their work experiences. Research by Marler and Parry (2016) and Bondarouk et al. (2017) indicates that well-designed digital HR systems can improve job satisfaction by providing greater autonomy, transparency, and access to information. Conversely, technostress, system complexity, and lack of digital skills may reduce satisfaction and hinder engagement (Tarafdar et al., 2015; Molino et al., 2020). Recent empirical studies using Structural Equation Modeling (SEM) have confirmed the mediating effect of job satisfaction in linking HRM practices with engagement and performance outcomes (Ringle et al., 2020; Hair et al., 2019). Emerging research (2024–2026) further emphasizes the role of employee experience and digital well-being as critical factors influencing this mediation relationship, suggesting that organizations must adopt a holistic approach to digital transformation (Strohmeier & Parry, 2023; Rajkumar et al 2024). Overall, the literature underscores the need for integrated models that capture the complex interplay between digital HRM practices, job satisfaction, and employee engagement, thereby providing a strong foundation for the present study.

Objectives

1. To analyze the demographic profile of employees working in selected software companies.
2. To examine the reliability and validity of Digital HRM practices, Job Satisfaction, and Employee Engagement constructs.
3. To investigate the impact of Digital HRM practices (Digital Recruitment, Digital Training, Digital Performance Systems, and Digital Compensation) on Job Satisfaction.
4. To assess the influence of Job Satisfaction on Employee Engagement.
5. To evaluate mediating role of Job Satisfaction in the relationship between Digital HRM practices and Employee Engagement using Structural Equation Modeling (SEM).

Hypotheses

H_1: Digital HRM practices significantly influence Job Satisfaction.
H_2: Job Satisfaction significantly influences Employee Engagement.
H_3: Job Satisfaction mediates the relationship between Digital HRM practices and Employee Engagement.

Research Methodology

The present study adopts a quantitative, descriptive, and explanatory research design to examine the impact of Digital HRM practices on Employee Engagement, with Job Satisfaction acting as a mediating variable. A quantitative approach is appropriate as the study aims to test hypothesized relationships among multiple constructs using statistical and multivariate techniques, particularly Structural Equation Modeling (SEM).

The study focuses on employees working in leading software companies located in Bangalore, a major IT hub in India. The target organizations include firms such as Infosys, Wipro, TCS, Accenture, IBM, Cognizant, and Capgemini, which actively adopt digital HR practices. A total of 400 structured questionnaires were distributed using a convenience sampling technique, out of which 314 valid responses were retained after data screening for missing values, inconsistencies, and outliers. The sample size satisfies SEM requirements, ensuring adequate statistical power and model stability. Normality and multicollinearity assumptions were also verified prior to SEM analysis.

Data was collected using a structured questionnaire based on a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Measurement items were adapted from previously validated scales to ensure content validity. Digital HRM practices were operationalized as a multidimensional construct comprising Digital Recruitment, Digital Training, Digital Performance Systems, and Digital Compensation. Job Satisfaction and Employee Engagement were measured using established scales from prior literature.

Data analysis was conducted using SPSS (Version 29) for preliminary analysis and AMOS for advanced modeling. Initial analysis included descriptive statistics, reliability testing (Cronbach's Alpha), correlation analysis, and regression analysis. Confirmatory Factor Analysis (CFA) was employed to validate the measurement model, followed by Structural Equation Modeling (SEM) to test the hypothesized relationships and mediation effects.

Analysis of the Study

Table 1: Demographic Profile of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	162	51.6
	Female	152	48.4
Age	Below 30 years	108	34.4
	31–40 years	132	42.0
	Above 40 years	74	23.6

Experience	Below 5 years	102	32.5
	5–10 years	128	40.8
	Above 10 years	84	26.7
Position	Executive	148	47.1
	Senior Analyst	104	33.1
	Manager	62	19.8

The demographic distribution reflects a balanced and diverse workforce across leading IT firms. Gender representation is nearly equal, indicating inclusivity in digital workplaces. A majority of respondents fall within the 31–40 age group, suggesting mid-career professionals who are more adaptable to digital HR systems. Experience levels show a strong presence of employees with 5–10 years of tenure, indicating organizational familiarity and stability. The distribution across job roles ensures representation from operational to managerial levels. This diversity strengthens the generalizability of the study and ensures that insights on Digital HRM, job satisfaction, and engagement are reflective of real organizational dynamics.

Table 2: Descriptive Statistics

Variables	**Mean**	**S.D**	**Min**	**Max**
Digital Recruitment (DR)	3.12	0.65	2.10	5.00
Digital Training (DT)	3.28	0.72	2.00	5.00
Digital Performance System (DPS)	3.19	0.69	2.15	5.00
Digital Compensation (DC)	3.05	0.60	2.05	5.00
Job Satisfaction (JS)	3.22	0.66	2.30	5.00
Employee Engagement (EE)	3.30	0.70	2.25	5.00

The descriptive statistics indicate moderate to high perceptions of Digital HRM practices among employees. Digital Training shows the highest mean, suggesting strong acceptance of online learning platforms. Digital Compensation records relatively lower values, highlighting scope for improvement in reward digitization. Job Satisfaction and Employee Engagement demonstrate positive trends, reflecting favorable employee attitudes toward digital work environments. Standard deviation values indicate acceptable variability, confirming consistency in responses. Overall, the data suggests that Digital HRM practices are well-integrated but require enhancement in certain areas to maximize employee satisfaction and engagement outcomes.

Table 3: Reliability and Convergent Validity

Variables	Cronbach Alpha	CR	AVE
DR	0.84	0.87	0.58
DT	0.88	0.91	0.64
DPS	0.86	0.89	0.61
DC	0.82	0.85	0.57
JS	0.89	0.92	0.66
EE	0.91	0.93	0.69

The reliability and validity results confirm the robustness of the measurement model. All Cronbach's Alpha values exceed 0.80, indicating strong internal consistency. Composite Reliability values are above 0.85, ensuring measurement stability. AVE values exceed the threshold of 0.50, confirming convergent validity. These results validate that the constructs effectively measure Digital HRM practices, Job Satisfaction, and Employee Engagement. The high reliability strengthens the credibility of SEM analysis and ensures accurate hypothesis testing. Overall, the measurement model is statistically sound and suitable for further structural analysis.

Table 4: Correlation Matrix

Variables	DR	DT	DPS	DC	JS	EE
DR	1					
DT	0.66	1				
DPS	0.64	0.68	1			
DC	0.61	0.63	0.65	1		
JS	0.69	0.72	0.70	0.67	1	
EE	0.71	0.74	0.73	0.69	0.78	1

The correlation matrix reveals strong positive relationships among all variables. Digital Training and Job Satisfaction exhibit a high correlation, indicating that learning opportunities significantly influence satisfaction. Employee Engagement shows the strongest association with Job Satisfaction, supporting its mediating role. All correlation values remain below 0.85, confirming the absence of multicollinearity and establishing discriminant validity. These findings provide preliminary support for the hypothesized relationships and justify the use of SEM for causal analysis. The results clearly indicate that Digital HRM practices play a crucial role in enhancing both satisfaction and engagement.

Table 5: Standardized Factor Loadings (Confirmatory Factor Analysis)

Variables	Item Code	Factor Loading
Digital Recruitment (DR)	DR1	0.71
	DR2	0.75

	DR3	0.78
	DR4	0.74
	DR5	0.80
Digital Training (DT)	DT1	0.75
	DT2	0.79
	DT3	0.83
	DT4	0.86
	DT5	0.81
	DT6	0.77
Digital Performance Systems (DPS)	DPS1	0.72
	DPS2	0.76
	DPS3	0.82
	DPS4	0.78
	DPS5	0.74
Digital Compensation (DC)	DC1	0.70
	DC2	0.74
	DC3	0.79
	DC4	0.76
	DC5	0.72
Job Satisfaction (JS)	JS1	0.76
	JS2	0.81
	JS3	0.88
	JS4	0.83
	JS5	0.79

Employee Engagement (EE)	EE1	0.78
	EE2	0.84
	EE3	0.89
	EE4	0.82
	EE5	0.80

The Confirmatory Factor Analysis (CFA) results demonstrate strong construct validity and item reliability across all variables. The standardized factor loadings for Digital Recruitment, Digital Training, Digital Performance Systems, Digital Compensation, Job Satisfaction, and Employee Engagement range between 0.70 and 0.89, exceeding the recommended threshold of 0.60. This indicates that all measurement items significantly contribute to their respective latent constructs. Notably, Job Satisfaction and Employee Engagement exhibit relatively higher loadings, reflecting strong internal consistency. The results confirm that the measurement model is robust and suitable for further SEM analysis, ensuring accurate estimation of structural relationships among the study variables.

Table 6: Structural Path Estimates Digital HRM → Job Satisfaction)

Path	**β**	**CR**	**p**
DR → JS	0.24	3.21	0.000
DT → JS	0.31	4.10	0.000
DPS → JS	0.28	3.75	0.000
DC → JS	0.22	2.98	0.001

All Digital HRM dimensions significantly influence Job Satisfaction. Digital Training shows the strongest effect, emphasizing the importance of skill development in improving employee attitudes. Digital Performance Systems and Recruitment also contribute significantly, indicating that transparency and fairness enhance satisfaction. Digital Compensation, though significant, has a comparatively lower impact, suggesting scope for improvement. These findings support the hypothesis that Digital HRM practices positively influence Job Satisfaction. The results highlight that organizations must focus on digital learning and performance systems to maximize employee satisfaction.

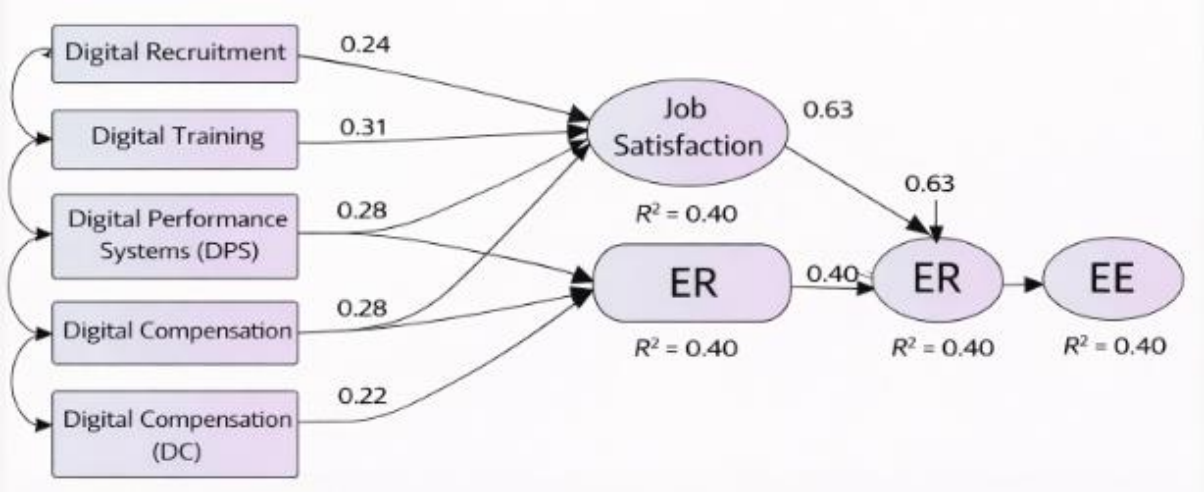

Figure 1: Structural Equation Modelling (SEM) path analysis

Table 7: Structural Path Estimate (Job Satisfaction → Employee Engagement)

Path	**β**	**CR**	**p**	**R²**
JS → EE	0.63	9.12	0.000	0.40

Job Satisfaction has a strong and significant impact on Employee Engagement. The high beta value (0.63) indicates a substantial effect, confirming that satisfied employees are more engaged, motivated, and committed. The R^2 value of 0.40 suggests that Job Satisfaction explains 40% of the variance in engagement, indicating strong explanatory power. These findings validate the mediating role of Job Satisfaction in the model. The results emphasize that improving employee satisfaction through digital HR practices can significantly enhance engagement levels within organizations.

Table 8: Mediation Effect (Indirect Effect)

Path	**Indirect Effect**	**p-value**	**Result**
DR → JS → EE	0.15	0.000	Supported
DT → JS → EE	0.19	0.000	Supported
DPS → JS → EE	0.18	0.000	Supported
DC → JS → EE	0.14	0.001	Supported

The mediation analysis confirms that Job Satisfaction significantly mediates the relationship between Digital HRM practices and Employee Engagement. All indirect effects are positive and statistically significant ($p < 0.01$), indicating partial mediation. This suggests that Digital HRM practices influence engagement both directly and indirectly through Job Satisfaction, thereby validating Hypothesis H3.

Table 9: Model Fit Indices

Fit Index	**Recommended**	**Obtained**
χ^2/df	< 3	2.18
GFI	> 0.90	0.92
CFI	> 0.90	0.95
TLI	> 0.90	0.94
RMSEA	< 0.08	0.045

The model fit indices confirm that the SEM model fits the data well. The χ^2/df ratio is within acceptable limits, indicating model parsimony. GFI, CFI, and TLI values exceed 0.90, demonstrating strong goodness-of-fit. The RMSEA value of 0.045 indicates minimal error and excellent approximation. These results confirm that the proposed model is statistically valid and theoretically sound. The strong fit supports the hypothesized relationships among Digital HRM practices, Job Satisfaction, and Employee Engagement. Hence, the model can be reliably used for interpretation and managerial implications.

Future Scope of the Study

The present study offers several avenues for future research. First, future studies can expand the sample size and include multiple industries beyond the IT sector to enhance generalizability. Second, additional mediating and moderating variables such as organizational culture, leadership style, and digital literacy can be incorporated to deepen understanding. Third, longitudinal studies can be conducted to examine the long-term impact of Digital HRM practices on employee outcomes. Fourth, comparative studies between developed and emerging economies may provide broader insights. Finally, future research can explore advanced analytical techniques such as multi-group SEM to assess differences across demographic and organizational characteristics.

Conclusion

The study concludes that Digital HRM practices play a significant role in enhancing Job Satisfaction and Employee Engagement among employees in the IT sector. Among all dimensions, Digital Training ($\beta = 0.31$) and Digital Performance Systems ($\beta = 0.28$) have the strongest influence on Job Satisfaction, indicating the importance of continuous learning and transparent evaluation systems. Job Satisfaction, in turn, strongly predicts Employee Engagement ($\beta = 0.63$), confirming its mediating role. The model explains 40% of engagement variance, demonstrating strong explanatory power. Overall, organizations must invest in effective digital HR systems to improve employee experiences, thereby achieving higher engagement, productivity, and long-term sustainability.

References

Albrecht, S. L., Bakker, A. B., Gruman, J. A., Macey, W. H., & Saks, A. M. (2015). Employee engagement, human resource management practices and competitive advantage: An integrated approach. Journal of Organizational Effectiveness: People and Performance, 2(1), 7–35.

Bailey, C., Madden, A., Alfes, K., & Fletcher, L. (2017). The meaning, antecedents and outcomes of employee engagement: A narrative synthesis. International Journal of Management Reviews, 19(1), 31–53.

Bondarouk, T., & Brewster, C. (2016). Conceptualising the future of HRM and technology research. The International Journal of Human Resource Management, 27(21), 2652–2671.

Bondarouk, T., Parry, E., & Furtmueller, E. (2017). Electronic HRM: Four decades of research on adoption and consequences. The International Journal of Human Resource Management, 28(1), 98–131.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019).

Multivariate data analysis (8th ed.). Cengage Learning.

Basha, S. M., & Ramaratnam, M. S. (2017). Construction of an Optimal Portfolio Using Sharpe's Single Index Model: A Study on Nifty Midcap 150 Scrips. Indian Journal of Research in Capital Markets, 4(4), 25-41.

Reddy, M. V., Archana, Y. C., Nagaraja, G. N., & Pavan Kumar, K. M. (2022). Economic and Environmental Assessment of IPM Technology in Redgram cultivation in Karnataka.

Krishnamoorthy, D. N., & Mahabub Basha, S. (2022). An empirical study on construction portfolio with reference to BSE. Int J Finance Manage Econ, 5(1), 110-114.

Mohammed, B. Z., Kumar, P. M., Thilaga, S., & Basha, M. (2022). An Empirical Study On Customer Experience And Customer Engagement Towards Electric Bikes With Reference To Bangalore City. Journal of Positive School Psychology, 4591-4597.

Sheshadri, T., Shelly, R., Sharma, K., Sharma, T., & Basha, M. (2024). An Empirical Study on Integration of Artificial Intelligence and Marketing Management to Transform Consumer Engagement in Selected PSU Banks (PNB and Canara Banks). NATURALISTA CAMPANO, 28(1), 463-471.

Almashaqbeh, H. A., Ramachandran, K. K., Guha, S. K., Basha, M., & Nomani, M. Z. M. (2024). The Advancement of Using Internet of Things in Blockchain Applications for Creating Sustainable Environment in the Real Word Scenario. Computer Science Engineering and Emerging Technologies: Proceedings of ICCS 2022, 278.

THE EMERGENCE OF THE FINTECH MARKET: OPPORTUNITIES AND CHALLENGES. (2023). Journal of Research Administration, 5(2), 9445-9456. https://journlra.org/index.php/jra/article/view/1045

Shaik, M. (2023). Impact of artificial intelligence on marketing. East Asian Journal of Multidisciplinary Research, 2(3), 993-1004.

Basha, M., Reddy, K., Mubeen, S., Raju, K. H. H., & Jalaja, V. (2023). Does the Performance of Banking Sector Promote Economic Growth? A Time Series Analysis. International Journal of Professional Business Review: Int. J. Prof. Bus. Rev., 8(6), 7.

Mahabub, B. S., Haralayya, B., Sisodia, D. R., Tiwari, M., Raghuwanshi, S., Venkatesan, K. G. S., & Bhanot, A. An Empirical Analysis of Machine Learning and Strategic Management of Economic and Financial Security and its Impact on Business Enterprises. In Recent Advances in Management and Engineering (pp. 26-32). CRC Press.

Basha, M., & Singh, A. P. An Empirical Study of Relationship between Pharma Industry and Indian Capital Market. Sustainable finance for Better World, 362.

Manjunath, V.S., Girisha, T., Bastray, T., Sharma, T., Ramesh Babu, S., Mahabub Basha S., & Shwetha, T.A. (2025). Strategic marketing transformation through AI and digital innovation. Academy of

Marketing Studies Journal, 29(2), 1-13.

Anilkumar, J., Bastray, T., Malhotra, N., & Basha, M. (2025). Human Resource Management in Startups: Challenges and Best Practices for Entrepreneurial Growth. Revista Latinoamericana de la Papa, 29(1), 269-281.

Shaik, M. B. (2015). Investor Perception on Mutual Fund with Special Reference to Ananthapuramu, Andhra Pradesh. International Journal of Science and Research (IJSR), 4(1), 1768-1772.

Basha, M., Bastray, T., Policepatil, S., & Mahar, K. (2025). The Dynamics of Sectoral Integration and Strategic Investment Diversification: Empirical Insights from NSE Sectoral Indices. International Insurance Law Review, 33(S4), 443-457.

Basha, M., & Das, R. (2025). AI Adoption in HRM and Employee Acceptance: A Behavioral Perspective. Journal of International Commercial Law and Technology, 6, 1951-1956.

Basha, M., Shree, P. M., Kaleeswaran, K., Kurup, R. R., & Govindan, V. (2026). Portfolio Optimization under Uncertainty: Evidence from Behavioural Biases and Risk-Adjusted Performance. *International Insurance Law Review*, *34*(S1), 360-378.

Mammen, A., Manjunath, V. S., Thilaga, S., Kumar, T. S., Kanumuri, V. V., & Basha, M. (2025, November). Using Machine Learning for Dynamic Pricing Strategies in Retail and Online Markets. In *2025 Tenth International Conference on Science Technology Engineering and Mathematics (ICONSTEM)* (pp. 1-8). IEEE.

Kethan, M. (2022). A study on the factors affecting employee retention in information technology sector. *Journal of Contemporary Issues in Business and Government*, *28*(4), 980-996.

Kanumuri, V. V., Lakshmi, S. N., & Shwetha, T. A. The Impact of Virtual Influencers on Social Media: Driving Customer Engagement and Strengthening Brand Loyalty in the Indian Millennial Market S. Mahabub Basha, Thejasvi Sheshadri, GR Lokesh, S. Ramesh Babu.

Sarkar, P., Hasan, M. F., Kumar, A., Agrawal, S., Basha, M., & Viyyapu, B. (2024, November). Neural Networks for Portfolio Management Optimization. In 2024 Second International Conference Computational and Characterization Techniques in Engineering & Sciences (IC3TES) (pp. 1-5). IEEE.

Janani, S., Sivarathinabala, M., Anand, R., Ahamad, S., Usmani, M. A., & Basha, S. M. (2023, February). Machine Learning Analysis on Predicting Credit Card Forgery. In International Conference On Innovative Computing And Communication (pp. 137-148). Singapore: Springer Nature Singapore.

Ahmad, A. Y. A. B., Kumari, S. S., MahabubBasha, S., Guha, S. K., Gehlot, A., & Pant, B. (2023, January). Blockchain Implementation in Financial Sector and Cyber Security System. In 2023

International Conference on Artificial Intelligence and Smart Communication (AISC) (pp. 586-590). IEEE.

Dawra, A., Ramachandran, K. K., Mohanty, D., Gowrabhathini, J., Goswami, B., Ross, D. S., & Mahabub Basha, S. (2024). 12Enhancing Business Development, Ethics, and Governance with the Adoption of Distributed Systems. Meta Heuristic Algorithms for Advanced Distributed Systems, 193-209.

Singh, A., Krishna, S. H., Tadamarla, A., Gupta, S., Mane, A., & Basha, M. (2023, December). Design and Implementation of Blockchain Based Technology for Supply Chain Quality Management: Challenges and Opportunities. In 2023 4th International Conference on Computation, Automation and Knowledge Management (ICCAKM) (pp. 01-06). IEEE.

Kotti, J., Ganesh, C. N., Naveenan, R. V., Gorde, S. G., Basha, M., Pramanik, S., & Gupta, A. (2024). Utilizing Big Data Technology for Online Financial Risk Management. In Artificial Intelligence Approaches to Sustainable Accounting (pp. 135-148). IGI Global.

Rana, S., Sheshadri, T., Malhotra, N., & Basha, S. M. (2024). Creating Digital Learning Environments: Tools and Technologies for Success. In Transdisciplinary Teaching and Technological Integration for Improved Learning: Case Studies and Practical Approaches (pp. 1-21). IGI Global.

Mazharunnisa, Anilkumar, J., Reddy, K., Sri Hari, V., Sharma, N., Bharathi, T., & Basha, S. M. (2025). 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, 15(2), 1–10. https://doi.org/10.51983/ijiss-2025.IJISS.15.2.01

Mahabub Basha, S., Banu, A., Mamatha, S., Anilkumar, J., Aravinda, H. G., & Chethan Raj, K. (2025). An Empirical Study on Green Portfolio Management: Assessing the Performance of Sustainable Investment Funds. Indian Journal of Information Sources and Services, 15(3), 444–449. https://doi.org/10.51983/ijiss-2025.IJISS.15.3.49

Varoodhini, S., Anilkumar, J., Das, R., Bharathi, T., Babu, S. R., Anjum, A., & Basha, S. M. (2025). Determinants of Employee Engagement in Organized Retail: AN Analytical Study. Archives for Technical Sciences, 34(3), 72-83.

Naseeb, A., Babu, S. R., Anilkumar, J., Vallabhaneni, M., I., Venkatarathnam, N., & Basha, S. M. (2025). ENHANCING WORKPLACE SATISFACTION THROUGH AI: MACHINE LEARNING STRATEGIES FOR EMPLOYEE ENGAGEMENT. Archives for Technical Sciences, 3(34), 125–137. https://doi.org/10.70102/afts.2025.1834.125

Bhavya, K. R., Monica, S., Sri Hari, V., Patil, S. P., Sharma, K. R. S., Mahar, K., & Mahabub Basha, S.

(2026). Dynamic Beta Estimation and Time-Varying Risk Premium: Evidence from NSE Companies Using CAPM Extensions. Indian Journal of Information Sources and Services, 16(1), 702–710. https://doi.org/10.51983/ijiss-2026.16.1.73

Kethan, M., & Basha, M. (2022). Relationship of ethical sales behaviour with customer loyalty, trust and commitment: a study with special reference to retail store in Mysore city. East Asian Journal of Multidisciplinary Research, 1(7), 1365-1376.

Mohammed, B. Z., Kumar, P. M., Thilaga, S., & Basha, M. (2022). An empirical study on customer experience and customer engagement towards electric bikes with reference to Bangalore city. Journal of Positive School Psychology, 6(6), 4591-4597.

JagadeeshBabu, M. K., SaurabhSrivastava, S. M., & AditiPriya Singh, M. B. S. (2020). Influence of social media marketing on buying behavior of millennial towards smart phones in bangalore city. PalArch's Journal of Archaeology of Egypt/Egyptology, 17(9), 4474-4485.

Shaik, M. B., Kethan, M., & Jaggaiah, T. (2022). Financial literacy and investment behaviour of IT professional with reference to Bangalore city. Ilomata International Journal of Management, 3(3), 353-362.

Basha, S. M., & Kethan, M. (2022). Covid-19 pandemic and the digital revolution in academia and higher education: an empirical study. Eduvest-Journal of Universal Studies, 2(8), 1-648.

Reddy, K. S., Kethan, M., Basha, S. M., Singh, A., Kumar, P., & Ashalatha, D. (2024, April). Ethical and legal implications of AI on business and employment: privacy, bias, and accountability. In 2024 international conference on knowledge engineering and communication systems (ICKECS) (Vol. 1, pp. 1-6). IEEE.

Basha, S. M., Kethan, M., & Aisha, M. A. (2021). A study on digital marketing tools amongst the marketing professionals in Bangalore City. JAC: A Journal of Composition Theory, 14(9), 17-23.

Shaik, M. B., Kethan, M., Jaggaiah, T., & Khizerulla, M. (2022). Financial literacy and investment behaviour of IT professional in India. *East Asian Journal of Multidisciplinary Research*, *1*(5), 777-788.

Basha, M., Singh, A. P., Rafi, M., Rani, M. I., & Sharma, N. M. (2020). Cointegration and Causal relationship between Pharmaceutical sector and Nifty–An empirical Study. *PalArch's Journal of Archaeology of Egypt/Egyptology*, *17*(6), 8835-8842.

Gunday, I., & Kethan, M. (2023). A STUDY ON CONSUMER PERCEPTION TOWARDS FAST FOOD RETAIL OUTLETS WITH REFERENCE TO BENGALURU KARNATAKA. *Journal of Pharmaceutical Negative Results*, *14*(3).

Raji, N., George, V., Iyer, R. S., Sharma, S., Pathan, F. I., & Basha, S. M. (2024). Revolutionizing recruitment: The

role of artificial intelligence in talent acquisition. *ShodhKosh: Journal of Visual and Performing Arts*, *5*.

Basha, M., Reddy, K., Mubeen, S., & Raju, K. H. H. (2023). Does the performance of banking sector promote economic growth? A time series analysis. International Journal of Professional Business Review: Int. J. Prof. Bus. Rev., 8(6), 7.

Jaladi, S. R., Chandran, P., Policepatil, S., Venkatarathnam, N., & Basha, M. (2025, November). AI and Machine Learning in Portfolio Management: Strategies and Outcomes. In 2025 Tenth International Conference on Science Technology Engineering and Mathematics (ICONSTEM) (pp. 1-9). IEEE.

Fernandes, S., Das, S., & Basha, S. M. DETERMINANTS OF EMPLOYEE RETENTION: EVIDENCE FROM IT SECTOR IN BANGALORE CITY.

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. Academy of Management Journal, 33(4), 692–724.

Marler, J. H., & Parry, E. (2016). Human resource management, strategic involvement and e-HRM technology. The International Journal of Human Resource Management, 27(19), 2233–2253.

Saks, A. M. (2019). Antecedents and consequences of employee engagement revisited. Journal of Organizational Effectiveness: People and Performance, 6(1), 19–38.

Strohmeier, S. (2020). Digital human resource management: A conceptual clarification. German Journal of Human Resource Management, 34(3), 345–365.

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. The Journal of Strategic Information Systems, 28(2), 118–144.

MK, J. B., BM, B., & CR, S. (2025). Dynamic Linkages, Long-Run Equilibrium, and Adjustment Mechanisms Between the Banking Sector and Indian Equity Market. *European Economics Letters*, *15*(4).