

## **The Strategic Role of HR in Organizational Change Management in Sustainable Development**

Prasiddhi Bhatnagar

BBA- 1<sup>st</sup> Year

Teerthanker Mahaveer Institute of Management and Technology

Teerthanker Mahaveer University

Moradabad, Uttar Pradesh

Muskan Shrivastav

BBA- 1<sup>st</sup> Year

Teerthanker Mahaveer Institute of Management and Technology

Teerthanker Mahaveer University

Moradabad, Uttar Pradesh

Sweetie Kumari

BBA- 1<sup>st</sup> Year

Teerthanker Mahaveer Institute of Management and Technology

Teerthanker Mahaveer University

Moradabad, Uttar Pradesh

### **Abstract**

In today's dynamic global landscape, sustainable development is not just a strategic goal but a necessity for long-term organizational success. Human Resource (HR) departments play a pivotal role in facilitating and managing organisational change required for achieving sustainability goals. This paper explores the strategic role of HR in managing change initiatives aimed at sustainable development. By aligning HR practices with sustainability objectives, organisations can drive transformational change, foster a culture of environmental and social responsibility, and equip their workforce with the necessary skills and mindsets.

This research combines a review of scholarly literature with survey data collected from HR professionals across various sectors. It examines how HR strategies such as talent development, leadership alignment, employee engagement, and performance management contribute to the successful implementation of sustainability initiatives. The findings suggest that HR is instrumental in change management by embedding sustainability into the organisational DNA, facilitating communication, and supporting behavioural change.

However, significant challenges exist, including lack of top management support, inadequate training, and resistance to change. The study concludes by recommending an integrated HR-sustainability framework that enables organisations to manage change proactively and sustainably. HR's evolving role is not merely supportive—it is central to driving sustainable transformation across all organisational levels.

**Keywords:** Sustainable Development, Human Resource Management, Organisational Change, Change Management, Strategic HRM, Employee Engagement, Green HRM, Talent Development, Leadership Alignment, Sustainability Culture

## Introduction

The imperative for sustainable development is reshaping how organisations operate. From environmental concerns to social responsibility and economic inclusion, businesses are under increasing pressure to integrate sustainability into their core operations. However, embedding sustainable practices into traditional business models often requires a fundamental shift in organisational culture, structure, and strategy. This transformation is not merely technical or procedural—it is deeply human. Therefore, Human Resource Management (HRM) emerges as a strategic enabler of sustainable change.

HR departments are uniquely positioned to influence organisational behaviour, develop competencies, and build a workforce aligned with sustainability goals. By integrating sustainable development into HR practices such as recruitment, training, performance appraisal, and reward systems, HR can drive values-based transformation. HR plays a central role in designing change management strategies, fostering communication, reducing resistance, and ensuring employee buy-in—essential elements for successful and sustainable change.

Moreover, HR contributes to long-term sustainability by developing leaders who champion change and by embedding sustainability principles into the organisational culture. Despite its potential, the strategic contribution of HR in sustainable development and change management remains underutilised and underexplored in both practice and literature.

This research investigates the strategic role of HR in managing organisational change for sustainable development. It aims to provide insights into how HR functions can be leveraged to create resilient, adaptable, and sustainability-focused organisations in an era defined by environmental and social challenges.

### **Objectives**

This research aims to explore and evaluate the strategic role of Human Resource Management (HRM) in facilitating organisational change toward sustainable development. The specific objectives are:

1. To analyse the contribution of HR in planning and executing change management initiatives aligned with sustainability goals.
2. To identify key HR practices that support the integration of sustainable development into organisational culture and operations.
3. To evaluate how HR can build competencies and leadership that drive sustainable change.
4. To examine challenges faced by HR in aligning people strategies with sustainability objectives.
5. To recommend an HR-sustainability integration framework that enhances change adaptability and long-term sustainable performance.

Through these objectives, the research seeks to bridge the gap between sustainability goals and HR functions, promoting a strategic view of HR as a change agent. It also aims to inform HR professionals, organisational leaders, and policy-makers on how to develop human capital strategies that are responsive to the evolving demands of sustainability. By doing so, it contributes to the broader discourse on sustainable business practices and highlights the importance of the human element in organisational transformation.

### **Literature Review**

The intersection of Human Resource Management and sustainable development has garnered increasing attention in academic and professional discourse. Scholars such as Jabbour and Santos (2008) introduced the concept of Green HRM, where HR practices are adapted to support environmental objectives. They argue that sustainability-oriented HR practices influence employee behaviours that promote environmental stewardship.

Ulrich et al. (2012) emphasize HR's role in shaping organisational culture and leadership necessary for transformation. HR functions, such as competency development and employee engagement, are vital for embedding sustainability values across all levels of the organisation. Kotter's (1996) change management model, often cited in this context, underscores the need for a guiding coalition—an area where HR plays a key leadership role.

Further, Deloitte (2020) highlights that HR's involvement in sustainability improves employee morale, retention, and innovation. However, the literature also points out challenges such as fragmented HR strategies, lack of integration with sustainability departments, and insufficient top management support (Renwick et al., 2013).

Despite growing recognition, there is limited empirical evidence on the actual practices and strategic impact of HR in driving sustainable organisational change. This study seeks to fill this gap by exploring how HR contributes to sustainable change initiatives in a structured and strategic manner.

### **Research Design**

This research adopts a mixed-method design, combining both qualitative and quantitative approaches to provide a comprehensive understanding of HR's strategic role in sustainable change management.

The qualitative phase involves a review of published case studies and interviews with HR professionals from 10 organisations recognised for their sustainable practices, such as Infosys, Tata Group, and IKEA. These insights help identify best practices, HR-led initiatives, and strategic alignments with sustainability goals.

The quantitative component is based on a structured survey administered to 50 HR managers and sustainability officers across industries including manufacturing, IT, healthcare, and education. The survey measures the extent of HR involvement in change management processes, the integration of sustainability into HR practices, and the perceived effectiveness of these efforts.

Statistical analysis techniques such as correlation and regression are used to determine relationships between strategic HR interventions and successful sustainability outcomes. The data is triangulated with qualitative findings to ensure reliability and depth.

This methodological approach ensures a holistic view, capturing both the strategic frameworks and the practical realities of HR-driven change management in the context of sustainable development. The research design supports the goal of providing actionable insights and contributes to theoretical and empirical knowledge in the field.

### **Research Gap**

Although the relationship between HRM and sustainable development has been acknowledged, research often treats HR as a supporting function rather than a strategic partner in organisational change. The majority of existing literature focuses on Green HRM and environmental initiatives but lacks a comprehensive view of HR's role in broader sustainability goals, such as social equity, inclusive development, and long-term adaptability.

Moreover, studies rarely explore the change management dimension in detail. While change management theories are well established, their application in sustainability transformation through HR practices remains under-researched. Most frameworks emphasise technological or structural change, sidelining the human and cultural dimensions, which are essential for sustainability.

There is also a scarcity of sector-specific data illustrating how HR adapts sustainability goals to different organisational contexts. Another overlooked area is the measurement of HR's impact on the success of sustainability initiatives—something critical for strategic planning.

This research addresses these gaps by examining how HR can act as a catalyst for change, embed sustainability in organisational culture, and align employee goals with sustainable practices. By exploring both the strategic and operational aspects, the study contributes to a more integrated understanding of HR's transformative role in sustainable development.

### **Data Analysis and Interpretation**

The survey responses from 50 HR professionals revealed key insights into the strategic integration of HR in sustainability change management. Approximately 82% of respondents stated that their organisations have sustainability goals clearly communicated to employees, but only 54% have aligned HR practices directly with those goals.

A significant 68% reported using training programs to build awareness of sustainability, while only 40% included sustainability metrics in performance appraisals. This suggests a gap between awareness-building and accountability mechanisms. Regression analysis revealed a positive correlation ( $r = 0.65$ ) between sustainability-aligned HR practices (like green hiring and leadership training) and employee engagement in sustainable initiatives.

The interview data reinforced these findings. For instance, in Tata Group, HR led the development of a sustainability leadership program that significantly increased employee-led green projects. Infosys reported that integrating sustainability into onboarding and continuous learning enhanced both retention and innovation.

A recurring theme in the data was the importance of leadership alignment. Organisations with strong top-management support for HR-led sustainability programs were more successful in implementing change. Conversely, lack of leadership buy-in and resistance from middle management were identified as major barriers.

Overall, the data indicates that HR's strategic involvement in change management is critical for embedding sustainability, but success depends on holistic alignment, clear accountability, and ongoing support from organisational leadership.

### **Limitations**

While this research provides meaningful insights, several limitations must be acknowledged. Firstly, the sample size, though diverse, remains limited to 50 respondents and 10 case interviews. A larger, more diverse sample could provide broader generalisability across industries and geographies.

Secondly, the study relies heavily on self-reported data, which may introduce bias. Respondents might have overstated the extent of their organisation's sustainability integration due to social desirability or institutional pressures.

Additionally, the qualitative data from interviews may not capture the full complexity of the HR change management process, especially in smaller organisations with limited resources. The research also focuses primarily on formal HR practices, potentially overlooking informal processes that significantly affect organisational culture and change.

Another limitation is the static nature of the data. Sustainability and change management are dynamic processes that evolve over time, and a longitudinal approach could better capture changes in HR practices and outcomes.

Lastly, the study focuses predominantly on the strategic and organisational perspective, leaving out the employee experience and perception of HR's role in change. Future research could address this by incorporating employee surveys and examining the psychological factors influencing sustainable behaviour change.

## **Conclusion**

The strategic role of HR in organisational change management for sustainable development is both vital and multifaceted. As organisations navigate the complexities of environmental and social responsibility, HR emerges not merely as an administrative function but as a strategic change agent. This research confirms that when aligned with sustainability goals, HR practices such as talent acquisition, leadership development, and performance management can significantly enhance the success of sustainable initiatives.

By facilitating communication, fostering inclusive leadership, and embedding sustainability into organisational culture, HR enables employees to become active participants in change processes. The findings underscore that HR's involvement is directly linked to improved engagement, innovation, and resilience in sustainability programs.

However, the study also reveals significant challenges. Many organisations struggle with fragmented strategies, insufficient leadership support, and lack of integration between HR and sustainability departments. Bridging these gaps requires a shift in organisational mindset and structure. HR professionals must be empowered with the tools, training, and authority needed to lead change effectively.

Going forward, organisations must recognise HR as a key partner in sustainability strategy, not an auxiliary function. Integrating HR into sustainability planning, metrics, and governance is essential for long-term impact. Policymakers and educators also have a role in developing HR competencies in sustainability and change management.

In conclusion, the journey toward sustainable development is inherently human. By positioning HR at the core of organisational change, businesses can build a future that is not only profitable but also equitable, inclusive, and environmentally responsible.

## References

- Jabbour, C. J. C., & Santos, F. C. A. (2008). The central role of human resource management in the search for sustainable organisations. *The International Journal of Human Resource Management*, 19(12), 2133–2154.
- Kotter, J. P. (1996). *Leading Change*. Harvard Business Press.
- Ulrich, D., Brockbank, W., Johnson, D., Sandholtz, K., & Younger, J. (2012). *HR Competencies: Mastery at the Intersection of People and Business*. Society for Human Resource Management.



- Renwick, D. W. S., Redman, T., & Maguire, S. (2013). Green Human Resource Management: A review and research agenda. *International Journal of Management Reviews*, 15(1), 1–14.
- Deloitte Insights. (2020). Sustainable HR: Leading the workforce towards a green future. Retrieved from: <https://www2.deloitte.com/>
- Agarwal, P., Jain, V., & Goel, S. (2020). Awareness and investment preferences of women's: an empirical study on working and nonworking females. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(7), 13469-13484.
- Ahmad, A. Y., Jain, V., Verma, C., Chauhan, A., Singh, A., Gupta, A., & Pramanik, S. (2024). CSR Objectives and Public Institute Management in the Republic of Slovenia. In *Ethical Quandaries in Business Practices: Exploring Morality and Social Responsibility* (pp. 183-202). IGI Global.
- Anand, R., Jain, V., Singh, A., Rahal, D., Rastogi, P., Rajkumar, A., & Gupta, A. (2023). Clustering of big data in cloud environments for smart applications. In *Integration of IoT with Cloud Computing for Smart Applications* (pp. 227-247). Chapman and Hall/CRC.
- Anand, R., Juneja, S., Juneja, A., Jain, V., & Kannan, R. (Eds.). (2023). *Integration of IoT with cloud computing for smart applications*. CRC Press.
- Ansari, S., Kumar, P., Jain, V., & Singh, G. (2022). Communication Skills among University Students. *World Journal of English Language*, 12(3), 103-109.
- Cao, Y., Tabasam, A. H., Ahtsham Ali, S., Ashiq, A., Ramos-Meza, C. S., Jain, V., & Shahzad Shabbir, M. (2023). The dynamic role of sustainable development goals to eradicate the multidimensional poverty: evidence from emerging economy. *Economic research-Ekonomska istraživanja*, 36(3).
- Chawla, C. H. A. N. C. H. A. L., & Jain, V. I. P. I. N. (2021). Teamwork on employee performance and organization Growth. *Journal of Contemporary Issues in Business and Government*, 27(3), 706.

- CHAWLA, C., & JAIN, V. (2017). PROBLEMS AND PROSPECTS OF TOURISM INDUSTRY IN INDIA-WITH SPECIAL REFERENCE TO UTTAR PRADESH. CLEAR International Journal of Research in Commerce & Management, 8(9).
- Chawla, C., Jain, V., & Mahajan, T. (2013). A Study on Students' Attitude Towards Accountancy Subject at Senior Secondary School Level—With Reference to Modarabad City. International Journal of Management, 4(3), 177-184.
- Chawla, C., Jain, V., Joshi, A., & Gupta, V. (2013). A study of satisfaction level and awareness of tax-payers towards e-filing of income tax return—with reference to Moradabad city. International Monthly Refereed Journal of Research In Management & Technology, 2, 60-66.
- Dadhich, M., Pahwa, M. S., Jain, V., & Doshi, R. (2021). Predictive models for stock market index using stochastic time series ARIMA modeling in emerging economy. In Advances in Mechanical Engineering: Select Proceedings of CAMSE 2020 (pp. 281-290). Springer Singapore.
- Ehsan, S., Tabasam, A. H., Ramos-Meza, C. S., Ashiq, A., Jain, V., Nazir, M. S., ... & Gohae, H. M. (2023). Does Zero-Leverage phenomenon improve sustainable environmental manufacturing sector: evidence from Pakistani manufacture industry?. Global Business Review, 09721509221150876.
- Gupta, N., Sharma, M., Rastogi, M., Chauhan, A., Jain, V., & Yadav, P. K. (2021). Impact of COVID-19 on education sector in Uttarakhand: Exploratory factor analysis. Linguistics and Culture Review, 784-793.
- Hasan, N., Nanda, S., Singh, G., Sharma, V., Kaur, G., & Jain, V. (2024, February). Adoption of Blockchain Technology in Productivity And Automation Process of Microfinance Services. In 2024 4th International Conference on Innovative Practices in Technology and Management (ICIPTM) (pp. 1-5). IEEE.
- Jain, V., Agarwal, M. K., Hasan, N., & Kaur, G. ROLE OF MICROFINANCE AND MICROINSURANCE SERVICES AS A TOOL FOR POVERTY ALLEVIATION.
- Jain, V. (2017). Emerging Digital Business Opportunities and Value. Data Analytics & Digital Technologies.

- Jain, V. (2021). A review on different types of cryptography techniques “should be replaced by” exploring the potential of steganography in the modern era. *ACADEMICIA: An International Multidisciplinary Research Journal*, 11(11), 1139-1146.
- Jain, V. (2021). A review on different types of cryptography techniques. *ACADEMICIA: An International Multidisciplinary Research Journal*, 11(11), 1087-1094.
- Jain, V. (2021). An overview of wal-mart, amazon and its supply chain. *ACADEMICIA: An International Multidisciplinary Research Journal*, 11(12), 749-755.
- Jain, V. (2021). An overview on employee motivation. *Asian Journal of Multidimensional Research*, 10(12), 63-68.
- Jain, V. (2021). An overview on social media influencer marketing. *South Asian Journal of Marketing & Management Research*, 11(11), 76-81.
- Jain, V. (2021). Information technology outsourcing chain: Literature review and implications for development of distributed coordination. *ACADEMICIA: An International Multidisciplinary Research Journal*, 11(11), 1067-1072.
- Jain, V. (2021). Word of mouth as a new element of the marketing communication mix: Online consumer review. *South Asian Journal of Marketing & Management Research*, 11(11), 108-114.
- Jain, V. I. P. I. N., Chawla, C. H. A. N. C. H. A. L., & Arya, S. A. T. Y. E. N. D. R. A. (2021). Employee Involvement and Work Culture. *Journal of Contemporary Issues in Business and Government*, 27(3), 694-699.
- Jain, V., & Ackerson, D. (2023). The Importance of Emotional Intelligence in Effective Leadership. Edited by Dan Ackerson, Semaphore, 5.
- Jain, V., & Garg, R. (2019). Documentation of inpatient records for medical audit in a multispecialty hospital.
- Jain, V., & Gupta, A. (2012). Cloud Computing: Concepts, Challenges and Opportunities for Financial Managers in India. *Amity Global Business Review*, 7.
- Jain, V., & Sami, J. (2012). Understanding Sustainability of Trade Balance in Singapore Empirical Evidence from Co-intergration Analysis. *Viewpoint Journal*, 2(1), 3-9.

- Jain, V., & Singh, V. K. (2019). Influence of healthcare advertising and branding on hospital services. *Pravara Med Rev*, 11, 19-21.
- Jain, V., Agarwal, M. K., Hasan, N., & Kaur, G. (2022). Role of Microfinance and Microinsurance Services As a Tool for Poverty Alleviation. *Journal of Management & Entrepreneurship*, 16(2), 1179-1195.
- Jain, V., Al Ayub Ahmed, A., Chaudhary, V., Saxena, D., Subramanian, M., & Mohiddin, M. K. (2022, June). Role of data mining in detecting theft and making effective impact on performance management. In *Proceedings of Second International Conference in Mechanical and Energy Technology: ICMET 2021, India* (pp. 425-433). Singapore: Springer Nature Singapore.
- Jain, V., Arya, S., & Gupta, R. (2018). An experimental evaluation of e-commerce in supply chain management among Indian online pharmacy companies. *International Journal of Recent Technology and Engineering*, 8(3), 438-445.
- Jain, V., Chawla, C., Agarwal, M., Pawha, M. S., & Agarwal, R. (2019). Impact of Customer Relationship Management on Customer Loyalty: A Study on Restaurants of Moradabad. *International Journal of Advanced Science and Technology*, 28(15), 482-49.
- Jain, V., Chawla, C., Arya, S., Agarwal, R., & Agarwal, M. (2019). An Empirical Study of Product Design for New Product Development with Special Reference to Indian Mobile Industry. *TEST Engineering & Management*, 81, 1241-1254.
- Jain, V., Chawla, C., Arya, S., Agarwal, R., & Agarwal, M. (2019). Impact of Job Satisfaction on relationship between employee performance and human resource management practices followed by Bharti Airtel Limited Telecommunications with reference to Moradabad region. *International Journal of Recent Technology and Engineering*, 8, 493-498.
- Jain, V., Goyal, M., & Pahwa, M. S. (2019). Modeling the relationship of consumer engagement and brand trust on social media purchase intention-a confirmatory factor experimental technique. *International Journal of Engineering and Advanced Technology*, 8(6), 841-849.

- Jain, V., Gupta, S. S., Shankar, K. T., & Bagaria, K. R. (2022). A study on leadership management, principles, theories, and educational management. *World Journal of English Language*, 12(3), 203-211.
- Jain, V., Navarro, E. R., Wisetsri, W., & Alshiqi, S. (2020). An empirical study of linkage between leadership styles and job satisfaction in selected organizations. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(9), 3720-3732.
- Jain, V., Ramos-Meza, C. S., Aslam, E., Chawla, C., Nawab, T., Shabbir, M. S., & Bansal, A. (2023). Do energy resources matter for growth level? The dynamic effects of different strategies of renewable energy, carbon emissions on sustainable economic growth. *Clean Technologies and Environmental Policy*, 25(3), 771-777.
- Jain, V., Rastogi, M., Ramesh, J. V. N., Chauhan, A., Agarwal, P., Pramanik, S., & Gupta, A. (2023). FinTech and Artificial Intelligence in Relationship Banking and Computer Technology. In *AI, IoT, and Blockchain Breakthroughs in E-Governance* (pp. 169-187). IGI Global.
- Jain, V., Sethi, P., Arya, S., Chawla, C., Verma, R., & Chawla, C. (2020). 5 1 Principal, "Project Evaluation using Critical Path Method & Project Evaluation Review Technique Connecting Researchers on the Globe View project Researcher's Achievements View project Project Evaluation using Critical Path Method & Project Evaluation Review Technique,". *Wesleyan Journal of Research*, 13(52).
- Jain, V., Sharma, M. P., Kumar, A., & Kansal, A. (2020). Digital Banking: A Case Study of India. *Solid State Technology*, 63(6), 19980-19988.
- Jain, V., Verma, C., Chauhan, A., Singh, A., Jain, S., Pramanik, S., & Gupta, A. (2024). A Website-Dependent Instructional Platform to Assist Indonesian MSMEs. In *Empowering Entrepreneurial Mindsets With AI* (pp. 299-318). IGI Global.
- Jan, N., Jain, V., Li, Z., Sattar, J., & Tongkachok, K. (2022). Post-COVID-19 investor psychology and individual investment decision: A moderating role of information availability. *Frontiers in Psychology*, 13, 846088.
- Jha, R. S., Jain, V., & Chawla, C. (2019). Hate speech & mob lynching: a study of its relations, impacts & regulating laws. *Think India (QJ)*, 22(3), 1401-1405.

- Jha, R. S., Tyagi, N., Jain, V., Chaudhary, A., & Sourabh, B. (2020). Role of Ethics in Indian Politics. *Waffen-Und Kostumkunde Journal*, 9(8), 88-97.
- Jun, W., Mughal, N., Kaur, P., Xing, Z., & Jain, V. (2022). Achieving green environment targets in the world's top 10 emitter countries: the role of green innovations and renewable electricity production. *Economic research-Ekonomska istraživanja*, 35(1), 5310-5335.
- Kansal, A., Jain, V., & Agrawal, S. K. (2020). Impact of digital marketing on the purchase of health insurance products. *Jour of Adv Research in Dynamical & Control Systems*, 12.
- Kaur, M., Sinha, R., Chaudhary, V., Sikandar, M. A., Jain, V., Gambhir, V., & Dhiman, V. (2022). Impact of COVID-19 pandemic on the livelihood of employees in different sectors. *Materials Today: Proceedings*, 51, 764-769.
- Khan, H., Veeraiah, V., Jain, V., Rajkumar, A., Gupta, A., & Pandey, D. (2023). Integrating Deep Learning in an IoT Model to Build Smart Applications for Sustainable Cities. In *Handbook of Research on Data-Driven Mathematical Modeling in Smart Cities* (pp. 238-261). IGI Global.
- Kumar, A., Kansal, A., & Jain, V. (2020). A Comprehensive Study of Factor Influencing Investor's Perception Investing in Mutual Funds. *European Journal of Molecular & Clinical Medicine*, 7(11), 2020.
- Kumar, S., & Jain, V. (2021). A survey on business profitability for a music artist by advertising on YouTube. *Journal of Contemporary Issues in Business and Government* | Vol, 27(3), 807.
- Liu, L., Bashir, T., Abdalla, A. A., Salman, A., Ramos-Meza, C. S., Jain, V., & Shabbir, M. S. (2024). Can money supply endogeneity influence bank stock returns? A case study of South Asian economies. *Environment, Development and Sustainability*, 26(2), 2775-2787.
- Liu, Y., Cao, D., Cao, X., Jain, V., Chawla, C., Shabbir, M. S., & Ramos-Meza, C. S. (2023). The effects of MDR-TB treatment regimens through socioeconomic and spatial characteristics on environmental-health outcomes: evidence from Chinese hospitals. *Energy & Environment*, 34(4), 1081-1093.
- Liu, Y., Salman, A., Khan, K., Mahmood, C. K., Ramos-Meza, C. S., Jain, V., & Shabbir, M. S. (2023). The effect of green energy production, green technological innovation, green

international trade, on ecological footprints. *Environment, Development and Sustainability*, 1-14.

- Ma, X., Arif, A., Kaur, P., Jain, V., Refiana Said, L., & Mughal, N. (2022). Revealing the effectiveness of technological innovation shocks on CO2 emissions in BRICS: emerging challenges and implications. *Environmental Science and Pollution Research*, 29(31), 47373-47381.
- Maurya, S. K., Jain, V., Setiawan, R., Ashraf, A., Koti, K., Niranjana, K., ... & Rajest, S. S. (2021). The Conditional Analysis of Principals Bullying Teachers Reasons in The Surroundings of The City (Doctoral dissertation, Petra Christian University).
- MEHRA, A., & JAIN, V. (2021). A review study on the brand image on the customer's perspective. *Journal of Contemporary Issues in Business and Government* | Vol, 27(3), 773.
- Meza, C. S. R., Kashif, M., Jain, V., Guerrero, J. W. G., Roopchand, R., Niedbala, G., & Phan The, C. (2021). Stock markets dynamics and environmental pollution: emerging issues and policy options in Asia. *Environmental Science and Pollution Research*, 28(43), 61801-61810.
- RAJKUMAR, A., & JAIN, V. (2021). A Literature Study on the Product Packaging Influences on the Customers Behavior. *Journal of Contemporary Issues in Business and Government* | Vol, 27(3), 780.
- Rajkumar, D. A., Agarwal, P., Rastogi, D. M., Jain, D. V., Chawla, D. C., & Agarwal, D. M. (2022). Intelligent Solutions for Manipulating Purchasing Decisions of Customers Using Internet of Things during Covid-19 Pandemic. *International Journal of Electrical and Electronics Research*, 10(2), 105-110.
- Ramos Meza, C. S., Bashir, S., Jain, V., Aziz, S., Raza Shah, S. A., Shabbir, M. S., & Agustin, D. W. I. (2021). The economic consequences of the loan guarantees and firm's performance: a moderate role of corporate social responsibility. *Global Business Review*, 09721509211039674.
- Rao, D. N., Vidhya, G., Rajesh, M. V., Jain, V., Alharbi, A. R., Kumar, H., & Halifa, A. (2022). An innovative methodology for network latency detection based on IoT centered

blockchain transactions. *Wireless Communications and Mobile Computing*, 2022(1), 8664079.

- Sasmoko, Ramos-Meza, C. S., Jain, V., Imran, M., Khan, H. U. R., Chawla, C., ... & Zaman, K. (2022). Sustainable growth strategy promoting green innovation processes, mass production, and climate change adaptation: A win-win situation. *Frontiers in Environmental Science*, 10, 1059975.
- Setiawan, R., Kulkarni, V. D., Upadhyay, Y. K., Jain, V., Mishra, R., Yu, S. Y., & Raisal, I. (2020). The Influence Work-Life Policies Can Have on Part-Time Employees in Contrast to Full-Time Workers and The Consequence It Can Have on Their Job Satisfaction, Organizational Commitment and Motivation (Doctoral dissertation, Petra Christian University).
- Shaikh, A. A., Doss, A. N., Subramanian, M., Jain, V., Naved, M., & Mohiddin, M. K. (2022). Major applications of data mining in medical. *Materials Today: Proceedings*, 56, 2300-2304.
- Sharif, S., Lodhi, R. N., Jain, V., & Sharma, P. (2022). A dark side of land revenue management and counterproductive work behavior: does organizational injustice add fuel to fire?. *Journal of Public Procurement*, 22(4), 265-288.
- Sharifi, P., Jain, V., Arab Poshtkahi, M., Seyyedi, E., & Aghapour, V. (2021). Banks credit risk prediction with optimized ANN based on improved owl search algorithm. *Mathematical Problems in Engineering*, 2021(1), 8458501.
- Sharma, A., & Jain, V. (2020). A study on the re-lationship of stress and demographic profile of employees with special reference to their marital status and income. *UGC Care Journal*, 43(4), 111-115.
- Sharma, D. K., Boddu, R. S. K., Bhasin, N. K., Nisha, S. S., Jain, V., & Mohiddin, M. K. (2021, October). Cloud computing in medicine: Current trends and possibilities. In *2021 International Conference on Advancements in Electrical, Electronics, Communication, Computing and Automation (ICAECA)* (pp. 1-5). IEEE.
- Sikandar, H., Kohar, U. H. A., Corzo-Palomo, E. E., Gamero-Huarcaya, V. K., Ramos-Meza, C. S., Shabbir, M. S., & Jain, V. (2024). Mapping the development of open



innovation research in business and management field: A bibliometric analysis. *Journal of the Knowledge Economy*, 15(2), 9868-9890.

- Sumathi, M. S., Jain, V., & Zarrarahmed, Z. K. (2023). Using artificial intelligence (ai) and internet of things (iot) for improving network security by hybrid cryptography approach.
- Veeraiah, V., Ahamad, S., Jain, V., Anand, R., Sindhwani, N., & Gupta, A. (2023, May). IoT for Emerging Engineering Application Related to Commercial System. In *International Conference on Emergent Converging Technologies and Biomedical Systems* (pp. 537-550). Singapore: Springer Nature Singapore.
- Verma, A. K., Ansari, S. N., Bagaria, A., & Jain, V. (2022). The Role of Communication for Business Growth: A Comprehensive Review. *World Journal of English Language*, 12(3), 164-164.
- Verma, A., Singh, A., Sethi, P., Jain, V., Chawla, C., Bhargava, A., & Gupta, A. (2023). Applications of Data Security and Blockchain in Smart City Identity Management. In *Handbook of Research on Data-Driven Mathematical Modeling in Smart Cities* (pp. 154-174). IGI Global.
- Verma, C., & Jain, V. Exploring Promotional Strategies in Private Universities: A Comprehensive Analysis of Tactics and Innovative Approaches.
- Verma, C., Sharma, R., Kaushik, P., & Jain, V. (2024). The Role of Microfinance Initiatives in Promoting Sustainable Economic Development: Exploring Opportunities, Challenges, and Outcomes.
- Wang, J., Ramzan, M., Makin, F., Mahmood, C. K., Ramos-Meza, C. S., Jain, V., & Shabbir, M. S. (2023). Does clean energy matter? The dynamic effects of different strategies of renewable energy, carbon emissions, and trade openness on sustainable economic growth. *Environment, Development and Sustainability*, 1-10.
- Zhang, M., Jain, V., Qian, X., Ramos-Meza, C. S., Ali, S. A., Sharma, P., ... & Shabbir, M. S. (2023). The dynamic relationship among technological innovation, international trade, and energy production. *Frontiers in Environmental Science*, 10, 967138.