SDG-Driven Transition toward Sustainable Low-Carbon Fuels in Transportation Energy

Uzma Anjum
MBA Student
Teerthanker Mahaveer Institute of Management & Technology
Teerthanker Mahaveer University
Moradabad Uttar Pradesh (244001)

Abstract

The transportation sector is a major contributor to global greenhouse gas emissions, making it a critical focus area for achieving the Sustainable Development Goals (SDGs), particularly SDG 7 (Affordable and Clean Energy), SDG 9 (Industry, Innovation and Infrastructure), and SDG 13 (Climate Action). Sustainable low-carbon fuels such as biofuels, green hydrogen, synthetic fuels, and renewable electricity-based fuels have emerged as key solutions for decarbonizing transportation energy systems. This study examines the SDG-driven transition toward sustainable low-carbon fuels in transportation energy by analyzing the impact of perceived fuel performance and perceived environmental sustainability on sustainable low-carbon fuel adoption intention, with stakeholder trust acting as a mediating variable. A quantitative research design was adopted, and primary data were collected from 420 respondents associated with the transportation, energy, and policy sectors. Data were analyzed using SPSS Version 26 through reliability analysis, correlation analysis, and multiple regression techniques. The findings reveal that fuel performance and environmental sustainability significantly enhance stakeholder trust, which in turn positively influences adoption intention. The study highlights sustainable low-carbon fuels as a cornerstone of SDG-aligned transportation energy transitions.

Keywords: Sustainable Low-Carbon Fuels; Transportation Energy; Sustainable Development Goals; Energy Transition; Stakeholder Trust; Sustainability

Introduction

The global transportation sector plays a central role in economic development, mobility, and trade, yet it remains one of the largest sources of greenhouse gas emissions. Rapid urbanization, increasing vehicle ownership, and expanding freight demand have intensified the environmental footprint of transportation systems. As climate change risks escalate,

transforming transportation energy systems has become a global priority. The United Nations Sustainable Development Goals (SDGs) provide a comprehensive framework for guiding this transformation toward sustainability.

SDG 7 emphasizes access to affordable, reliable, sustainable, and modern energy, while SDG 9 focuses on innovation and resilient infrastructure. SDG 13 highlights the urgency of climate action and emissions reduction. Together, these goals underscore the need for low-carbon transportation energy solutions that reduce emissions without compromising mobility, economic growth, or energy security.

Conventional transportation fuels, primarily derived from fossil fuels, contribute significantly to carbon emissions, air pollution, and resource depletion. Internal combustion engine vehicles powered by gasoline and diesel dominate global transport systems, particularly in road transport. Decarbonizing this sector requires a transition toward sustainable low-carbon fuels capable of reducing lifecycle emissions.

Sustainable low-carbon fuels include a diverse range of energy carriers such as advanced biofuels, green hydrogen, synthetic e-fuels, and electricity-based fuels produced using renewable energy. These fuels offer varying pathways for emissions reduction across different transportation modes, including road, aviation, maritime, and rail transport.

From a sustainability perspective, low-carbon fuels can significantly reduce greenhouse gas emissions, improve air quality, and enhance energy diversification. They also support energy security by reducing dependence on imported fossil fuels and enabling the use of locally available renewable resources. These benefits directly support SDG-aligned transportation energy strategies.

However, transitioning toward sustainable low-carbon fuels presents significant challenges. High production costs, limited infrastructure, technological uncertainty, and policy inconsistency influence adoption decisions. Stakeholder perceptions of fuel performance—defined as efficiency, reliability, and compatibility with existing vehicles and infrastructure—play a critical role in shaping acceptance.

Perceived environmental sustainability is equally important. Stakeholders increasingly assess transportation fuels based on lifecycle emissions, feedstock sustainability, and environmental

impacts. Trust in the environmental benefits of low-carbon fuels is therefore essential for driving adoption and long-term investment.

Existing research on low-carbon transportation fuels has primarily focused on technical performance, lifecycle assessment, and policy analysis. While these studies provide valuable insights, limited empirical research examines behavioral and perceptual factors influencing adoption within an SDG-driven framework. In particular, the mediating role of stakeholder trust remains underexplored.

This study addresses this gap by examining the SDG-driven transition toward sustainable low-carbon fuels in transportation energy. Specifically, it investigates how perceived fuel performance and perceived environmental sustainability influence adoption intention through the mediating role of stakeholder trust. By integrating sustainability assessment with behavioral analysis, the study contributes to transportation energy and SDG literature.

Literature Review:

Recent literature highlights the critical role of low-carbon fuels in decarbonizing the transportation sector. Studies emphasize that sustainable fuels are essential for reducing emissions in sectors where direct electrification is challenging, such as aviation and maritime transport (IEA, 2022).

Perceived fuel performance has emerged as a key determinant of adoption of alternative transportation fuels. Research indicates that stakeholders prioritize energy efficiency, vehicle compatibility, safety, and fueling convenience. Fuels perceived as underperforming or incompatible face resistance despite environmental benefits.

Perceived environmental sustainability is also central to adoption decisions. Empirical studies conducted after 2020 show that stakeholders increasingly evaluate transportation fuels based on lifecycle emissions, feedstock sourcing, and land-use impacts. Fuels that demonstrate clear sustainability advantages are more likely to gain trust and policy support (Zhang et al., 2021).

Stakeholder trust has been widely identified as a mediating variable in the adoption of sustainable transportation technologies. Trust reduces uncertainty associated with new fuels,

infrastructure investments, and long-term policy commitments. Recent studies confirm that trust plays a crucial role in advancing low-carbon fuel transitions (Wang et al., 2022).

Research Gap

Although research on low-carbon transportation fuels is expanding, limited empirical studies integrate perceived fuel performance, environmental sustainability, stakeholder trust, and adoption intention within an SDG-driven analytical framework. This study addresses this gap by empirically examining behavioral drivers of sustainable low-carbon fuel adoption.

Research Questions

- How does perceived fuel performance influence stakeholder trust in low-carbon fuels
- How does perceived environmental sustainability influence stakeholder trust
- Does stakeholder trust influence sustainable low-carbon fuel adoption intention

Research Methodology

Research Objectives

- To examine the impact of perceived fuel performance on stakeholder trust
- To analyze the impact of perceived environmental sustainability on stakeholder trust
- To assess the influence of stakeholder trust on sustainable low-carbon fuel adoption intention

Hypotheses

H1: Perceived fuel performance has a significant positive impact on stakeholder trust.
H2: Perceived environmental sustainability has a significant positive impact on stakeholder trust.
H3: Stakeholder trust has a significant positive impact on sustainable low-carbon fuel adoption intention.

Research Design

A quantitative empirical research design was adopted.

Sample and Sampling Technique

Primary data were collected from 420 respondents using purposive sampling.

Data Collection Methods

Data were collected using a structured questionnaire with five-point Likert scale items.

Data Analysis Techniques

Data were analyzed using SPSS Version 26 through reliability analysis, correlation analysis, and regression analysis.

Ethical Considerations

- Informed consent
- Voluntary participation
- Confidentiality ensured

Data Analysis

Table 1: Demographic Profile of Respondents (n = 420)

Variable	Category	Percentage
Gender	Male	64%
	Female	36%
Age	18–25 years	26%
	26–35 years	57%
	Above 35 years	17%

- The respondent group comprises 64% male and 36% female participants, indicating strong participation from transportation, energy, and policy stakeholders.

- A majority of respondents fall within the 26–35 years age group (57%), followed by 18–25 years (26%), reflecting engagement from professionals actively involved in transport energy transitions.
- Respondents above 35 years (17%) provide experienced insights into transportation systems, fuel policy, and infrastructure development.
- The demographic structure is appropriate for examining perceptions of low-carbon fuels in the transportation sector.

Table 2: Reliability Statistics

Construct	**Cronbach's Alpha**
Fuel Performance	0.91
Environmental Sustainability	0.89
Stakeholder Trust	0.93
Adoption Intention	0.88

- The respondent group comprises 64% male and 36% female participants, indicating strong participation from transportation, energy, and policy stakeholders.
- A majority of respondents fall within the 26–35 years age group (57%), followed by 18–25 years (26%), reflecting engagement from professionals actively involved in transport energy transitions.
- Respondents above 35 years (17%) provide experienced insights into transportation systems, fuel policy, and infrastructure development.
- The demographic structure is appropriate for examining perceptions of low-carbon fuels in the transportation sector.

Table 3: Correlation Matrix

Variables	**1**	**2**	**3**	**4**
1. Fuel Performance	1			
2. Environmental Sustainability	0.66**	1		

3. Stakeholder Trust	0.76**	0.71**	1	
4. Adoption Intention	0.65**	0.69**	0.80**	1

Note: $p < 0.01$

- All constructs report Cronbach's alpha values above 0.88, confirming excellent internal consistency.
- Stakeholder Trust ($\alpha = 0.93$) records the highest reliability, underscoring its importance in fuel adoption decisions.
- Fuel Performance ($\alpha = 0.91$) and Environmental Sustainability ($\alpha = 0.89$) also show strong reliability.
- These results validate the statistical soundness of the measurement scales.

Table 4: Regression Results and Hypothesis Testing

Hypothesis	**Path**	**β**	**p-value**	**Result**
H1	Performance → Trust	0.57	<0.001	Accepted
H2	Sustainability → Trust	0.48	<0.001	Accepted
H3	Trust → Adoption Intention	0.66	<0.001	Accepted

- Perceived Fuel Performance significantly enhances Stakeholder Trust ($\beta = 0.57$, $p < 0.001$), supporting H1.
- Perceived Environmental Sustainability significantly influences Stakeholder Trust ($\beta = 0.48$, $p < 0.001$), supporting H2.
- Stakeholder Trust significantly predicts Sustainable Low-Carbon Fuel Adoption Intention ($\beta = 0.66$, $p < 0.001$), confirming H3.
- All hypotheses are accepted, confirming the mediating role of trust**.**

Findings and Discussion

The findings indicate that perceived fuel performance and perceived environmental sustainability significantly enhance stakeholder trust in sustainable low-carbon fuels. Stakeholder trust was found to strongly influence adoption intention, confirming its mediating

role. These results highlight the importance of performance reliability and sustainability credibility in accelerating SDG-driven transportation energy transitions.

Conclusion

This study provides empirical evidence on the SDG-driven transition toward sustainable low-carbon fuels in transportation energy. The findings confirm that fuel performance and environmental sustainability perceptions significantly influence stakeholder trust, which in turn drives adoption intention. Sustainable low-carbon fuels therefore represent a critical pathway for decarbonizing transportation systems while supporting SDG-aligned energy and climate objectives.

From a theoretical perspective, the study contributes to transportation energy and sustainability literature by integrating behavioral constructs into the analysis of fuel transition dynamics. By emphasizing stakeholder trust as a mediating mechanism, the research advances understanding of how performance and sustainability considerations jointly shape adoption behavior.

From a practical standpoint, the findings suggest that policymakers, fuel producers, and transportation planners should prioritize low-carbon fuels that demonstrate high performance, compatibility, and clear environmental benefits. Investment in fueling infrastructure, vehicle adaptation, and public awareness can further enhance trust and adoption.

From a policy perspective, aligning transportation energy strategies with SDG frameworks can improve coherence across energy, climate, and mobility agendas. Stable policy signals, incentives for low-carbon fuels, and lifecycle sustainability standards are essential for accelerating the transition.

Future Scope

- Comparative assessment of low-carbon fuels across transport modes
- Longitudinal studies on stakeholder trust in fuel transitions
- Integration of social acceptance indicators into SDG-based transport energy analysis

Recommendations

- Promote sustainable low-carbon fuels in hard-to-electrify transport sectors
- Strengthen policy incentives for SDG-aligned transportation energy
- Enhance stakeholder engagement and trust-building initiatives

References:

- Banister, D. (2011). The trilogy of distance, speed and time. *Journal of Transport Geography, 19*(4), 950–959. https://doi.org/10.1016/j.jtrangeo.2010.12.004
- Creutzig, F., Jochem, P., Edelenbosch, O. Y., Mattauch, L., van Vuuren, D. P., McCollum, D., & Minx, J. (2015). Transport: A roadblock to climate change mitigation? *Science, 350*(6263), 911–912. https://doi.org/10.1126/science.aac8033
- International Energy Agency. (2022). *Transport and energy transitions*. IEA.
- International Energy Agency & International Transport Forum. (2021). *Transport and energy transitions: Pathways to cleaner mobility*. OECD Publishing.
- United Nations. (2021). *The sustainable development goals report 2021*. United Nations Publications.
- Verma, C., & Jain, V. (2023). Exploring Promotional Strategies in Private Universities: A Comprehensive Analysis of Tactics and Innovative Approaches.
- Agarwal, C., Pradesh, M. U., Jain, V., & Verma, C. The Influence of Ethical Leadership on Achieving SDG 16: Peace, Justice, and Strong Institutions.
- Verma, C., & Jain, V. Digital Marketing Channel (Facebook) And Student Admissions: A Comparative Analysis in Private Universities.
- Verma, V., Gupta, K., Verma, C., & Pradesh, U. Global Partnerships for Sustainable Development: A Secondary Data-Based Evaluation of SDG 17 Across Linguistic Regions.
- Jain, V., & Verma, C. Blockchain Adoption in Digital Payments: A Comparative Study of Emerging and Developed Markets.
- Jain, V., Verma, C., Agarwal, M. K., & Rajkumar, A. (2026). Influence of Content Authenticity on Long-Term Consumer Loyalty in Digital Markets. International Journal of Research & Technology, 14(S1), 608-628.
- Verma, C., Manimekalai, K., Patil, M. K., & Dadhich, M. R. Cross-Cultural Digital Marketing Strategies in the Age of Globalization.

- Wang, S., Wang, J., Li, J., & Zhou, K. (2022). Trust in sustainable transportation energy systems and public acceptance of clean mobility solutions. *Technological Forecasting and Social Change, 176*, 121448. https://doi.org/10.1016/j.techfore.2021.121448
- Zhang, Y., Ma, Y., & Li, X. (2021). Determinants of clean energy adoption intention: Evidence from sustainability-oriented consumers. *Sustainability, 13*(4), 2171. https://doi.org/10.3390/su13042171
- 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. (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. (2021). An overview of wal-mart, amazon and its supply chain. ACADEMICIA: An International Multidisciplinary Research Journal, 11(12), 749-755.
- 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. Ansari, S., Kumar, P., Jain, V., & Singh, G. (2022). Communication skills among university students. World Journal of English Language, 12(3), 103-109.
- 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 Scientific Publishing.
- 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.
- 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.

- Pallathadka, H., Leela, V. H., Patil, S., Rashmi, B. H., Jain, V., & Ray, S. (2022). Attrition in software companies: Reason and measures. Materials Today: Proceedings, 51, 528-531.
- Jain, V. (2021). An overview on social media influencer marketing. South Asian Journal of Marketing & Management Research, 11(11), 76-81.
- 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.
- 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., Sethi, P., Arya, S., Verma, R., & Chawla, C. (2020). Project Evaluation Using Critical Path Method & Project Evaluation Review Technique. Wesleyan J. Res, 13, 1-9.
- 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.
- Sumaiya, B., Srivastava, S., Jain, V., & Prakash, V. (2022). The role of effective communication skills in professional life. World Journal of English Language, 12(3), 134-140.
- 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., & Ackerson, D. (2023). The Importance of Emotional Intelligence in Effective Leadership. Edited by Dan Ackerson, Semaphore, 5.
- 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.
- 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.

- Jain, V. (2021). A review on different types of cryptography techniques. ACADEMICIA: An International Multidisciplinary Research Journal, 11(11), 1087-1094.
- Sharma, A., & Jain, V. (2020). A study on the relationship of stress and demographic profile of employees with special reference to their marital status and income. UGC Care Journal, 43(4), 111-115.
- 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., 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.
- Wen, J., Mughal, N., Kashif, M., Jain, V., Meza, C. S. R., & Cong, P. T. (2022). Volatility in natural resources prices and economic performance: Evidence from BRICS economies. Resources Policy, 75, 102472.
- Kumar, S. U. M. I. T., & Jain, V. I. P. I. N. (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.
- 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.
- Jain, V., & Singh, V. K. (2019). Influence of healthcare advertising and branding on hospital services. Pravara Med Rev, 11, 19-21.
- 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).
- 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., & Gupta, A. (2012). Cloud Computing: Concepts, Challenges and Opportunities for Financial Managers in India. Amity Global Business Review, 7.
- 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., & Garg, R. (2019). Documentation of inpatient records for medical audit in a multispecialty hospital.
- 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.
- Shafi, M., Ramos-Meza, C. S., Jain, V., Salman, A., Kamal, M., Shabbir, M. S., & Rehman, M. U. (2023). The dynamic relationship between green tax incentives and environmental protection. Environmental Science and Pollution Research, 30(12), 32184-32192.
- Meza, C. S. R., Kashif, M., Jain, V., Guerrero, J. W. G., Roopchund, 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.
- The Phan, C., Jain, V., Purnomo, E. P., Islam, M. M., Mughal, N., Guerrero, J. W. G., & Ullah, S. (2021). Controlling environmental pollution: dynamic role of fiscal decentralization in CO2 emission in Asian economies. Environmental Science and Pollution Research, 28(46), 65150-65159.
- 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.
- Liu, J., Jain, V., Sharma, P., Ali, S. A., Shabbir, M. S., & Ramos-Meza, C. S. (2022). The role of Sustainable Development Goals to eradicate the multidimensional energy poverty and improve social Wellbeing's. Energy Strategy Reviews, 42, 100885.
- Jain, V., Beram, S. M., Talukdar, V., Patil, T., Dhabliya, D., & Gupta, A. (2022, November). Accuracy enhancement in machine learning during blockchain based

transaction classification. In 2022 Seventh International Conference on Parallel, Distributed and Grid Computing (PDGC) (pp. 536-540). IEEE.

- Yaqoob, N., Jain, V., Atiq, Z., Sharma, P., Ramos-Meza, C. S., Shabbir, M. S., & Tabash, M. I. (2022). The relationship between staple food crops consumption and its impact on total factor productivity: does green economy matter?. Environmental Science and Pollution Research, 29(46), 69213-69222.
- Maurya, S. K., Jain, V., Setiawan, R., Ashraf, A., Koti, K., Niranjan, K., ... & Vipin Jain, T. M. I. M. T. (2020). The Conditional Analysis of Principals Bullying Teachers Reasons in The Surroundings of The City. Productivity Management, 25(5), 1195-1214.
- Bai, D., Jain, V., Tripathi, M., Ali, S. A., Shabbir, M. S., Mohamed, M. A., & Ramos-Meza, C. S. (2022). Performance of biogas plant analysis and policy implications: Evidence from the commercial sources. Energy Policy, 169, 113173.
- Sundram, S., Venkateswaran, P. S., Jain, V., Yu, Y., Yapanto, L. M., Raisal, I., ... & Regin, R. (2020). The impact of knowledge management on the performance of employees: The case of small medium enterprises. Productivity Management, 25(1), 554-567.
- Khan, U. A., & Jain, V. (2025). Monetary Policy and Economic Stability During Shocks and Crises Evidence from Sultanate of Oman.
- 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.
- Suresh, S., Markose, J., Eshwar, S., Rekha, K., & Jain, V. (2017). Comparison of platform switched and sloping shoulder implants on stress reduction in various bone densities: finite element analysis. The Journal of Contemporary Dental Practice, 18(6), 510-515.
- 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.

- Dadhich, M., Pahwa, M. S., & Vipin Jain, R. D. (2021). Predictive Models for Stock Market Index Using Stochastic Time Series ARIMA Modeling in Emerging Economy. Advances in Mechanical Engineering, 281–290.
- Veeraiah, V., Kotti, J., Jain, V., Sharma, T., Saini, S., & Gupta, A. (2023, July). Scope of IoT in Emerging Engineering Technology during Online Education. In 2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT) (pp. 1-6). IEEE.
- Karla, D., Alam, M., Jain, V., & Sharma, M. (2022). An Overview on Team Work Strategy in Medical Education. World J English Lang, 12(3), 110-6.
- Nath, N. A. M. I. T. A., & Jain, V. I. P. I. N. (2020). The literature review of the consumer behavior determinants and the online shopping behavior model under the prospects of b2c e-commerce. J. Orient. Res. xci-xxxviii, 75-87.
- Jain, V., & Jain, V. (2019). A Study of Different Retai Formats with Special Reference to Unorganized Retailing in India. International Journal of Management, IT & Engineering, 9(4), 2.
- Vinoth, S., Gupta, S., Jain, V., & Kumari, U. (2024). Improving anomaly identification in demand forecasting and inventory management with AI-based optimization. Multidisciplinary Science Journal, 6.
- Verma, A. K., Ansari, S. N., Bagaria, A., & Jain, V. (2022). The Role of Communication for Business Growth: A Comprehensive. World Journal of English Language. https://doi. org/10.5430.
- Jain, V. (2021). Based upon block chain and its context. ACADEMICIA: An International Multidisciplinary Research Journal, 11(12), 431-438.
- Joshi, M. A., & Jain, V. (2024). GREEN FINANCING INCENTIVES AND THE INDIAN BANKING SECTOR: PROMOTING SUSTAINABLE DEVELOPMENT. DEPARTMENT OF COMMERCE (UG), 1.
- Gupta, N., Jain, V., Agarwal, P., Sharma, M., & Agarwal, A. K. (2024). Career change: systematic literature review future research agenda. Smart innovation, systems and technologies. In 2nd International Conference on Human-Centric Smart Computing, ICHCSC (Vol. 376, pp. 219-235).

- Jain, V., Verma, C., Agarwal, M. K., & Rajkumar, A. (2026). Influence of Content Authenticity on Long-Term Consumer Loyalty in Digital Markets. International Journal of Research & Technology, 14(S1), 608-628.
- KHAN, H. (2026). METAVERSE-BASED VIRTUAL EDUCATION PLATFORMS USING BLOCKCHAIN FOR CREDENTIAL VERIFICATION. Journal of Theoretical and Applied Information Technology, 104(4).
- Khan, U. A., & Jain, V. Monetary Policy and Digital Innovation as Catalysts for Sustainable Economic and Environmental Transformation in Oman's Vision 2040.
- Jain, S., Jain, V., & Agarwal, S. Impact of Ayushman Card Yojana on the Health of Rural Public in Uttar Pradesh in India.
- Zhang, W., Zhu, W., & Jain, V. (2026). Fiscal policy shocks and green growth in China. Fluctuation and Noise Letters, 25(1), 2650011-1930.
- Harshitha, P., Rajitha, N., Veeraiah, V., Rastogi, H., Koujalagi, A., Gupta, A., & Jain, V. (2025, November). Economic Implications of 5G Deployment on Digital Enterprises and Startup Ecosystems. In 2025 International Conference on Innovations and Emerging Technologies In AI & Communication Systems (IETACS) (pp. 1099-1104). IEEE.
- Ramesh, J. V. N., Veeraiah, V., Bhattacharya, D., Jain, V., Jain, S. K., & Gupta, A. (2025, November). Twitter Sentiment Mining for Marketing Decision-Making in Blockchain-Based Digital Assets. In 2025 International Conference on Innovations and Emerging Technologies In AI & Communication Systems (IETACS) (pp. 1005-1011). IEEE.
- Dasaraju, S. R., Nallamalli, V. R. B., Rajendran, J., Chennamsetty, M. R., Jain, V., & Painoli, G. K. (2025). Enhancing Strategy and Governance Through AI-Driven Behavioral Competency Analytics: An ML Model for Competency Development.
- Raj, A., & Jain, V. (2025). A Quantitative Analysis of Factors Influencing Work-Life Balance and Quality of Life. European Economics Letters, 15(3).
- Jain, N., & Jain, V. (2025). Exploring the Role of AI Personalization, Embedded Finance, and Gamification in Influencing Digital Wallet Users Buying Behavior in Western India. European Economics Letters, 15(3).
- Jain, N., & Jain, V. Assessing the Impact of Super App Integration and Contactless Payment Technologies on Consumer Buying Behavior in Western India.

- Joshi, A., & Jain, V. Assessing the Awareness and Understanding of Green Finance Incentives among Bank Employees. International Journal of Environmental Sciences, 11(5s), 2025.
- Vishnoi, N. K., Singh, R., & Jain, V. A Review on Green Purchase Behaviour about Green Products.
- Raj, A., & Jain, V. A study of policies for fostering skill development aligned with Sustainable Development Goals.
- Jain, N., & Jain, V. Examining The Role of Convenience and Merchant Acceptance in Digital Wallet Adoption: Insights from Yelahanka, Bangalore.
- Jain, T. S., & Jain, V. Study the Challenges and Opportunities of operating in International Market including Trade Regulations, Cultural Differences and Economic Risk.
- Sharma, R., Pradesh, M. U., & Jain, V. Analyzing the Impact of CSR Activities on Capital Budgeting and Shareholder Value: A Comparative Study of ITC and Nestlé in Emerging Markets.
- Jain, V. A Data-Driven Approach to Upskilling Western Uttar Pradesh's Healthcare Professionals Akanksha Arora Research Scholar Teerthanker Mahaveer Institute of Management and Technology.
- Khan, U. A., Muscat, O., & Jain, V. Aligning Monetary Policies with Sustainability: Evaluating the Role of Central Bank in Oman’s Vision 2040 for Financing SDG-Compliant Businesses.
- Jain, V., & Verma, C. Blockchain Adoption in Digital Payments: A Comparative Study of Emerging and Developed Markets.
- Khanna, R., Singh, R., & Jain, V. Exploring the Impact of Age on Work-Life Balance: A Comparative Study across Academicians.
- Arora, A., & Jain, V. Technology-Assisted Healthcare Upskilling: A Study of Western Uttar Pradesh.
- Mittal, S., & Jain, V. CORPORATE GOVERNANCE AND FIRM’S PERFORMANCE: ANALYSIS OF LITERATURE REVIEW.
- Mittal, S., & Jain, V. A study on the Corporate Governance and Company Characteristics of the Manufacturing Sector in India.

- Modia, P., Jainb, V., Uchilc, A., & Nandad, S. Examining link prediction and node connectivity objectives in social networks: Comprehensive review.
- Nanda[1], S., Jain, V., & Purohit, A. The Importance of Mental Development in Addressing Youth Unemployment: A Psychological Case Study of Skill Retention in Development Programmes.
- Agarwal, P., Kumar, A., & Jain, V. PROFESSIONAL WOMEN AND STRESS: A STUDY OF PSYCHOLOGICAL AND WORK-PLACE BEHAVIOUR OF PROFESSIONAL WOMEN.
- Sethi, P., & Agarwal, P. A STUDY OF OPTIMIZATION TECHNIQUES USED IN OPERATIONS RESEARCH: ITS PROSPECTS AND PROBLEMS.
- Jain, V., Ramos-Meza, C. S., Min, Z., Qian, X., Ali, S. A., Sharma, P., ... & Shabbir, M. S. (2023). The dynamic relationship among technological innovation, international trade, and energy production.
- Hashim, N. A. A. N., Batool, H., Jain, V., Julca-Guerrero, F., & Cruz-Castillo, N. (2023). A systematic study of mobility and innovation and technology management for skilled enhancement with operational frameworks. International Journal of Intellectual Property Management, 13(3-4), 227-251.
- Jain, V., Sethi, P., Rawat, G., Singh, V. A., Kumar, A. R., Chawla, C., & Bansal, B. (2023). Information Frameworks and Business Patterns in Smart Cities. In Handbook of Research on Data-Driven Mathematical Modeling in Smart Cities (pp. 224-237). IGI Global Scientific Publishing.
- Jiang, J., Jain, V., Qian, X., Sharma, P., Mohamed, M. A., Haddad, A. M., ... & Zamir, A. Does Renewable Energy matter for SDGs? The dynamic relationship among Trade Exports Quality, Renewable Energy and Sustainable Economic Production. Frontiers in Environmental Science, 1788.
- Sehgal, S., Dhingra, V., & Jain, V. (2022). Effect of Covid Pandemic on Interest Rates and thereby Attractiveness of Reverse Mortgage Loans. INTERNATIONAL JOURNAL OF SPECIAL EDUCATION, 37(3).
- Jain, V. (2021). Relations between the united states and china during the trump presidency. Asian Journal of Research in Social Sciences and Humanities, 11(11), 1-6.
- Jain Sr, V. ROLE OF TEACHERS IN INSTITUTIONAL PLANNING. ADMINISTRATION AND MANAGEMENT IN SCHOOL EDUCATION, 83.

- Jain, V. COACHING AND MENTORING IN EDUCATION SERVICE: AN ASSESSMENT. COMMUNICATION SKILLS FOR PROFESSIONALS, 71.
- Jain, V. Teerthanker Mahaveer Institute of Managament & Technology, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India Email Id-vipin555@ rediffmail. com. INTRODUCTION TO MEDIA STUDIES, 39.
- Ashok Kumar Upadhyay, Pramod Kumar Srivastava, Piyush Kumar (2026) Academic Excellence through Holistic Growth: Integrating Physical, Mental, Emotional, and Spiritual Development in Education, MSW MANAGEMENT -Multidisciplinary, Scientific Work and Management Journal, ISSN: 1053-7899, Vol. 36 Issue 1, Jan-June 2026, Pages: 744-752 (Scopus)
- Srivastava, P. K., Sharma, A., Whig, V., Malaviya, S., & Kumar, N. (2025). Review Of Transforming Grocery Shopping with Artificial Intelligent: A New Era of Convenience. Advances in Consumer Research, 2(2), 665-675.
- Srivastava, P. K., Sharma, A., Malaviya, S., Hasan, N., & Singh, P. (2025). Exploring Social Dynamics and Emotional Triggers in the Adoption of Buy Now, Pay Later. Advances in Consumer Research, 2(3).
- Kumar, P., Zai, R. Y., & Srivastava, P. K. (2024). Overview of the Marketing Strategies Adopted by Different Pharmaceutical Companies. In Pharma Marketing and Pharmacoeconomics (pp. 143-149). Apple Academic Press.
- Shukla, V., & Srivastava, P. K. (2023). Travelling with a vengeance: the influence of social media on revenge tourism. International Journal of Tourism Policy, 13(6), 600-605.
- Prasad, A., & Srivastava, P. K. (2024). A COMPREHENSIVE ANALYSIS OF HUMAN RESOURCE POLICIES AND THEIR IMPACT ON EMPLOYEE TURNOVER IN THE HOTEL INDUSTRY IN DELHI NCR. Journal of Strategic Human Resource Management, 13(2).
- Sharma, R. K., & Srivastava, P. K. (2022). Impact of E-business on organized retail sector. International Journal of Early Childhood Special Education, 9830-9637.
- Rakshit, P., Srivastava, P. K., & Chavan, O. (2022). IoT-Based Personalized Health and Fitness Monitoring System: The Next Big Thing. In Reinvention of Health Applications with IoT (pp. 19-30). CRC Press.

- A Khan, F., Singh, M., Shrivastava, P. K., & Bahl, S. (2022). Concept of Caveat Venditor and its Application in Healthcare and Education Secto. Turkish Online Journal of Qualitative Inquiry, 13(1).
- Rakshit, P., Srivastava, P. K., & Chavan, O. (2022). Security Concerns with IoT-Based Health and Fitness Systems. In Reinvention of Health Applications with IoT (pp. 155-162). CRC Press.
- Srivastava, S. K., Sharma, R. K., Srivastava, P. K., & Srivastava, R. (2021, April). Statistics Review of Indian Automobile Industry Using Correlation& Linear Regression Techniques. In 2021 2nd International Conference on Intelligent Engineering and Management (ICIEM) (pp. 510-515). IEEE.
- Srivastava, P. K., Srivastava, S. K., Rakshit, P., Kumar, Y., & Kumar, V. (2021). The ecosphere of online service delivery and its growing presence in automobile sector: an extended study of connected technology in Indian outlook. International Journal of Forensic Engineering, 5(1), 34-48.
- Rakshit, P., Srivastava, P. K., Afjal, M., & Srivastava, S. K. (2021). Sentimental analytics on Indian big billion day of flip kart and Amazon. SN Computer Science, 2(3), 204.
- Rakshit, P., & Srivastava, P. K. (2021, March). Cutting edge IoT technology for smart Indian pharma. In 2021 International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE) (pp. 360-362). IEEE.
- Rakshit, P., & Sharma, R. (2021). A study to comprehend role of artificial intelligence in building smart cities. Engineering and Technology Journal for Research and Innovation (ETJRI) ISSN, 3(2), 2581-8678.
- Rakshit, P., & Srivastava, P. K. (2021). An Inclusive Analysis to Study Challenges in Building Student Retention Rate on MOOC Platforms-Technology in Education. Grenze International Journal of Engineering & Technology (GIJET), 7(1).
- Afjal, M., Rakshit, P., Dutta, M., & Srivastava, P. K. (2020). A Critical Study To Comprehend Amendments In Indian Education System Post Covid-19. Solid State Technology, 63(6), 4079-4085.
- Rakshit, P., Srivastava, P. K., Srivastava, S. K., Kumar, Y., & Kumar, V. (2020). A Critical Study To Understand Privacy Concerns With Covid-19 Patient Data. Solid State Technology, 63(6), 4222-4233.

- Srivastava, P. K., Rakshit, P., Kumar, Y., Kumar, V., Singh, C. K., & Afjal, M. (2020). An Intercontinental Comparative Financial Analysis Of Civil Aviation Business. Solid State Technology, 63(6), 4127-4138.
- Bhatt, V., Sharma, R. K., & Srivastava, P. K. Emergence and its impact of organized unrecognized retailors in FMCG-food and beverage.
- SHARMA, R. K., & SRIVASTAVA, P. K. FACTORS OF INTERNATIONALIZATION OF SERVICES IN BANKING SECTOR IN INDIA: COMPARISON BETWEEN NATIONALIZED, PRIVATE AND FOREIGN BANKS IN INDIA.
- Kaushik, R., Srivastava, P. K., & Tiwari, S. (2020, January). Services Standardization In Banking Sector In India: Comparison Between Nationalized, Private And Foreign Banks in India. In 2020 International Conference on Computation, Automation and Knowledge Management (ICCAKM) (pp. 505-514). IEEE.
- Alok, P., Gupta, S., & Srivastava, P. K. (2009). Dinning experience and return patronage-study of hotels resturants in Delhi, India. JOHAR, 4(2), 45.
- Prasad, A., & Srivastava, P. K. (2008). Practices of yield management-An analytical study with special reference to hotel industry. JOHAR, 3(2), 25.