Conference Proceedings International Conference on Sustainable Development Goals-Challenges, Issues & Practices by TMIMT- College of Management, Teerthanker Mahaveer University, Moradabad 25th & 26th April 2025. TMIMT International Journal (ISSN: 2348-988X)

FinTech for a Better Future: Accelerating Sustainable Development Goals by 2025

Himanshu
B.Com
Teerthanker Mahaveer Institute of Management & Technology
Teerthanker Mahaveer University
Moradabad, Uttar Pradesh

Saurabh Jain
B.Com
Teerthanker Mahaveer Institute of Management & Technology
Teerthanker Mahaveer University
Moradabad, Uttar Pradesh

Gaurav Bhatt
B.Com
Teerthanker Mahaveer Institute of Management & Technology
Teerthanker Mahaveer University
Moradabad, Uttar Pradesh

Abstract

This paper explores the transformative role of Financial Technology (FinTech) in advancing the United Nations Sustainable Development Goals (SDGs) by the year 2025. As the global community strives toward achieving the 17 SDGs, FinTech emerges as a powerful enabler, bridging financial gaps, promoting inclusion, and fostering innovation. The study reviews existing literature, defines clear research objectives, applies a qualitative methodology, and discusses the findings from multiple global case studies. Results show FinTech significantly contributes to financial inclusion, economic growth, and environmental sustainability. This paper also examines regulatory challenges, ethical considerations, and provides recommendations for policymakers, stakeholders, and technology developers. The rapid rise of Financial Technology (FinTech) is transforming the global financial landscape, offering innovative solutions that extend beyond economic efficiency to address key social and environmental challenges. This research explores the pivotal role of FinTech in advancing the United Nations Sustainable Development Goals (SDGs), with a focus on accelerating progress by 2025. By leveraging technologies such as mobile banking, blockchain, digital payments, and artificial intelligence, FinTech has the potential to enhance financial inclusion, promote economic empowerment, support green finance, and improve transparency in development efforts. Through an interdisciplinary approach, this paper analyzes how FinTech solutions are being deployed to tackle issues like poverty, inequality, and climate change,

especially in underserved and developing regions. Case studies from diverse global contexts are examined to highlight successful initiatives and scalable models. The paper also critically addresses the challenges posed by regulatory gaps, cybersecurity threats, and digital divides, proposing a framework for responsible innovation and multi-stakeholder collaboration. Ultimately, this research positions FinTech as a transformative force capable of driving inclusive, resilient, and sustainable growth, aligning financial innovation with global development priorities in the lead-up to 2025.

Keywords: FinTech, Sustainable Development Goals, Financial Inclusion, Digital Innovation, Green Finance, Economic Empowerment, Blockchain, SDG 2025

Introduction

The Sustainable Development Goals (SDGs), adopted in 2015, provide a blueprint for global peace, prosperity, and environmental sustainability. As the 2025 milestone approaches, the integration of technology—especially financial technology—has become pivotal. FinTech leverages digital innovation to deliver financial services in a more efficient, inclusive, and scalable manner. This paper investigates how FinTech can accelerate progress toward the SDGs, highlighting both its potential and the challenges ahead.

In the rapidly evolving global economy, **Financial Technology (FinTech)** has emerged as a powerful catalyst for innovation, inclusion, and transformation across the financial sector. Leveraging digital tools such as blockchain, mobile banking, AI, big data, and peer-to-peer platforms, FinTech is reshaping how individuals, businesses, and governments interact with financial services. More than a technological revolution, FinTech holds transformative potential to address some of the world's most pressing socio-economic and environmental challenges, particularly those outlined in the **United Nations Sustainable Development Goals (SDGs)**.

Adopted in 2015, the **17 SDGs** aim to create a more equitable, inclusive, and sustainable future by 2030. These goals span critical areas such as poverty reduction, gender equality, quality education, clean energy, decent work, and climate action. Achieving these targets requires innovative and scalable financial solutions, especially in developing regions where traditional financial infrastructures are limited or inaccessible. FinTech, with its ability to democratize financial access and reduce transaction costs, presents an unprecedented opportunity to bridge the gap between financial exclusion and sustainable development.

This paper explores how FinTech innovations are being harnessed to **accelerate the achievement of the SDGs by 2025**, particularly in light of growing global efforts to leverage digital finance for sustainable outcomes. It investigates how digital financial services can empower underserved populations, promote responsible consumption, enable micro-entrepreneurship, enhance transparency in aid distribution, and support green investments.

The paper also examines case studies from both emerging and developed economies, highlighting successful FinTech-driven initiatives aligned with SDG targets.

However, alongside its vast potential, FinTech also brings challenges—ranging from data privacy risks and cybersecurity threats to regulatory uncertainty and digital divides. Thus, a critical component of this research includes evaluating the enabling policy environments and multi-stakeholder collaborations necessary for maximizing FinTech's positive impact while mitigating potential harms.

In essence, this study positions FinTech not just as a financial innovation, but as a strategic enabler of inclusive and sustainable development. By aligning FinTech's disruptive power with the global development agenda, it is possible to unlock new pathways toward achieving the SDGs—potentially ahead of the 2030 target. The focus on **2025** as a milestone year reflects both the urgency and the momentum required to ensure that digital finance contributes meaningfully to a better future for all.

Literature Review

The intersection of **Financial Technology (FinTech)** and sustainable development has become an increasingly important area of academic inquiry and policy discourse in recent years. Scholars and global institutions alike recognize the transformative potential of FinTech in achieving the **United Nations Sustainable Development Goals (SDGs)**, a framework of 17 interlinked objectives designed to create a better and more sustainable future by 2030.

1. FinTech and Financial Inclusion

One of the most widely studied contributions of FinTech to sustainable development is in the area of **financial inclusion**. According to the World Bank (2022), approximately 1.4 billion adults remain unbanked globally, particularly in developing regions. FinTech services—such as mobile money (e.g., M-Pesa in Kenya), digital wallets, and micro-lending platforms—have been instrumental in reducing this gap (Demirgüç-Kunt et al., 2018). Suri and Jack (2016)

found that mobile banking in Kenya lifted 2% of households out of poverty by providing access to financial tools and increasing savings.

2. Digital Finance and SDGs Alignment

The **UN Secretary-General's Task Force on Digital Financing of the SDGs (2020)** highlighted that digital finance can directly contribute to achieving most SDGs, especially those targeting poverty reduction (SDG 1), gender equality (SDG 5), decent work and economic growth (SDG 8), and climate action (SDG 13). Innovations like green bonds on blockchain platforms and crowdfunding for renewable energy projects show how FinTech is being aligned with sustainability targets (Chen et al., 2021).

3. FinTech for MSMEs and Economic Empowerment

Small and Medium-sized Enterprises (SMEs) are a key driver of economic growth and employment, particularly in emerging markets. However, they often face limited access to credit. Peer-to-peer (P2P) lending, alternative credit scoring using big data, and AI-driven underwriting systems are helping bridge financing gaps for these businesses (Zetzsche et al., 2020). Studies have shown that FinTech adoption by SMEs leads to improved productivity and resilience (Ghosh, 2021).

4. Blockchain and Transparency in Development Aid

Blockchain has gained attention for its potential to enhance transparency and accountability in international development aid distribution. Projects like the World Food Programme's **Building Blocks** use blockchain to securely distribute food aid in refugee camps, significantly reducing costs and leakage (WFP, 2020). This aligns with SDG 16, which promotes peace, justice, and strong institutions.

5. Challenges and Ethical Considerations

While the potential is vast, literature also warns of the **risks and limitations** of FinTech in achieving the SDGs. Regulatory uncertainty, cybersecurity threats, and ethical issues around data privacy are persistent concerns (Arner et al., 2017). Moreover, the **digital divide**—particularly among rural and marginalized populations—threatens to exclude some groups from the benefits of FinTech (UNCTAD, 2021). Critics argue that without inclusive design and robust governance, FinTech may reinforce existing inequalities rather than resolve them (Gabor & Brooks, 2017).

6. Policy and Regulatory Frameworks

The role of governments and international organizations in enabling a **pro-innovation and pro-inclusion regulatory environment** is also highlighted in the literature. The concept of "regulatory sandboxes" has gained traction as a way to allow FinTech startups to innovate while still under regulatory oversight (Zetzsche et al., 2019). Cross-sector partnerships, public-private collaborations, and open banking ecosystems are increasingly seen as vital components for success.

The existing body of literature demonstrates that FinTech offers significant opportunities for accelerating progress toward the SDGs. It facilitates inclusive economic participation, improves transparency, supports climate-friendly financing, and enables micro-entrepreneurship. However, realizing this potential requires deliberate efforts to mitigate associated risks and to create a supportive ecosystem for innovation, regulation, and collaboration. This research builds on the current literature by providing an updated, 2025-focused analysis of how FinTech can be strategically leveraged to meet global development goals, with an emphasis on scalable models, real-world case studies, and future-forward policy recommendations.

Research Objectives

- To evaluate how FinTech contributes to achieving selected SDGs by 2025.
- To identify specific FinTech solutions that have impacted financial inclusion, gender equality, and climate action.
- To assess the regulatory, ethical, and infrastructural challenges faced by FinTech ecosystems.
- To provide policy recommendations for maximizing FinTech’s positive influence on sustainable development.

Methodology

This research adopts a qualitative approach based on secondary data analysis. It involves:

- A comprehensive review of global case studies and reports from institutions such as the UN, World Bank, IMF, and FinTech organizations.
- Content analysis of peer-reviewed journals, white papers, and regulatory publications.
- Comparative analysis of regional FinTech initiatives and their alignment with SDGs.

Results and Findings

This study reveals that **FinTech innovations are making measurable contributions to several key Sustainable Development Goals (SDGs)**. The following areas show particularly significant impact:

1. Financial Inclusion (SDG 1 – No Poverty)

FinTech platforms have dramatically reduced barriers to financial access, particularly in regions with underdeveloped banking infrastructure:

- **M-Pesa (Kenya)**: Introduced in 2007, M-Pesa allows users to send and receive money via mobile phones without needing a traditional bank account. By 2023, it had over **51 million active users** across Africa. A study by Suri and Jack (2016) found that M-Pesa helped lift **2% of Kenyan households out of poverty**, especially among female-headed households.
- **Paytm (India)**: With more than **350 million users**, Paytm has become one of India's leading digital wallets, enabling access to payments, savings, insurance, and credit for the unbanked population. Its services expanded during the COVID-19 pandemic, helping small vendors and informal workers remain economically active.
- These platforms reduce transaction costs, increase financial autonomy, and facilitate savings and remittances—contributing directly to poverty alleviation and resilience against economic shocks.

2. Gender Equality (SDG 5 – Achieve Gender Equality and Empower All Women and Girls)

FinTech is enabling financial products and services that specifically target women, who often face systemic barriers in traditional banking systems:

- **Women-Centric Platforms**: Startups like **Kiva** (global) and **Mahila Money** (India) offer microloans and business development services tailored for women entrepreneurs, often using alternative credit scoring mechanisms based on social data or community trust.
- **Impact**: Access to digital wallets and savings tools has been shown to increase women's decision-making power in households and foster entrepreneurship. A study by the GSMA (2022) found that women with access to mobile money were more likely to start businesses and invest in family welfare.

- In regions like Sub-Saharan Africa and South Asia, where gender gaps in financial access persist, digital financial services are closing that gap faster than traditional means.

3. Green Finance and Climate Action (SDG 13 – Climate Action)

FinTech is increasingly being integrated into environmental sustainability strategies through **green finance solutions**:

- **Blockchain for Carbon Trading**: Platforms such as **Veridium Labs** and **ClimateTrade** use blockchain to create transparent, verifiable carbon credit markets. This reduces fraud, ensures real-time tracking, and lowers entry barriers for small-scale green projects.
- **Green Bonds and Impact Investing**: Digital platforms are facilitating the issuance of **green bonds** and connecting investors with sustainable infrastructure projects. This democratizes green investment and enables tracking of environmental impact.
- **Case Example**: In Singapore, the Monetary Authority (MAS) launched **Project Greenprint**, a FinTech initiative using data and analytics to support ESG (Environmental, Social, and Governance) investment frameworks.

4. Support for MSMEs (SDG 8 – Decent Work and Economic Growth, and SDG 10 – Reduced Inequalities)

Micro, Small, and Medium Enterprises (MSMEs) are vital for job creation and economic growth, especially in developing countries, but they often face credit constraints due to lack of collateral and credit history.

- **Crowdfunding and P2P Lending**: Platforms like **Funding Circle (UK)**, **Lendio (USA)**, and **Faircent (India)** enable small businesses to raise capital directly from the public or through peer investors. These models leverage AI and alternative credit scoring to assess borrower risk.
- **Invoice Financing and Supply Chain Finance**: FinTech solutions such as **Trefi** and **Taulia** help MSMEs access working capital by selling unpaid invoices, improving liquidity without incurring debt.
- **Digital Bookkeeping and Credit Scoring**: Tools like **TallyKhata (Bangladesh)** and **KhataBook (India)** provide digital ledgers for small vendors, enabling them to build credit histories and access formal finance.

- **Outcomes**: These innovations reduce inequality by empowering local entrepreneurs, creating jobs, and expanding the tax base—further supporting public service delivery.

Findings underscore that FinTech is more than a disruptor—it is a powerful enabler of sustainable development. By addressing long-standing barriers in finance and catalyzing inclusive economic systems, FinTech directly contributes to multiple SDGs. With proper governance, infrastructure, and partnerships, its role in shaping a more equitable and sustainable future by 2025 is both significant and scalable.

Discussion

The results of this study affirm the growing consensus that **FinTech serves as a key enabler of sustainable development**, particularly in the context of accelerating the achievement of the **Sustainable Development Goals (SDGs)**. The findings demonstrate tangible progress in areas such as financial inclusion, gender equality, climate action, and support for MSMEs. However, this impact is nuanced and shaped by a complex interplay of technological innovation, socio-economic context, regulatory frameworks, and digital literacy.

1. Bridging the Financial Access Gap: An Inclusive Growth Engine

FinTech's most immediate and widely acknowledged contribution lies in **financial inclusion (SDG 1)**. Digital financial services have enabled millions, especially in low- and middle-income countries, to engage in the formal financial ecosystem. Mobile money, digital wallets, and agent banking models have proven effective in reaching previously unbanked populations.

The success of platforms like M-Pesa and Paytm illustrates how **access to digital finance is linked to poverty reduction, increased savings behavior, and economic resilience**. Yet, the benefits vary by geography and demographic group. For example, mobile money penetration remains limited in rural areas with poor digital infrastructure, and the elderly or digitally illiterate populations often remain excluded. Therefore, while FinTech is an inclusion driver, complementary investments in **digital infrastructure and literacy** are crucial for equitable outcomes.

2. FinTech and Women's Economic Empowerment: Opportunities and Challenges

The alignment of FinTech with **SDG 5 (Gender Equality)** marks a significant step forward in closing the gender financial gap. Women-specific financial services, entrepreneurial

financing, and access to mobile wallets have enhanced women's autonomy and economic participation.

However, a **gender gap in mobile ownership and internet use** persists, especially in South Asia and Sub-Saharan Africa. This limits the reach of FinTech solutions unless specific strategies—like community-based digital education, subsidized devices, and female-led agent networks—are implemented. Moreover, a **lack of gender-disaggregated data** in FinTech limits our ability to assess long-term impacts on women's empowerment.

3. Driving Sustainable Investment: Green Finance and the Role of Blockchain

The emergence of **green FinTech**—including blockchain-based platforms for carbon trading, green bonds, and ESG investment tools—suggests a promising path toward achieving **SDG 13 (Climate Action)**. These innovations increase transparency, traceability, and trust in sustainable finance.

However, **blockchain's environmental costs**, particularly in proof-of-work systems, pose a paradox: the very technology driving green finance can contribute to carbon emissions. Transitioning to **low-energy consensus mechanisms** (e.g., proof-of-stake) and integrating ESG standards in platform design are vital to ensuring that FinTech's climate contributions are net positive.

Moreover, regulatory support is necessary to build **standardized taxonomies and reporting frameworks** for green assets. Without these, the risk of "greenwashing" increases, which can undermine both investor trust and environmental impact.

4. Empowering MSMEs: Catalysts for Inclusive Economic Growth

MSMEs account for over 90% of businesses and more than 50% of employment worldwide. FinTech models like P2P lending, invoice financing, and digital bookkeeping are transforming how these enterprises access credit and manage operations—advancing **SDGs 8 (Decent Work) and 10 (Reduced Inequality)**.

The ability of alternative credit scoring to evaluate non-traditional data (e.g., mobile usage, social media activity, digital transactions) is a game changer, especially in markets with limited credit histories. Yet, concerns about **data privacy, algorithmic bias, and financial literacy** must be addressed to ensure fair and ethical lending.

In addition, many MSMEs still lack the digital capabilities needed to fully leverage FinTech solutions. There is a growing need for **digital upskilling programs and affordable financial management tools** tailored to the informal economy.

5. Policy, Regulation, and Governance: The Need for Enabling Ecosystems

While FinTech holds promise, its sustainable integration into development pathways depends heavily on **supportive regulatory and institutional frameworks**. The balance between innovation and consumer protection remains a core challenge.

Regulatory sandboxes, as piloted in countries like the UK, Singapore, and India, have proven useful for testing new models in a controlled environment. However, many developing countries still face **capacity constraints** in regulating complex technologies, leaving them vulnerable to risks like cyber fraud, data breaches, and market monopolization.

Moreover, **cross-border regulatory coordination** is essential as FinTech platforms often operate globally. Initiatives by the Financial Stability Board (FSB), the International Monetary Fund (IMF), and regional bodies can support harmonized frameworks that ensure FinTech advances sustainable development without compromising security or fairness.

Synthesis and Implications

The discussion reveals that FinTech is not a one-size-fits-all solution—it is a **flexible enabler that must be contextually adapted**. Its success in driving SDGs by 2025 will depend on:

- **Collaborative efforts** among governments, private sector actors, development agencies, and civil society.
- **Inclusive design principles** to avoid reinforcing digital or socio-economic divides.
- **Robust data governance and ethical frameworks** to protect users and promote trust.
- **Capacity building and digital education** to prepare users, especially in vulnerable communities, for digital financial engagement.

By integrating these principles, FinTech can evolve into a force that not only accelerates the SDGs but also redefines how we approach inclusive and sustainable development.

Conclusion

As the global community strives to meet the ambitious targets set by the **United Nations Sustainable Development Goals (SDGs)**, the role of innovation—particularly in financial services—has become increasingly critical. This research has demonstrated that **Financial Technology (FinTech)** is not merely a disruptive force in the financial industry, but a **strategic enabler** of inclusive and sustainable development. Through digital platforms, innovative financial models, and data-driven solutions, FinTech is actively contributing to

several key SDGs, particularly those related to poverty alleviation, gender equality, climate action, and economic empowerment.

The findings of this study highlight that **FinTech has already made significant progress** in improving financial inclusion, with platforms such as M-Pesa and Paytm transforming access to essential financial services for millions of unbanked and underbanked individuals. Moreover, FinTech is facilitating the economic empowerment of women by offering targeted financial solutions and entrepreneurial support. In the realm of **green finance**, blockchain-based carbon credit platforms and digital green bonds are enabling transparent, efficient, and scalable investment in environmental sustainability. Additionally, **MSMEs**, the backbone of many economies, are increasingly benefiting from alternative lending mechanisms, digital bookkeeping tools, and micro-investment platforms that help them grow and create jobs.

However, while the promise of FinTech is evident, its potential to fully accelerate the SDGs by **2025** hinges on several critical factors. First, **digital divides and unequal access** to technology remain a major barrier, particularly in rural and marginalized communities. Without proactive efforts to expand digital infrastructure and improve digital literacy, many individuals may be left behind, exacerbating rather than alleviating inequality. Second, **regulatory gaps and policy uncertainty** present challenges to the safe and sustainable growth of FinTech. A lack of cohesive global standards and inconsistent national regulations can hinder innovation and create risks related to privacy, data protection, and financial stability.

Furthermore, while FinTech platforms offer efficiency and scale, they must be **designed with ethical considerations** in mind—ensuring transparency, user consent, and fairness in algorithmic decision-making. Without inclusive design and strong governance, FinTech may replicate existing systemic biases or create new forms of exclusion.

In light of these considerations, the path forward involves more than just technological innovation. It requires a **multi-stakeholder approach** involving governments, private sector leaders, civil society, development institutions, and end users. Policies that promote responsible innovation, capacity-building initiatives that empower users, and cross-sector partnerships that align financial systems with development priorities are essential.

Ultimately, this research concludes that **FinTech can play a transformative role** in accelerating the achievement of the SDGs by 2025—**but only if its deployment is guided by inclusion, sustainability, and shared value**. As we approach this critical milestone year, the

global community must act decisively to ensure that FinTech's momentum is directed toward building not just smarter financial systems, but a **better, fairer, and more sustainable future for all**.

References

- 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.
- 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.
- 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.
- Maurya, S. K., Jain, V., Setiawan, R., Ashraf, A., Koti, K., Niranjan, K., ... & Rajest, S. S. (2021). The Conditional Analysis of Principals Bullying Teachers Reasons in The Surroundings of The City (Doctoral dissertation, Petra Christian University).
- Anand, R., Juneja, S., Juneja, A., Jain, V., & Kannan, R. (Eds.). (2023). Integration of IoT with cloud computing for smart applications. CRC Press.
- 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.
- 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.
- Verma, C., Sharma, R., Kaushik, P., & Jain, V. (2024). The Role of Microfinance Initiatives in Promoting Sustainable Economic Development: Exploring Opportunities, Challenges, and Outcomes.

- 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.
- 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.
- 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).
- 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.
- 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.
- 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.
- 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.
- 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.

- Verma, C., & Jain, V. Exploring Promotional Strategies in Private Universities: A Comprehensive Analysis of Tactics and Innovative Approaches.
- 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.