Centre for Sustainability and Corporate Governance Research
INDIAN INSTITUTE of MANAGEMENT AHMEDABAD
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PwC ESG Forum @IIMA

Report

# India Responsible Capital Conference (IRCC 2024)

## Indian Institute of Management Ahmedabad

**Co-Located with**
**India Management Research Conference (IMRC) 2024**

December 07 - 09, 2024

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# OVERVIEW

The Centre for Sustainability and Corporate Governance Research (CSCG) hosted the second edition of the India Responsible Capital Conference (IRCC 2024), co-located with the India Management Research Conference (IMRC 2024), at the Indian Institute of Management Ahmedabad (IIMA) from December 07 to 09, 2024.

Focusing on a wide range of topics related to sustainability, IRCC 2024 featured a variety of events, including workshops, panel discussions, and paper and poster presentations. The conference witnessed a confluence of thoughts, ideas, and solutions put forth by an eclectic mix of renowned academicians, industry practitioners, senior corporate leaders, and researchers. While corporate sustainability was the central theme in the discussions, the conference was not limited to just this area. The aim of the IRCC, since its inception in 2023, has been to address the climate change challenge in a multidimensional manner, and the 2024 edition successfully delivered on that goal.

A key element of the conference was the paper presentations by PhD students, faculty members, and aspiring researchers representing academic institutions from across the country. These presentations covered an extensive array of topics, including, but not limited to, sustainable finance, climate tech, clean technology solutions, environmental policy, climate economics, corporate sustainability strategy, and corporate social responsibility. The papers attempted to provide research-based insights on the factors shaping the dynamics of sustainability and governance not just in the corporate world but also at the policy-making level. The primary goal of these papers is to expand the current research areas as well as open up new avenues of research in the field of sustainability and provide practical solutions to the most pressing problems.

In addition to the paper presentations, poster presentations were also an important part of the IRCC 2024. The posters were essentially a snapshot of different projects and ideas undertaken or proposed by students, academicians, and practitioners designed to offer innovative solutions to issues related to climate change and sustainability.

This document provides a detailed summary of all the events that took place at the IRCC 2024, highlighting the major insights shared by the speakers and discussing what lies ahead for the sustainability space.

# KEYNOTE ADDRESS

**Prof. Rohini Pande**
Henry J. Heinz II Professor of Economics and
Director of the Economic Growth Center at Yale University

Professor Rohini Pande, Henry J. Heinz II Professor of Economics and Director of the Economic Growth Centre at Yale University, delivered a compelling keynote address at the India Responsible Capital Conference 2024, focusing on the challenges and potential reforms for voluntary carbon markets. As the world faces the urgent need to reduce greenhouse gas emissions, voluntary carbon markets have emerged as a promising mechanism to finance emission reduction projects and facilitate resource transfers from high-emitting nations to low-income countries. However, these markets are plagued by issues of effectiveness, credibility, and equity, limiting their potential impact. In her address, Prof. Pande provided a critical analysis of the current state of voluntary carbon markets, framed within the broader context of global climate agreements like the Paris Accord, and highlighted actionable reforms to align these markets with principles of climate justice and economic equity.

**Background and context**

Prof. Pande opened her discussion on voluntary carbon markets by situating them within the urgent global challenge of climate change mitigation. She underscored the significance of the 2015 Paris Agreement, which set an ambitious target of limiting global warming to 1.5°C, or at most 2°C, above pre-industrial levels. Achieving this goal requires reaching net-zero carbon dioxide emissions globally by 2050. However, while many nations have announced net-zero targets, far fewer have translated these commitments into concrete policies or actionable strategies. She highlighted a sobering reality: even if all current pledges were fully realized, the world is still on course for a temperature rise of 2.5 to 2.9°C by mid-century—well beyond the thresholds set by the Paris Agreement. This stark gap between ambition and action, she argued, underscores the critical need for innovative mechanisms like voluntary carbon markets to bridge the divide and accelerate progress toward meaningful climate solutions.

**Current state of emission reduction policies**

In her keynote address, two primary approaches were delineated to emission reduction policies, underscoring their significance in combating climate change. The first category, carbon pricing policies, encompasses mechanisms like carbon taxes and cap-and-trade systems, which collectively address approximately 25% of global emissions, highlighting the need for additional measures for the remaining 75%. These strategies incentivize emitters to reduce greenhouse gas outputs by attaching a cost to emissions, thereby promoting cleaner practices and innovation. The second category, avoided emissions policies, focuses on preventing activities such as deforestation and land-use changes that release stored carbon into the atmosphere. She particularly highlighted the critical role of addressing land use, noting that tropical deforestation alone contributes emissions at a rate 4.5 times greater than the combined outputs of the aviation and shipping industries. By emphasizing both energy-related emissions and the preservation of natural carbon sinks like forests, she advocated for a comprehensive approach to climate mitigation that balances economic tools with ecological preservation.

**A case for carbon trading**

An emphasis was laid on the critical role of carbon trading as a tool for addressing global climate change, particularly in fostering collaboration between high-income and low-income countries. She highlighted its cost-effectiveness, noting that emission reductions in low-income countries often come at a lower financial cost, enabling more substantial global progress with the same level of investment. Beyond economic efficiency, Prof. Pande underscored the equity dimensions of carbon trading, framing it as a mechanism to transfer resources from historically high-emitting nations to less affluent ones, thereby supporting their development while addressing climate challenges. Additionally, the importance of tackling emissions from both energy and land use was stressed upon. While energy-related emissions dominate much of the discourse, carbon trading can also incentivize the preservation of forests and other natural carbon sinks, ensuring a more holistic approach to reducing greenhouse gases.

**Voluntary carbon markets: Structures and challenges**

Prof. Pande provided a detailed examination of voluntary carbon markets, shedding light on their structure, performance, and inherent challenges. She explained that the market operates through four key players: buyers, typically large corporations like tech firms or airlines seeking to offset their emissions; project developers, who implement emission reduction or avoidance projects, often in low-income countries; brokers, serving as intermediaries between buyers and developers; and registries, which uphold standards and verify the validity of carbon credits. Highlighting its recent trajectory, she noted the market's rapid growth during 2020 and 2021, fuelled by increasing corporate commitments to net-zero goals, but also its subsequent crash in 2022 due to oversupply and doubts about the effectiveness of many carbon credits.

**Voluntary carbon markets: Key challenges**

Several critical challenges were found to be undermining the market's credibility:

- Additionality: Ensuring that carbon credits represent genuine emission reductions that would not have occurred without the financial incentive remains a major challenge. Many projects have been deemed "non-additional," meaning they would have taken place regardless of the credit.
- Adverse Selection: The market structure tends to attract projects requiring minimal effort or change, resulting in an oversupply of low-quality credits that undermine the market's credibility.
- Verification Issues: Third-party auditors face inherent conflicts of interest, as their business model depends on approving projects. This dynamic raises questions about the reliability and integrity of the verification process.
- Price Discrepancy: The voluntary market's current carbon credit price—less than $5 per metric ton—is significantly lower than the estimated social cost of carbon, which exceeds $200 per metric ton. This vast gap highlights the undervaluation of carbon credits in addressing climate impacts.

India's Participation in Voluntary Carbon Markets: A Case Study on Gujarat's Emissions Trading Success

Prof. Pande highlighted India's prominent role in the voluntary carbon market, emphasizing its substantial contribution as of 2021. India accounted for approximately 23% of projects registered or under consideration by major carbon credit registries, with over 500 active project developers operating across the country. Most of these projects were centred on renewable energy, particularly wind and solar, rather than land-use initiatives. However, she cautioned that the declining costs of renewable energy could challenge the additionality of these projects over time, potentially diminishing India's participation in the market unless it diversifies into other project types.

To further illustrate the potential for innovative climate solutions in developing countries, she presented a case study on emissions trading systems in the Indian cities of Surat and Ahmedabad. In Surat, a pilot program involving 342 textile plants split the participants into two groups: one operating under a cap-and-trade system and the other following traditional command-and-control regulations. The results were striking, with plants in the cap-and-trade system achieving 20% lower emissions compared to their counterparts. Encouraged by this success, the program was expanded to all textile plants in Surat and later implemented in Ahmedabad.

This case study underscores that well-designed emissions trading systems can deliver significant environmental benefits even in developing countries with limited regulatory capacity, offering a scalable model for broader adoption.

**Proposed reforms and suggestions for strengthening voluntary carbon markets**

Prof. Pande advocated for several reforms and solutions to enhance the effectiveness, credibility, and impact of voluntary carbon markets:

- Integration with Compliance Markets: The eventual integration of high-quality voluntary carbon projects into compliance markets, such as cap-and-trade systems, was highlighted as a strategy to help stabilize and elevate carbon credit prices, ensuring greater market reliability.
- Improved Additionality Assessment: The adoption of rigorous evaluation methods, such as randomized controlled trials, was recommended to more effectively assess the additionality of projects. Examples from Uganda and India illustrated how these methods successfully reduced deforestation and crop burning through targeted payment schemes.
- Risk Targeting with AI and Machine Learning: Leveraging AI and machine learning to identify areas at high risk of deforestation could enhance the targeting of interventions, thereby improving the additionality and impact of carbon projects.
- Regulatory Sandboxes: The establishment of "regulatory sandboxes" was proposed as a means to test and evaluate innovative approaches to carbon credit verification and project implementation within a controlled environment.
- Aligning Incentives for Verification: Drawing from her experience with pollution audits in Gujarat, India, Prof. Pande suggested reforms to the verification process, including centralized auditor assignments and fixed payment structures. These measures aim to reduce conflicts of interest and enhance the credibility of carbon credit verifications.

**Indian carbon markets: The way forward**

Prof. Pande concluded her discussion by highlighting India's recent strides toward building a robust carbon market, marking a significant step in its climate action journey. In June 2023, the Government of India introduced the Carbon Credit Trading Scheme (CCTS), which proposes a framework for establishing a voluntary carbon market while paving the way for a future cap-and-trade system. She emphasized that this initiative provides India with a unique opportunity to experiment with and refine carbon market mechanisms tailored to its economic and environmental context. By doing so, India could not only strengthen its domestic climate strategy but also emerge as a model for other developing nations seeking to implement effective and equitable carbon market solutions.

**Conclusion**

Prof. Pande's keynote address offered profound insights into the complexities and opportunities within voluntary carbon markets, highlighting both their challenges and pathways for reform. She underscored the importance of rigorous evaluation methods, enhanced verification processes, and the integration of high-quality projects into compliance markets to ensure carbon prices better reflect the true social cost of emissions. As developing nations like India advance their own carbon market frameworks, the lessons drawn from her address serve as a crucial guide for shaping more effective, equitable, and sustainable strategies. These recommendations not only hold the potential to strengthen domestic climate action but also contribute meaningfully to the broader global effort to combat climate change.

**Key takeaways**

- Voluntary Carbon Markets: While still relatively small, voluntary carbon markets have the potential to significantly contribute to global emissions reduction efforts, particularly by addressing land-use changes and deforestation.
- Structural Challenges: Issues such as additionality, adverse selection, and ineffective verification processes have undermined the credibility and effectiveness of voluntary carbon markets.
- Need for Reforms: Improving the quality of carbon credits, enhancing verification mechanisms, and integrating high-quality projects into compliance markets are critical steps for reforming these markets.
- Opportunities for Developing Countries: Nations like India can benefit from participating in carbon markets but must diversify beyond renewable energy projects to remain relevant as technology costs continue to decline.
- Rigorous Evaluation Methods: Techniques such as randomized controlled trials and advanced predictive technologies can strengthen the additionality and overall impact of carbon offset projects.
- Market-Based Policies in Developing Contexts: The success of emissions trading systems in Indian cities like Surat and Ahmedabad highlights the feasibility of implementing effective market-based environmental policies in developing countries.

**Q&A Session**

**Question 1**: What are the key concerns regarding the Indian carbon market, particularly related to caps and the building sector?

**Prof. Pande**: For the Indian carbon market, a major concern is avoiding the mistakes of the Renewable Energy Certificate (REC) system, which lacked a binding cap. Drawing from the Emissions Trading System (ETS) experience in Surat, it was critical for regulators to adjust caps as needed. Initially, they didn't know how much capacity they could reduce, but when companies were meeting targets too easily, they lowered the cap. This adjustment was vital for maintaining effective pricing—starting with a floor price and ceiling price of ₹5 and ₹100, prices eventually rose to ₹15 as caps tightened. Regulators in the carbon market will need to adopt a similar approach to ensure effectiveness.

Regarding the building sector, residential buildings contribute significantly to emissions, but builders lack incentives for sustainable construction since customers are unwilling to pay a premium. An intermediary mechanism, such as leveraging carbon credits, could help incentivize sustainable building practices. This idea is worth exploring further as it could open new avenues for market participation.

**Question 2**: How do infrastructure projects in low-income countries affect their role as providers in voluntary carbon markets?

**Prof. Pande**: Infrastructure development in low-income countries poses a dual threat: first, it can increase emissions; second, exploitative practices like "carbon cowboys" buying land from farmers at low prices and reselling it in carbon markets at higher rates undermine equity. For instance, in Zimbabwe, companies like Blue Carbon have been acquiring large tracts of land for this purpose. To address this, governments like Ghana have implemented jurisdictional REDD+ programs with strict oversight to prevent such practices.

To counteract infrastructure-related emissions, it's essential to maintain high carbon prices in voluntary markets. This would provide an alternative path for funding sustainable infrastructure while preserving forests. Governments must adopt climate-based industrial policies that prioritize sustainable development by valuing forests at their true cost rather than marginal land prices.

**Question 3**: Are efforts toward addressing carbon emissions proportionate to their impact on global warming?

**Prof. Pande**: The percentage of carbon in the atmosphere is less relevant than the goal of limiting global warming to below 2°C. Scientific evidence supports the need for net-zero emissions to achieve this target. As development progresses and emissions rise, it's crucial to ensure enough emissions are avoided or reduced to balance out increases and achieve net-zero levels. The absolute levels of atmospheric carbon are secondary to maintaining this balance for climate stability.

# PANEL DISCUSSION 1

## Voluntary Carbon Markets: Challenges and Opportunities in Developing Economies

## Panelists

**Mr. Atul Mittal**
Director Growth
South Asia, Sistema.bio

**Prof. Rohini Pande**
Henry J. Heinz II
Professor of Economics
and Director of the
Economic Growth
Center at Yale University

**Mr. Syed Farhan**
Associate Director
Carbon Markets, PwC India

## Moderator:

**Prof. Anish Sugathan**
IIMA

This section of the report summarizes a panel discussion on voluntary carbon markets and their role in sustainable development, with a focus on the Indian context. The panel featured three experts: Prof. Rohini Pande (Yale University), Mr. Atul Mittal (Director Growth, Southeast Asia, sistema.bio), and Mr. Syed Farhan (Associate Director, Carbon Markets, PwC India). The panel discussion session was moderated by Prof. Anish Sugathan, Co-chair, Centre for Sustainability and Corporate Governance (CSCG) and Chairperson, Strategy area at IIM, Ahmedabad.

Prof. Pande emphasized the importance of additionality in carbon offset projects, the need for market efficiency through uniform pricing, and the challenges of balancing environmental integrity with social co-benefits. Mr. Mittal highlighted biogas projects as a case study, demonstrating their ability to generate carbon credits while addressing multiple Sustainable Development Goals (SDGs). Mr. Farhan discussed India's evolving regulatory framework, including efforts to integrate SDG indicators and benefit-sharing mechanisms. Together, the panellists provided valuable insights into designing voluntary carbon markets that effectively reduce emissions while supporting broader sustainability objectives.

**Key insights from the panellists**

**Prof. Rohini Pande**

Prof. Rohini Pande offered a comprehensive analysis of the economics and policy dimensions of voluntary carbon markets, focusing on their challenges and opportunities for reform. She underscored the critical importance of additionality in carbon offset projects, emphasizing that ensuring genuine emissions reductions should be the primary concern when evaluating these initiatives. From an economic standpoint, she advocated for a single, uniform price for carbon credits, warning that introducing multiple price points based on social benefits could undermine market efficiency and complicate its functioning. While acknowledging the value of social benefits in carbon projects, she cautioned against mandating them as a requirement, arguing that such an approach might narrow the market's scope and exclude projects that effectively reduce emissions but lack explicit social components.

Additionally, Prof. Pande highlighted the lack of transparency in current voluntary markets, where buyers often prioritize the cheapest credits without adequate information about project details. This lack of clarity, as she noted, diminishes market credibility and effectiveness. Her insights provided a balanced perspective on aligning economic efficiency with environmental integrity in voluntary carbon markets.

**Mr. Atul Mittal**

Mr. Atul Mittal shared valuable insights from his experience implementing biogas projects in rural India, highlighting their environmental, economic, and social benefits. He described an innovative model where farmers receive biogas plants worth ₹35,000 by paying only ₹5,000 upfront, with the remaining ₹30,000 financed through carbon credits. These biogas plants provide cooking gas and biofertilizer, reducing firewood consumption and methane emissions from cattle dung while promoting sustainable agricultural practices.

He elaborated on the process of aggregating carbon credits from small-scale projects, verifying them through rigorous standards like Gold Standard, and selling them to corporate buyers. However, he pointed out significant challenges in project development, including the need for pre-financing and managing risks associated with credit generation and verification. Beyond environmental benefits, he emphasized on the broader impact of biogas projects, such as reduced reliance on chemical fertilizers, improved sanitation, and local employment generation. Notably, he highlighted that these projects align with 12 out of 17 Sustainable Development Goals, demonstrating their potential as a transformative renewable energy solution for rural communities.

**Mr. Syed Farhan**

Mr. Syed Farhan provided valuable insights into the evolving regulatory landscape and future directions of carbon markets in India, with a focus on aligning them with Sustainable Development Goals (SDGs). He highlighted the Indian government's ongoing efforts to integrate SDG indicators into the framework for carbon offset projects, though it remains uncertain whether these components will be mandated or simply encouraged in future regulations.

He underscored the potential for benefit-sharing mechanisms in carbon projects, drawing comparisons to earlier Clean Development Mechanism (CDM) initiatives that successfully incorporated community benefits. However, he acknowledged the inherent challenge of balancing additionality with social benefits, emphasizing that Indian standards for carbon markets are still under development and subject to ongoing discussions. His contributions offered a thoughtful perspective on how India can shape its carbon market policies to achieve both environmental and social objectives effectively.

**Conclusion**

The panel discussion offered a comprehensive exploration of the complexities and opportunities within voluntary carbon markets, emphasizing their potential to address both environmental and social challenges. Prof. Rohini Pande highlighted the critical importance of additionality in ensuring the credibility of carbon offset projects, while advocating for market efficiency through uniform pricing mechanisms. Mr. Atul Mittal illustrated the transformative role of biogas projects, which not only generate carbon credits but also deliver significant co-benefits such as improved sanitation, reduced chemical fertilizer use, and local employment generation, aligning with multiple Sustainable Development Goals (SDGs). Mr. Syed Farhan provided insights into India's evolving regulatory framework, focusing on the integration of SDG indicators into carbon market policies and the potential for benefit-sharing mechanisms inspired by earlier Clean Development Mechanism (CDM) projects. Together, these perspectives underscored the need for transparent market mechanisms, robust institutional frameworks, and context-sensitive project designs to ensure that voluntary carbon markets effectively reduce emissions while contributing to broader sustainable development objectives.

A recurring theme across the discussion was the need for transparent and efficient market mechanisms that accommodate diverse project types and varying levels of social impact. The panel also emphasized the importance of tailoring carbon offset projects to local contexts, considering factors such as gender equity and community benefits to ensure equitable outcomes. However, balancing economic efficiency with broader sustainable development goals remains a significant challenge in designing effective carbon markets. As voluntary carbon markets continue to evolve, this discussion underscored the complex interplay between environmental, social, and economic considerations.

**Key takeaways**

- Additionality: Ensuring that carbon offset projects deliver genuine emissions reductions is essential, while also balancing the opportunity to provide meaningful social co-benefits.
- Market Transparency and Efficiency: Transparent and efficient market mechanisms are critical for accommodating projects with varying levels of social impact, ensuring credibility and equitable participation.
- Biogas Projects as Exemplars: Biogas initiatives demonstrate how carbon offset projects can align with multiple Sustainable Development Goals (SDGs), offering environmental benefits such as reduced methane emissions and social advantages like improved sanitation, reduced chemical fertilizer use, and local employment generation.
- Evolving Indian Carbon Market Regulations: India's regulatory framework is progressing toward integrating SDG indicators into carbon market policies, presenting an opportunity to align environmental goals with social objectives while addressing challenges like additionality.
- Local Contexts in Project Design: Effective carbon offset projects must consider local factors, including gender dynamics and community benefits, to ensure equitable outcomes and long-term success.
- Balancing Economic Efficiency with Sustainability Goals: Policymakers, project developers, and market participants must navigate the challenge of maintaining economic efficiency while advancing broader sustainable development objectives.
- Potential of Benefit-Sharing Mechanisms: Drawing lessons from earlier Clean Development Mechanism (CDM) projects, benefit-sharing mechanisms can enhance community engagement and ensure equitable distribution of project benefits.

**Q&A Session**

**Question 1**: What is the current state of biochar in carbon markets, and what are the challenges associated with it?

**Mr. Syed Farhan**: Biochar credits are currently priced at $100 per credit, and there is significant demand for them, with many new projects and explorations in this space. However, the technology is still new and evolving.

**Mr. Atul Mittal**: The cost of producing biochar is high, ranging between $130 and $140 per ton, which makes selling it at $100 unattractive for developers. The major costs include logistics and sourcing waste material, which becomes expensive when done regularly. Additionally, if biochar is not converted on-site, transportation costs further erode profitability. While biochar has potential, it remains a costly technology under development.

**Question 2**: What are the challenges to scaling biogas projects in India?

**Mr. Atul Mittal**: The primary challenge lies on the buyer side, as biogas is just one of many technologies that can generate offsets. Although biogas has a 50-year history in India, there is skepticism about its long-term viability since few plants have operated for more than 2-3 years. To address this, partnerships with organizations like the National Dairy Development Board have been established to access dairy farmers across India. On the distribution side, progress is steady; however, voluntary markets have been volatile—strong in 2021-22 but currently at a low point. A combination of voluntary and compliance markets may help stabilize demand and scale projects effectively.

**Question 3**: How do voluntary carbon markets benefit organizations aiming for net-zero emissions?

**Mr. Atul Mittal**: Companies purchase carbon credits to offset their emissions and move toward net-zero goals. For example, Infosys has installed 40,000 biogas plants to declare itself carbon neutral in 2021. Emissions are categorized into Scope 1 (direct emissions), Scope 2 (indirect emissions from energy), and Scope 3 (emissions from product use). Companies often focus on offsetting Scope 3 emissions by retiring credits or trading them based on market conditions.

**Mr. Syed Farhan**: Organizations align with Science-Based Targets initiative (SBTi) goals by purchasing credits to offset emissions until they achieve net-zero status. They support emission reduction activities outside their operations by investing in projects like biogas plants, cookstoves, or reforestation. Some companies also opt for "insetting," where they directly fund emission reduction within their supply chain without third-party certification.

**Question 4**: Why are community-based approaches challenging for biogas projects in India?

**Mr. Atul Mittal**: Community-based approaches are difficult because biogas involves kitchens, which are highly personal spaces in Indian households. Shared systems often fail due to disputes over usage and cultural sensitivities related to caste and religion. As a result, decentralized technologies tailored to individual households are more effective and scalable.

**Question 5**: What policy actions are being considered under India's Carbon Credit Trading Scheme (CCTS) to ensure fair pricing for carbon reductions?

**Mr. Syed Farhan**: The government is deliberating measures to address issues of oversupply and low demand seen in earlier schemes like PAT (Perform Achieve Trade). Baselines are being discussed at the facility level, with independent verifiers conducting research to establish fair mechanisms. While consultations are ongoing, no definitive policy actions have been finalized yet.

**Question 6**: How scalable are biogas projects in India given the diverse terrain and farmer demographics?

**Mr. Atul Mittal**: Biogas projects are highly scalable due to the availability of raw materials (dung) at farmers' homes, eliminating logistical challenges faced by other bioenergy products. India has 7 million dairy farmers, of which 4.5 million can potentially install biogas plants. So far, only 100,000 plants have been installed (by sistema.bio), highlighting a vast untapped market that requires significant scaling efforts.

# PANEL DISCUSSION 2

## Sustainability in Practice: Global Trends and Innovations

## Panelists

**Shri Alpan Raval**
Chief AI/ML Scientist
Wadhwani Institute for Artificial Intelligence

**Shri Chetan Savla**
President – Sustainability and Strategic Projects
Kotak Mahindra Bank Limited

**Shri P. S. Narayan**
Global Head: Sustainability, Wipro
Managing Trustee: Wipro Foundation

## Moderator:

**Prof. Rama Mohana Turaga**
IIMA

The panel session was initiated by Prof. Rama Mohana Turaga, who set the context for an in-depth discussion on the evolving landscape of sustainability. In his opening remarks, Prof. Turaga highlighted the paradoxical scenario where corporate sustainability initiatives are proliferating while environmental crises continue to escalate. He framed the session as an opportunity to explore whether sustainability in practice aligns with its theoretical promise. Prof. Turaga emphasized the critical need for interdisciplinary approaches to address ecological, social, and economic challenges and introduced the three speakers, each representing a unique facet of sustainability—corporate strategy, financial innovation, and technological advancement. The discussion was structured into three themes:

1. Sector-specific sustainability challenges and initiatives.
2. Broad trends in corporate and financial sectors driving sustainability.
3. Emerging technological innovations, particularly AI, as enablers of sustainable development.

**Key Insights from the Panelists**

**Mr. P.S. Narayan: Corporate Sustainability Frameworks**

Mr. P.S. Narayan, a pivotal figure in corporate sustainability and a key leader at Wipro, provided a comprehensive and detailed exploration of how sustainability can be effectively integrated into business strategies. He began by tracing the evolution of corporate sustainability in India, noting that significant momentum was achieved post-2012 following SEBI's introduction of Business Responsibility Reporting (BRR) and the enactment of the CSR law in 2013. However, he underscored that companies like Wipro had embraced sustainability long before these regulatory frameworks were established, inspired by voluntary adoption of global standards such as the triple bottom line framework introduced in the late 1990s.

Mr. Narayan recounted the transformative journey of Wipro's leadership during 2005-2006, a period of intense strategic reflection and planning. Over an 18-month period, the company's leadership identified sustainability as a critical priority for the 21st century. This introspective process culminated in a formal sustainability charter that addressed climate change, water conservation, and diversity, equity, and inclusion (DEI). Early initiatives, such as investments in renewable energy and the establishment of inclusive workplace policies, not only underscored Wipro's commitment to sustainability but also set benchmarks for the industry.

Despite these accomplishments, Mr. Narayan acknowledged the limitations of corporate sustainability efforts in addressing systemic global challenges. He explained that while Wipro is on track to achieve 100% renewable energy by 2028 and net-zero emissions by 2040, these initiatives alone cannot offset the broader impacts of climate change. He emphasized the need for collective action at the policy and societal levels, urging stakeholders to view corporate initiatives as part of a larger mosaic rather than standalone solutions.

**Mr. Chetan Savla: Financial Inclusion and Climate Finance**

Mr. Chetan Savla, representing Kotak Mahindra Bank, elaborated on the critical role of financial institutions in advancing sustainability through innovative practices and regulatory compliance. He began by acknowledging the significant influence of regulatory frameworks, particularly the Reserve Bank of India's five-year strategy for financial inclusion and SEBI's transition from Business Responsibility Report (BRR) to Business Responsibility and Sustainability Reporting (BRSR). These measures, he argued, have redefined how financial institutions approach sustainability, compelling them to adopt more structured and measurable strategies.

Mr. Savla provided an in-depth overview of Kotak's initiatives in financial inclusion. One of the most impactful innovations was the introduction of priority sector lending certificates (PSLCs). This market-based mechanism enables banks to trade surplus lending capacities in critical areas such as agriculture and micro, small, and medium enterprises (MSMEs), creating a vibrant ecosystem that aligns with both financial and sustainability goals. He noted that the PSLC market for small and marginal farmers has grown exponentially, with current transactions exceeding ₹5,00,000 crore annually.

In addition to financial inclusion, Mr. Savla highlighted Kotak's digital innovations, such as the 811 account, which allows customers to open bank accounts within minutes using Aadhaar-based authentication. The bank has also expanded its reach through micro-ATMs and business correspondent networks, enabling seamless financial access in remote areas. On the environmental front, Mr. Savla described Kotak's initiatives such as the Kotak-IIT Madras Save Energy Mission, which conducts energy audits for MSMEs, and a partnership with IIT Kanpur to establish a School of Sustainability. These projects illustrate how financial institutions can catalyze sustainable development by aligning their business strategies with environmental and social objectives.

**Mr. Alpan Raval: AI-Driven Sustainability**

Mr. Alpan Raval, Chief AI and ML Scientist at the Wadhwani Institute for Artificial Intelligence, presented an enlightening discourse on how artificial intelligence can serve as a transformative force for sustainability. He began by introducing the institute's mission to leverage AI for social good, focusing on public health, education, and smallholder agriculture. He emphasized that the institute's nonprofit model allows it to prioritize impact over profit, enabling partnerships with government bodies and global foundations.

In healthcare, Mr. Raval detailed several pioneering projects targeting tuberculosis (TB), a disease that disproportionately affects underserved populations. One such initiative involves AI-powered predictive models integrated into the government's NIKSHAY platform. These models provide real-time risk assessments, enabling health workers to identify patients at high risk of discontinuing treatment. Another innovation is a smartphone-based TB screening tool that uses cough sound analysis to determine whether a patient requires further diagnostic tests. This tool, designed to be cost-effective and accessible, has the potential to revolutionize TB diagnosis in rural areas.

Mr. Raval also described the institute's efforts in agriculture, where AI tools provide smallholder farmers with data-driven insights on crop management, pest control, and irrigation. In education, he highlighted the deployment of an AI-based oral reading fluency tool in Gujarat, which assesses students' reading skills and provides personalized learning content. With data from over two million students, the institute is now exploring generative AI to create tailored educational materials that address individual learning needs. These initiatives exemplify how AI can bridge critical gaps in healthcare, education, and agriculture, fostering equitable and sustainable development.

**Q&A Session**

**Question 1**: How do corporations reconcile the tension between shareholder value and ambitious sustainability goals?

**Mr. Narayan**: I believe that corporations must fundamentally embed sustainability into their core strategy. It's not just about balancing priorities; it's about adopting a stakeholder-centric approach that aligns long-term value creation with sustainability goals. At Wipro, we treat sustainability as a driver of value rather than a separate agenda. Achieving this alignment requires a significant cultural shift within organizations, supported by regulatory frameworks and visionary leadership. I've seen how challenging it can be to overcome the tension between shareholder demands and sustainability goals, but with the right strategies, this balance can deliver both economic and societal benefits.

**Question 2**: Financial institutions are pivotal in addressing climate risks. What specific measures has Kotak taken to integrate these risks into its decision-making?

**Mr. Savla**: At Kotak, we've implemented a comprehensive ESG-based scorecard to evaluate credit risks, particularly in high-impact sectors. This tool helps us assess the environmental and social footprint of investments, allowing us to prioritize projects that align with sustainability objectives. Additionally, we've made significant investments in renewable energy projects to contribute to India's clean energy transition. However, addressing climate risks is an industry-wide challenge that requires collaboration among banks, regulators, and stakeholders. While we're proud of the strides we've made, I acknowledge that there's much more work to be done to create systemic impact.

**Question 3**: AI holds immense promise, but scalability remains a challenge. How can AI-driven solutions achieve widespread impact?

**Mr. Raval**: Scalability is indeed a key challenge, and I believe collaboration is the solution. At the Wadhwani Institute, our approach involves embedding AI-driven solutions into existing government platforms to leverage their reach and infrastructure. For example, our predictive models for tuberculosis are integrated into the NIKSHAY platform and are being scaled nationwide. Partnerships with policymakers, private sector stakeholders, and community organizations are essential to ensuring that these innovations reach underserved populations. By aligning AI tools with institutional frameworks and addressing real-world challenges, we can achieve widespread and sustainable impact.

**Conclusion**

The panel underscored the urgency of aligning corporate actions with global sustainability goals. While individual initiatives demonstrate potential, systemic challenges like regulatory inconsistencies, economic dependencies on fossil fuels, and socio-political complexities demand collective action. The insights presented reinforced the need for interdisciplinary approaches, robust policy frameworks, and innovative technologies to accelerate the transition towards a sustainable future.

**Recommendations**

1. Policy Alignment: Strengthen global and regional frameworks to ensure consistency in sustainability goals.
2. Collaborative Innovation: Foster partnerships between corporates, governments, and nonprofits to leverage shared resources.
3. Community-Centric Solutions: Design solutions that prioritize inclusivity and address the needs of underserved populations.
4. Technological Integration: Invest in scalable AI-driven tools that can bridge gaps in healthcare, education, and agriculture.

# QUOTABLE MOMENTS

"The voluntary carbon market is selling carbon at less than \$5 per ton, while the social cost of carbon is estimated to be over \$200 per ton."

"Adverse selection in carbon markets means the cheapest projects often provide no additional benefit, undermining the system."

**- Prof. Rohini Pande**

"The voluntary nature of carbon markets means that the cost of a ₹ 35,000 biogas plant can be reduced to ₹ 5,000 for farmers, with the remaining ₹ 30,000 financed through carbon credits."

"Biogas plants address 12 out of 17 Sustainable Development Goals (SDGs), making them one of the most impactful renewable energy solutions."

**- Mr. Atul Mittal**

"The Indian Government's offset mechanism may mandate SDG alignment for projects, ensuring both environmental and social benefits."

"Benefit-sharing mechanisms will actually help improve the overall development economy and ensure benefits to local communities."

**- Mr. Syed Farhan**

"Sustainability is not just about compliance; it has to be embedded into the culture of the organization."

"The first thermal power plant shutdown in India may not happen until 2045, reflecting the challenges of transitioning from fossil fuels."

**- Mr. P.S. Narayan**

"For sustainability to be sustainable, it must be embedded into business strategy."

"Climate risk evaluation is challenging without standardized data on physical risks at granular levels like pin codes."

**- Mr. Chetan Savla**

"AI models must always have a human layer between their outputs and decisions to ensure ethical use."

"We developed an AI tool to predict TB treatment adherence, enabling health workers to intervene proactively."

**- Mr. Alpan Raval**

# WORKSHOP 1

## Mine Your Text: Applications for Management Research

**Prof. Adrija Majumdar**
Information Systems Area
IIMA

### Introduction

In today's data-driven world, in an era where unstructured data dominates the information landscape, the ability to extract meaningful insights from text has become increasingly crucial for management research. Professor Adrija Majumdar, a faculty member in the Information Systems area at IIM Ahmedabad, delivered a comprehensive workshop on text mining applications, equipping researchers with valuable tools and methodologies to harness the power of unstructured data. This report captures the key methodologies, examples, and insights shared during her workshop, offering a comprehensive guide for researchers aiming to integrate text analysis into their work effectively.

### The Importance of Unstructured Data

Prof. Majumdar opened her workshop by underscoring the significant role of unstructured data in today's digital ecosystem. Drawing attention to a report from Computer World magazine, she highlighted that unstructured data constitutes an estimated 70-80% of all organizational data. This vast category includes diverse formats such as text, images, videos, and sensor data. However, the workshop specifically focused on textual data, exploring its analysis and potential to generate meaningful insights for research and decision-making.

### Sources of Unstructured Data

The workshop highlighted several key sources of unstructured data that are particularly relevant to management research. These were categorized into two main types: user-generated and firm-generated content. User-generated content includes data from social media platforms like Twitter, Facebook, and LinkedIn; review sites such as Yelp, Amazon, and Airbnb; and health social exchange platforms. On the other hand, firm-generated content encompasses annual reports, conference call transcripts, corporate social media accounts, and YouTube channels. She emphasized the importance of incorporating both types of content in research, as they provide distinct, yet complementary perspectives and valuable insights into consumer behaviour and organizational practices.

### Approaches to Text Analysis

The workshop introduced three primary approaches for researchers to analyze text, each offering unique insights and applications. The first approach, Text as a Reflection of the Producer, focuses on analysing and uncovering the intent, personality, or characteristics of the text's creator. For example, analyzing a company's annual reports can reveal management intent, while studying an individual's social media posts can provide insights into their personality traits. The second approach, Text Impact on Receivers, explores how text influences its audience, such as evaluating the persuasiveness of crowdfunding pitches or assessing the effect of online reviews on sales outcomes. Lastly, the Text for Prediction and Understanding approach leverages text to predict outcomes or identify emerging themes. This includes tasks like classifying text into categories or predicting future events and behaviours based on textual data. These approaches collectively provide a comprehensive framework for extracting actionable insights from unstructured data.

### Text Analysis Methodologies

In the workshop, she outlined several methodologies for text analysis, illustrating their applications with examples from her own research.

- The first approach, Dictionary Approaches, uses predefined word lists to categorize or analyze text. She highlighted the Linguistic Inquiry and Word Count (LIWC) tool as a widely accepted and user-friendly method, particularly effective for analyzing emotional content and linguistic styles. However, she noted its limitation in not accounting for context and emphasized the importance of selecting appropriate dictionaries for specific domains, such as finance or sentiment analysis, while validating them against human annotations.
- The second approach, Topic Modelling, is an unsupervised machine learning technique used to identify latent themes in large text datasets. Prof.Majumdar discussed Latent Dirichlet Allocation (LDA) as a popular method,

stressing the importance of determining the optimal number of topics through coherence score analysis or theoretical frameworks. She also highlighted the need for careful naming of topics based on associated words and expert evaluation, along with justifying methodological choices.

- The third approach, Supervised Learning for Prediction involves training models on labelled data to classify text or predict outcomes. She underscored the value of comparing multiple machine learning algorithms, considering deep learning models, ensuring model explainability alongside accuracy, and conducting robustness tests with varying thresholds for continuous variables. Together, these methodologies provide a robust toolkit for researchers to analyze unstructured text effectively and derive meaningful insights from them.

**Case Studies and Applications**

Throughout the workshop, Prof. Majumdar presented several case studies from her research to demonstrate the practical applications of text analysis methodologies:

- Analyzing Persuasive Narratives in Online Crowdfunding: This study utilized dictionary approaches to analyze data from the “Random Acts of Pizza” subreddit, examining how rational (logical), emotional, and credibility-based appeals influenced the likelihood of receiving donations.
- Twitter Use and Content Analysis for Manufacturing Firms: A large-scale study that applied topic modelling to millions of tweets from manufacturing companies, uncovering key themes in their social media communication strategies.
- COVID-19 Impact on Pharmaceutical Innovation: By employing topic modelling on patent abstracts, this research explored whether AI-related interventions increased in pharmaceutical innovation following the COVID-19 pandemic.
- Cultural Differences in Social Media Communication: This study used supervised learning techniques to predict whether social media content was authored by foreign or Indian CEOs of IPL cricket franchises, focusing on cultural linguistic markers.

These case studies effectively showcased the versatility of text analysis methodologies in answering diverse research questions across various domains.

**Applications in ESG Research**

Prof. Majumdar concluded the workshop by discussing the use of text analysis in Environmental, Social, and Governance (ESG) research. She referenced a recent study (Selecting Textual Analysis Tools to Classify Sustainability Information in Corporate Reporting) that evaluated different text analysis tools for classifying sustainability information in corporate reporting. The study revealed that large language models and transformer-based approaches were highly effective in identifying sustainability-related content, offering advanced capabilities for nuanced analysis. Importantly, the findings emphasized that combining multiple methods often produced the most comprehensive and reliable results, underscoring the importance of methodological flexibility and highlighting the need for a flexible and integrated approach in ESG research.

Building on this, she highlighted key challenges and advancements in ESG-focused text analysis. She noted the variability in how firms disclose sustainability information, with some using vague or symbolic language that complicates classification efforts. To address these challenges, she emphasized the value of combining methodologies such as dictionary approaches, topic modelling, and transformer-based models to achieve robust insights. Fine-tuned large language models like ClimateBERT, FinBERT and SustainBERT were particularly noted for their ability to distinguish sustainability-related content from general corporate language.

### Challenges and Considerations

Several challenges and considerations for researchers employing text analysis were highlighted throughout the workshop:

- Data Collection: Access to data varies across platforms. While platforms like Reddit provide relatively straightforward access, others, such as Twitter, have imposed stricter restrictions, complicating data acquisition.
- Context Sensitivity: Text analysis methods often struggle to account for context-dependent meanings, making it essential for researchers to approach interpretations with caution.
- Cultural and Linguistic Variations: Language use and interpretation can vary significantly across cultures, particularly in global studies. Researchers must carefully consider these variations to ensure meaningful and accurate analysis.
- Replicability and Objectivity: The subjective nature of certain methodological decisions in text analysis can raise concerns about replicability. Researchers should ensure transparency in their choices and conduct robustness checks to enhance objectivity.
- Balancing Automation and Human Insight: Although automated tools are highly effective at processing large datasets, human expertise remains indispensable for interpreting results and ensuring their alignment with research objectives.

### Conclusion

Prof. Adrija Majumdar's workshop on text mining applications for management research offered a detailed and insightful exploration of the field, emphasizing its growing significance in an era dominated by unstructured data. The session highlighted the transformative potential of text analysis methodologies to generate valuable insights across diverse areas of management research, including consumer behaviour, corporate governance, and sustainability. By presenting approaches such as dictionary methods, topic modelling, and supervised learning, she provided researchers with a comprehensive and versatile toolkit to address the complexities of textual data.

The workshop stressed the importance of balancing advanced technological tools with rigorous research practices, advocating for transparency in methodological choices and sensitivity to contextual nuances. As advancements in AI and large language models (LLMs) continue to expand the possibilities for text analysis, researchers face unparalleled opportunities to derive meaningful insights. However, these advancements also demand thoughtful application rooted in strong theoretical frameworks and domain expertise. Ultimately, the workshop underscored that effective text analysis in management research requires a careful integration of technical skills, subject matter expertise, and critical thinking to fully realize its potential.

### Key Takeaways

- Unstructured Data: Text, as a significant component of unstructured data, remains an underutilized resource in management research, accounting for an estimated 70-80% of organizational data.
- Approaches to Text Analysis: Researchers can analyze text through three key perspectives—understanding the producer's characteristics, evaluating the text's impact on its audience, and using text for prediction and thematic exploration.
- Core Methodologies: Core methods include dictionary approaches (e.g., LIWC), topic modelling (e.g., LDA), and supervised learning for prediction, each offering distinct advantages and limitations.
- Methodological Choices: Justifying methodological decisions, such as selecting dictionaries, determining the number of topics, and choosing models, is critical for producing credible research and to ensure robust and credible results.
- Context and Culture: Sensitivity to context-dependent meanings and cultural variations is essential to ensure accurate and meaningful interpretations in global studies.
- ESG Research Applications: Text analysis offers significant opportunities in ESG research, with large language models demonstrating strong capabilities in classifying sustainability-related content.
- Challenges in Text Analysis: Researchers face challenges such as restricted access to data, replicability concerns, and the need to balance automation with human expertise
- Skill Development: Proficiency in both user-friendly tools (e.g., LIWC) and advanced programming languages (e.g., Python) is essential for conducting sophisticated analyses and to enhance analytical capabilities.

# WORKSHOP 2

## Critical Sustainability Challenges and the Role of AI and ML in Addressing Them

**Prof. Anirban Adhikary**
Dean of Faculty and Research,
Associate Professor, and Young Faculty Research Chair
IIM Udaipur

**Introduction**

The Centre for Sustainability and Corporate Governance (CSCG) hosted its inaugural workshop as part of the India Responsible Capital Conference (IRCC) 2024, co-located with the India Management Research Conference (IMRC) 2024. This landmark event brought together scholars, industry experts, and policymakers to deliberate on the evolving challenges and opportunities in sustainability and corporate governance. The workshop was a pivotal moment for CSCG, reinforcing its commitment to fostering impactful research and dialogue on corporate sustainability, governance practices, and responsible business conduct.

The keynote address was delivered by Professor Anirban Adhikary, a distinguished scholar in the field of sustainability and supply chain management. His presentation focused on critical sustainability challenges and the role of Artificial Intelligence (AI) and Machine Learning (ML) in addressing them. Through an engaging session, Professor Adhikary dissected the current landscape of Environmental, Social, and Governance (ESG) trends, discussing the implications of its declining influence in global financial markets and corporate strategies.

**Key Themes and Discussions**

1. The Evolving ESG Landscape: A Paradigm Shift

The workshop began with a thought-provoking discussion on the decline of ESG as a dominant investment criterion. A Financial Times video was presented, highlighting how the once-prevalent ESG movement has lost traction in global financial markets due to concerns of greenwashing, regulatory inconsistencies, and shifting corporate priorities. Professor Adhikary emphasized that despite the waning interest in ESG-driven investments, sustainability challenges remain as urgent as ever.

**Key Takeaways:**
- ESG investments reached a peak around 2021, but recent years have seen diminishing investor confidence.
- Geopolitical tensions, economic uncertainties, and regulatory shifts are contributing to the decline of ESG.
- There is a pressing need for standardized, transparent, and verifiable sustainability metrics to regain credibility.

2. Greenwashing, Greenhashing, and Greenwishing: Emerging Challenges

One of the most compelling segments of the workshop was the exploration of three major pitfalls in corporate sustainability efforts:
1. Greenwashing: Companies exaggerating their sustainability achievements for marketing gains.
2. Greenhashing: Deliberate non-disclosure or selective reporting of sustainability data to evade scrutiny.
3. Greenwishing: Overambitious corporate pledges towards sustainability without concrete implementation strategies.

Professor Adhikary elaborated on how these challenges undermine the effectiveness of ESG initiatives and hinder progress towards meaningful environmental and social responsibility.

**Key Takeaways:**
- Firms often highlight positive sustainability outcomes while obscuring negative impacts.
- The lack of enforcement mechanisms allows corporations to set ambitious goals without accountability.

- Improved regulatory oversight, third-party audits, and AI-powered data verification are essential to mitigate these challenges.

3. AI and ML: Game Changers in Sustainability Analytics

A core theme of the workshop was the transformative potential of AI and ML in sustainability management. Professor Adhikary highlighted how advanced computational techniques can enhance data transparency, improve supply chain traceability, and optimize ESG reporting.

**Potential AI Applications in Sustainability:**
- Supply Chain Emissions Tracking: AI can integrate disparate data sources to quantify Scope 3 emissions.
- ESG Performance Monitoring: Machine learning models can detect inconsistencies in corporate sustainability disclosures.
- Regulatory Compliance: AI-powered platforms can assist companies in meeting evolving sustainability standards.

**Key Takeaways:**
- AI can provide real-time, data-driven insights into sustainability practices.
- Companies need to invest in AI-driven ESG analytics to remain competitive in responsible business practices.
- The adoption of blockchain and big data analytics can significantly improve sustainability transparency.

4. The Future of Sustainability Research: Key Research Gaps

The workshop concluded with a discussion on the future of sustainability research and the need for data-driven, interdisciplinary approaches. Participants engaged in a lively debate on the methodological challenges in measuring sustainability impact and the role of researchers in bridging knowledge gaps.

**Key Research Questions Identified:**
- How can AI be leveraged to detect and mitigate greenwashing in corporate reporting?
- What are the most effective strategies for supply chain decarbonization?
- How can investors and regulators ensure greater accountability in ESG disclosures?

**Conclusion and Way Forward**

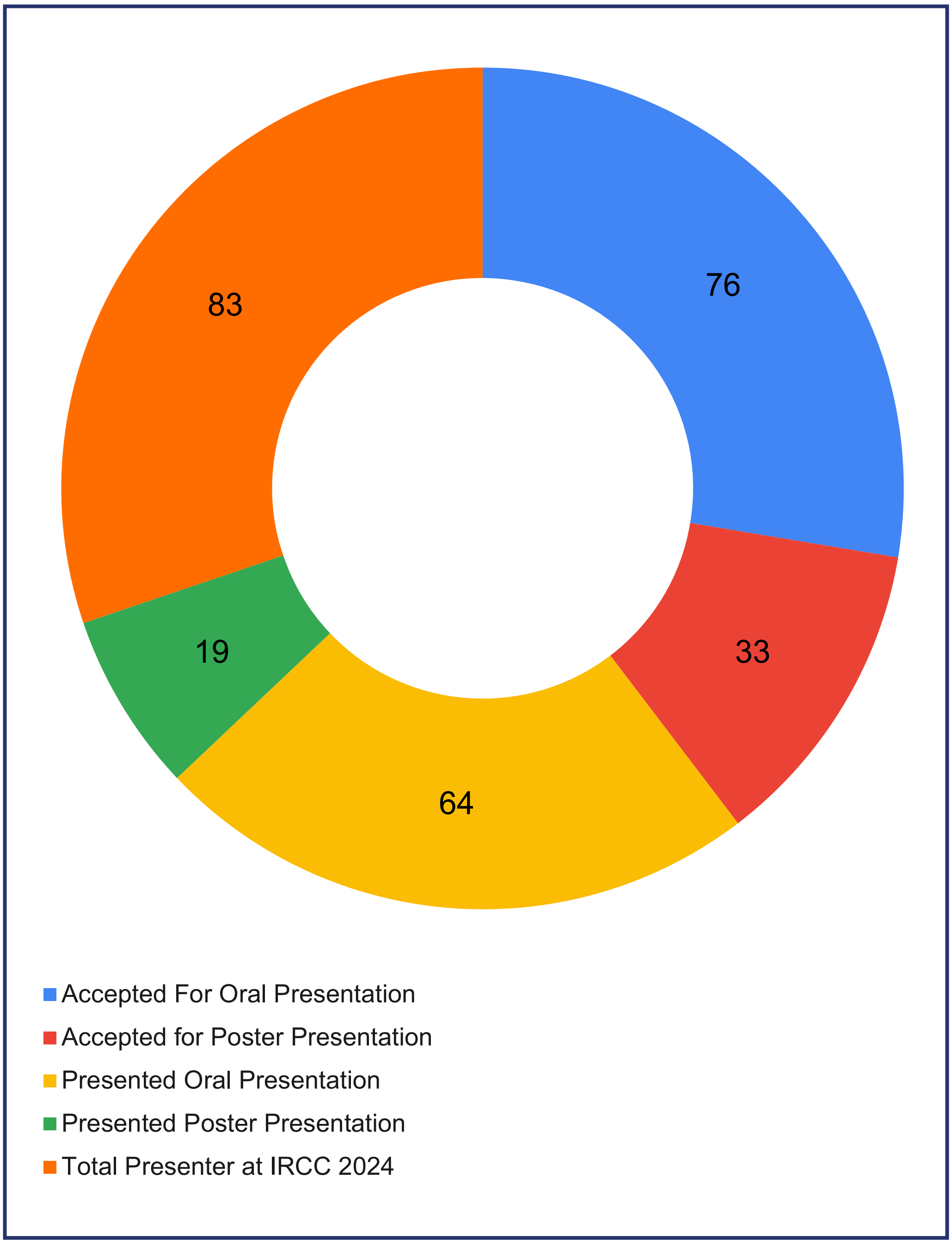
The CSCG workshop at IRCC 2024 was a groundbreaking initiative that underscored the importance of rethinking sustainability strategies in the corporate sector. As ESG frameworks continue to evolve, it is imperative for businesses, researchers, and policymakers to collaborate in designing robust, transparent, and actionable sustainability solutions.

Moving forward, CSCG aims to build on this momentum by launching research collaborations, policy dialogues, and industry partnerships to drive impactful sustainability outcomes. The insights from this workshop will serve as a foundation for future engagements, reinforcing CSCG's leadership in corporate sustainability and governance discourse

This report serves as a comprehensive documentation of the workshop's discussions, providing valuable insights for stakeholders in academia, industry, and policymaking. The Centre for Sustainability and Corporate Governance remains committed to advancing the frontiers of responsible business practices, ensuring that sustainability remains a cornerstone of corporate strategy in the years to come.

# PRESENTATION OF PAPERS & POSTERS

## IRCC 2024 Research Presentation Statistics - An Overview



# RESEARCH PAPER PRESENTATIONS

## TITLE: Job Seekers' perceptions of corporate social responsibility practices (CSRP) and organizational attractiveness: a multi-group analysis

**AUTHORS:** Dr. Esrafil Ali (Entrepreneurship Development Institute of India Ahmedabad) and Prof. Indranil Bose (MIT University of Meghalaya, Shillong, India)

**ABSTRACT**

Purpose- The paper aims to model the impact of corporate social responsibility practices (CSRP) on job seekers' organizational attractiveness (JSA) with special reference to two Indian states i.e., Andhra Pradesh (AP) and Odisha (OD). Finally, the paper examines whether there are any significant variations in the perception of job seekers in these two states.

Design/methodology/approach- The study used two sets of data gathered from AP and OD business students pursuing their management courses. The model was developed and examined using partial least squares structural equation modeling (PLS-SEM). Furthermore, PLS-multi group analysis (MGA) was used to examine the specific differences between two sample groups.

Findings- The study indicates that there is no significant variations in the perceptions of job seekers while selecting CSRP as an important criterion to choose organizations for job. The study's application of the MGA also found that there is a significant difference in the perception of job seekers in AP and OD sample groups in terms of their level of education about CSRP and JSA relationships.

Practical implications- The study has various practical implication. One important aspect is that the benefit of CSRP is now not limited to civic society, rather it benefits the organizations in terms of HR practices. Second, the study recommends that organizations and educational institutions can take efforts to improve the CSR teaching and learning programs effectively. Today, CSR has elicited various positive stimulus in the minds of job seekers. Thus, the educational institutes who are involved in transforming the mindset of students could improve the CSR practical skills and knowledge to reduce the education gap.

Originality/value- The study investigates CSR's effect on organizational attractiveness from the theoretical lens of Carroll's pyramid for two different groups of job seekers. Very few studies examined the complexity of this association with such research context. The results provide guidance for organizations, educators, practitioners, and job seekers that work on CSRP and its impact on JSA.

### TITLE: SRIMA – A new model of Sustainability integrating people, technology and process

**AUTHORS:** Shyni Carmel Mary Susaipragasam (Assistant Professor), Xavier Mj (Professor of marketing) and Joe Arun C (Professor of Marketing)

**ABSTRACT**

This paper attempts to summarize myriad models, including the most popular ESG model, that discusses sustainability and Environmental protection. Methods: The models were evaluated on the dimensions Social Impact, Environmental Impact, Governance, Stakeholder Engagement, Integration, Collaboration, Reporting, and Transparency, this study delves into the intricate synergy between people, technology, and processes to identify gaps in these models. Design: The gaps include Sustainable Development (economic empowerment, social inclusivity, cultural preservation), Responsibility Integration (environmental stewardship, humanitarian engagement, ethical governance), Innovation and Collaboration (technological advancement, cross-sector collaboration, continuous learning), Measurement and Reporting (comprehensive metrics, transparent reporting) and Adaptive Governance (agile decision- making, policy advocacy). Moreover, this article introduces the Sustainable-Development, Responsibility-Integration, Innovation-Collaboration, Measurement-Reporting and Adaptive- Governance Model (SRIMA) that addresses these gaps. Findings: Through a comprehensive case study focusing on Tesla, Inc., this study illustrates the seamless integration of human expertise, advanced technology, and streamlined processes, highlighting the symbiotic relationship between ESG principles and global living standards, and environmental sustainability. Also, the SRIMA model was validated using PLS-SEM with 5 dimensions of SRIMA linked to ESG. The perception scores for Tesla on the 23 items also indicate that Tesla is performing well on all the items and contributing to environmental, social, and cultural sustainability. Conclusion: SRIMA model addresses the gap identified in ESG models and provides a comprehensive framework for enhancing sustainability and governance practices. The Significant contribution of Tesla to environment , social and sustainability measured through the developed model SRIMA.

### TITLE: Strategic Portfolio Management: Navigating Macroeconomic Influences and ESG Principles for Optimal Stock Selection

**AUTHORS:** Amit Kumar (Manav Rachna International Institute of Research and Studies) and Vinit Sikka (Manav Rachna International Institute of Research and Studies)

**ABSTRACT**

The paper is presented with a view to adopting an integrated approach to stock portfolio management, laying emphasis on strategic asset allocation within the ESG framework against dynamic macroeconomic changes. The strategy follows construction of a diversified portfolio with the Treynor-Black and Markowitz models to optimally tussle between risk and return, with an ultimate goal of outperforming an ESG benchmark. First of all, the analysis conducted an overview of the macroeconomic environment—trends in inflation, monetary policies of central banks, and geopolitical changes that generally influence market conditions. After that, the more granular view of industry-level analysis did help pin down the strategy to technology, consumer goods, healthcare, and renewable energy sectors—key drivers of today's economy. At the second stage, securities promising sustainable growth and standing the ESG criteria were selected using intrinsic and relative valuation models. The investment strategy integrated both active as well as passive approaches in order to exploit inefficiencies existing in the market, all the while mitigating risk. In performance measurement, attribution analysis at the detailed level was performed with respect to contributions of asset allocation and security selection to overall performance. Results showed that strategic focusing on ESG-compliant sectors informed by robust analytical frameworks jibed very well with global trends in sustainability, enhancing

portfolio resilience and growth potential.The paper intends to contribute to the discourse on integrating ESG consideration into portfolio management, thereby allowing institutional investors to optimize their investment strategy in an economically dynamic environment.

## TITLE: Exploring the significance of Community Participation in ensuring the sustainability of Corporate Social Responsibility Programs

**AUTHORS:** Trilochana Dash (PhD Scholar, School of Management, NIT Rourkela) and Dr. Chandan Kumar Sahoo (Professor, School of Management, NIT Rourkela)

### ABSTRACT

This study aims to understand the mediating role played by community participation on the relationship between corporate social innovation and sustainable corporate social responsibility. This research was conducted in Odisha, a state in India, with 448 respondents and a response rate of 89%. The convenience sampling technique was used, and questionnaires were prepared in English and translated into regional languages during data collection. Psychological separation and Harman's single-factor test were used to avoid common method bias. Exploratory factor analysis and confirmatory factor analysis will be performed step by step to validate the proposed model. This study is one of its kind concerning the variables considered, and it can work as a stepping stone for upgrading the delivery mechanism for corporate social responsibility programs, which can solve the fundamental problems faced in society more effectively.

## TITLE: Validating the efficacy of The GreenSCOR model in creating sustainability performance for manufacturing companies: A sufficient and necessary condition analysis

**AUTHORS:** Soumya Prakash Rath (Doctoral Scholar, IIM Nagpur, Business Consultant, CAPCO Technologies) and Nikunj Kumar Jain (Associate Professor of Production & Operations Management, Indian Institute of Management Nagpur)

### ABSTRACT

The manufacturing sector plays an important role in achieving a country's overall sustainability objectives. To achieve sustainability in manufacturing, it is imperative that the intricate supply chain as a whole be also sustainable. Based on supply chain operations reference (SCOR) model, this study tries to find out how the GreenSCOR model in the supply chain helps a company in achieving its social, economic, and environmental objectives. This study used partial least squares structural equation modelling (PLS-SEM) to validate the sufficient condition for achieving sustainability goals. This was done by analysing empirical data obtained from a sample of 326 executives who were actively engaged in sustainability initiatives. In addition, our study use necessary condition analysis (NCA) to determine the necessary or bottleneck criteria for attaining the sustainability objectives. The study findings indicate that the mostly in-house components of GreenSCOR, specifically GreenSCOR-Planning and GreenSCOR-Make, have significant positive effects on all three dimensions of sustainability. GreenSCOR-Scouring positively influences both the economic and social performance of a company, while GreenSCOR-Delivery only has a significant positive impact on economic factors. Interestingly, all four components of GreenSCOR (Planning, Sourcing, Make, and Delivery) are necessary and can act as bottleneck factors in achieving social, economic, and environmental objectives. This study adds to the existing research on GreenSCOR and offers significant insights on how to achieve sustainability goals by promoting GreenSCOR practices.

## TITLE: The Impact of Financial Distress and Governance Dynamics on Earnings Management: Insights from the Pandemic

**AUTHORS:** Amandeep Kaur (Delhi Technological University), Archana Singh (Delhi Technological University) and Girish Chandra Maheshwari (Delhi Technological University).

### ABSTRACT

This study examines how corporate board composition, foreign auditors, and financial distress influence earnings management via real activities. More specifically, the research investigates whether companies capitalized on the economic downturn during the pandemic to manage their earnings. Utilizing non-financial firms listed on the NIFTY 500 index in India from 2015 to 2022, the study employs the generalized method of moments –system estimator approach to address potential omitted variables and reverse causality issues. The results show that firms were more inclined to practice earnings management during the pandemic than in the preceding period. The presence of foreign auditors decreases the chances of manipulation of financial reporting. Regarding board composition, it is observed that larger, independent boards and those with CEO duality oversee managers more efficiently. Additionally, the results indicate that it is difficult for managers to manipulate operational, financial, and investment activities through real actions in financially distressed firms, especially during the pandemic. The findings offer investors and practitioners valuable insights into how firms react to the pandemic shock. For regulators and standard setters, the findings reaffirm the need to address shortcomings in accounting standards and governance norms to reduce the risk of cash flow misclassification, cost of goods sold, and discretionary expenditures.

## TITLE: Perceived Board Diversity and Perceived Firm Performance: mediating role of Perceived Inclusion

**AUTHORS:** Dr. Purva Kachhy (Silver Oak University) and Dr. Narayan Baser (Pandit Deendayal Energy University)

### ABSTRACT

There are numerous studies that have investigated the correlation between board diversity and company success; however, there are only a handful that have investigated the combined impact of both variables. The research that establishes a correlation between Firm Performance and Board Diversity is inconclusive. The present study investigates the extent to which employees' perceptions of the company's performance are influenced by board diversity. This investigation examines the role of Perceived knowledge, surface diversity, and employees' perceptions of inclusion as mediator. The current study collected data from 150 top- and middle-level personnel from public sector entities and private limited enterprises across a variety of industries in India.The performance of a firm is influenced by the diversity of its surface and knowledge, as demonstrated by structural equation modeling. Perceived Knowledge Diversity has a positive influence on Perceived Firm Performance, while Perceived Surface Diversity has a negative impact. Furthermore, the relationship between Perceived firm Performance, Perceived Surface diversity, and Perceived Knowledge Diversity was mediated by Perceived Inclusion. The present study investigates the relationship between Perceived Inclusion and Perceived Firm Performance in the context of Board Diversity. Future research should take into account additional variables that may impact the relationship.This paper investigates board diversity from the perspectives of Indian society and employment. Inclusion, a contextual component that has not been extensively investigated in India, is also incorporated in the study.

## TITLE: Promotion of social enterprise as driver of sustainable economic growth: Empirical evidence from Gondia, Maharashtra

**AUTHOR:** Kshitij Sharma (Adani Foundation)

### ABSTRACT

Introduction: District Gondia, a part of Nagpur division of Maharashtra, is primarily an agrarian economy with over half the population depending on agriculture, mostly paddy cultivation, for earning their livelihood. Gondia has never been among the highest producers of milk in Maharashtra. A scrutiny of trends over 2003-04 to 2013-14 reveals that the in-milk bovine population has remained constant at around 75000 - 77,000 cattle. The indigenous and cross breed milch cattle populations also have remained constant further reinforcing the fact that milk production has never been a very popular source of livelihood in the district. The unorganized milk production never yielded lucrative returns for the farmers, many of whom struggled to make ends meet. In this backdrop, Adani Foundation, the CSR implementation arm of Adani group of companies, mobilized the local farmer groups in form of a farmer producer company in the year 2020, introducing an organized approach encompassing breed improvement, fodder management, healthcare services, technical trainings and a cooperative model for aggregation of milk as a pilot project in 26 villages of Tiroda block in Gondia district. The project introduced a professional approach to the dairy business and went on to set up 45 village level milk collection centers and 5 bulk chilling centers, now aggregating nearly 17,000 liters of milk every day which is benefitting 1997 farmers who are directly associated with the project. The collected milk is transported to large processing facilities by the dairy cooperative that pays the contributing farmers via direct beneficiary transfers basis the quality of their milk. The milk collection centers are managed and operated by women of self-help groups who get fixed amount as handling charges from the aggregator.

Objectives: The researcher attempted to examine the role of focused entrepreneurship development initiative ensuring required technical support to facilitate project operations and strengthening linkages with reliable market stakeholders with involvement of community as driver of a thriving enterprise and augmenting incomes at household level.

Methodology adopted was secondary review of available reports and analysis of MIS data collated over a period of 3.5 years.

Results: A review of data revealed that the project achieved several milestones with number of milk collection centers going up from 1 to 45 and, in turn, generating employment for 135 SHG women. Similarly, the number of farmers benefiting increased from 21 in October 2020 to 1997 in March 2024, registering a growth of 94 times. The annual milk collection grew 24 times since the inception year to reach 37.7 lakh liters. Most importantly, the annual payout to the farmers under the project increased 35 times from ₹17.94 lakh to ₹641.82 lakh. The trends demonstrate that the project has not only been able to attract new farmers but has also been instrumental in establishing a steady source of additional monthly income of Rs 9,000 to Rs. 11,000.

Discussion: Temporal analysis of the data indicates prolific growth of the enterprise year on year. The trend suggests that inputs provided in form of technical support to facilitate project operations; strengthening of linkages with reliable market stakeholders, and encouragement to community involvement are highly likely to result in a sustainable enterprise model. The project actively involved the local community at every stage, right from planning to implementation, thereby seeking to build upon their insights and aspirations which led them to assume leadership role ensuring that the decisions are made collectively.

Conclusion: It may be concluded that with concerted efforts on connecting the dots and encouraging community to assume leadership role, a cottage-scale enterprise can assume a growth path that could have a widespread positive effect on sustainable value creation for the community thereby contributing towards improved per capita income.

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## TITLE: Sustainability: Influence of firm's country of origin (COO) policies on green consumption behaviour (GCB)

**AUTHOR:** Vishal Sinha (Indian Institute of Management, Indore).

### ABSTRACT

Abstract: A for-profit firm's IPO (Input-Process-Output) Model's inherent aim is to maximize profit. Firms target consumers to ensure revenue, and going concern value. Over the years, consumers' buying intentions/ behaviours have aligned towards sustainable consumption i.e. 'Going Green'; resulting from increased awareness (mandated under goal 13; SDGs), and transparency (fueled by 'digitalization of processes'; shortening information transference between actors). GCB entails sustainable behaviours beneficial to the environment. Despite extensive studies on GCB and COO using frameworks like TBL, SCT, ESG, etc., research about firm's COO's sustainable policies' influence on GCB remains non-existent.

Sustainability perception transcends if firm's COO advances sustainable policies influencing consumers' sustainability practices.

Purpose: To identify GCB relative to a firm's COO's policies utilizing 'Mehrabian and Russel's; 1974: Stimulus-Organism-Response (SOR) Theory'. We propose that a firm's COO's sustainable policies influence consumers' GCB, mediated by cognitive factors, and moderated by construal processing. This novel approach integrates socio-psychological aspects, ensuring a sustainable future in a digital world.

We explore two important research questions: (1) Do sustainable policies of a firm's COO influence sustainable consumption? (2) How does cognitive and construal processing influence this relationship?

NOTE: COO implies favorable sustainable policies. CLT implies firm's entry into the host country is far/near. GCB implies sustainable and green consumer behaviour (here, behaviour signifies purchase intention)

## TITLE: Is the supply chain of Indian electric vehicle (EV) companies environmentally-viable (E-V)? A sustainability reporting and disclosure perspective.

**AUTHORS:** Ranjan Kumar (Assistant Professor, Business Communication, IIM Lucknow) and Ishaan Sai (1ST YEAR STUDENT, MA IN SUSTAINABLE DEVELOPMENT PRACTICE, TERI SCHOOL OF ADVANCED STUDIES).

### ABSTRACT

The penetration of electric vehicles (EVs) in India - the world's third-largest light vehicles and the largest two-wheeler market, and the fastest-growing for both two- and four-wheelers (Kapur, 2023; Mohile, 2023) - is projected to surpass 40 percent by 2030, growing eight-fold in seven years (Seetharaman, 2023). But, there is much more to this exponential growth than meets the eye, entailing significant hidden environmental costs and adverse impacts that can't be ignored (Carreon, 2023; Choudhury, 2021). This research focuses on the pertinent, but unexplored theme of environmental-viability (E-V) of the supply chain of Indian EV companies. An analytical framework comprising 10 objective parameters was developed based on global benchmarks and best practices, and applied to evaluate if the companies' EV supply chain is environmentally-viable (E-V).

Four key findings emerged from our analysis. One, none of the 14 prominent Indian EV companies has yet adopted the parameters that correspond to upstream environmental-viability, i.e. supply chain traceability

for responsible and conflict-free sourcing of minerals. This omission is glaring when benchmarked with the global leader in the EV segment, Tesla, which has long back implemented a Conflict Mineral policy that extends to all its Tier 1 suppliers (Tesla, 2018). Two, at the midstream stage, companies have adopted and are reporting the three parameters. However, the extent of disclosure varies widely with the five prominent internal combustion engine (ICE)-based automakers, who have ventured into the EV business – Hero Motors, Mahindra, Tata Motors, TVS Motor, and VE Commercial Vehicles – providing the most detailed information on lean manufacturing and responsible waste management parameters. Apparently, their manufacturing prowess honed over decades and process expertise has enabled them to transfer the best practices from ICE-based to EV businesses. That said, sustainable packaging as a parameter remains an under-reported area for all EV companies, except for Ather Energy to some extent. Three, at the downstream stage, all EV companies have mentioned smart charging features, but they have interpreted it very liberally. The reporting on renewable energy grid charging is conspicuously absent, which in the Indian context can be explained due to limited battery charging infrastructure, and that too is largely reliant on thermal power-based grids. In such a scenario, it is still not possible for EV companies in India to track, report, and/or enable renewable grid-based battery charging. Finally, all EV companies have adopted circularity by enrolling in or creating a battery recycling and reuse alliance, an expected outcome of the mandatory regulation introduced in 2022.

Research findings establish an urgent need for multi-pronged interventions across the supply chain by EV industry stakeholders in India.

## TITLE: Understanding the impact of greenwashing on consumers' purchase intention in the context of Indian Fashion Industry

**AUTHORS:** Abhijeet Vikramaditya Tiwari (GLA University), Shivangi Jaiswal (GLA University) and Ruchika Joshi (GLA University).

### ABSTRACT

Greenwashing is widespread in the fashion and textile business, where corporations deceive consumers about their products or services' environmental practices and eco-friendliness. Businesses frequently use sustainable messaging not due to authentic environmental concerns but to appeal to eco-conscious consumers and cultivate a false perception of their environmental responsibilities. This strategy not only deceives clients but also weakens the endeavours of truly sustainable firms. Although greenwashing is widespread, there is a lack of research on this subject, particularly regarding fashion businesses in countries such as India. This study seeks to close the existing divide by investigating the impact of greenwashing on green word of mouth, loyalty, and image and how these factors influence purchase intentions.

The fashion industry significantly contributes to global pollution, including substantial harm to water resources, chemical pollution, and textile waste disposal. Several fashion companies have used green marketing strategies in order to meet the growing customer consciousness and need for sustainable products. However, some firms choose to engage in greenwashing instead of genuinely making efforts to reduce their impact on the environment.  The issue of greenwashing in the fashion industry is particularly pertinent in India due to the country's significant and growing consumer market, coupled with an increasing awareness of environmental issues. However, the lack of research on greenwashing in this specific context leads to a lack of understanding of its influence on customer behaviour and perceptions in India. This study seeks to address this gap by particularly analysing the Indian market, providing useful insights that could aid scholars and business managers in understanding the implications of greenwashing.

This study utilizes Partial Least Squares Structural Equation Modelling (PLS-SEM) to investigate the correlation between greenwashing and its influence on customer behaviour. The study investigates the impact of greenwashing on green word of mouth, loyalty, and image, and how these qualities subsequently influence purchase intention. When consumers see that inaccurate environmental assertions have misled them, they communicate their unfavourable encounters with others. Thus, depicting greenwashing had a negative impact on WOM. Secondly, consumer loyalty is essential for every brand, and loyalty towards environmentally friendly practices is especially significant for brands that promote themselves as

sustainable. The study demonstrates that greenwashing erodes this loyalty. The perceived environmental friendliness of a company, sometimes known as its green image, is crucial for recruiting and maintaining environmentally sensitive consumers. Greenwashing undermines the positive perception of the company, causing consumers to doubt its genuineness and dedication to sustainability. Greenwashing has an impact on green word of mouth, green loyalty, and green image, which eventually results in a decrease in purchase intention. Consumers are less inclined to purchase from brands they perceive as deceitful, leading to a decline in sales and market share.

The phenomenon of greenwashing in the fashion industry has a substantial and negative impact on customer behaviour and views. By comprehending these effects through theoretical frameworks and empirical studies, business managers may more effectively tackle the issue and advocate for truly sustainable practices. Comprehending the negative consequences of greenwashing is crucial for business managers who strive to establish and sustain consumer trust and loyalty. The results of this study emphasize the significance of authentic sustainability initiatives and clear communication. This has positive implications for the environment and contributes to the establishment of consumer confidence and loyalty, ultimately resulting in a more sustainable fashion sector.

## TITLE: Corporate Board Diversity and ESG Performance: Evidence from G7 firms

**AUTHORS:** Himanshu Joshi (FORE School of Management, New Delhi) and Prachi Bhatt (FORE School of Management, New Delhi)

### ABSTRACT

Growing climate concerns and its anticipated social consequences have enhanced the scrutiny of externalities created by corporate firms. Under the ESG movement, investors are increasingly including Environmental, Social, and Governance (ESG) factors in their investment decisions alongside the conventional risk-return metrics (De la Fuente et al., 2022). This movement facilitates easy access of capital to the firms with good ESG performance, leading to higher valuation (Van Durren et al., 2016). On the other hand, firms facing ESG controversies find it hard to raise capital. In this changed scenario, firms are compelled to examine the key ESG issues central to their strategy and operations. This requires identification of material ESG issues, developing financial metrics to assess their impact, adoption of innovative practice leading to improvement in ESG performance, and communication to the key stakeholders (Eccles & Serafeim, 2013). There is a growing recognition in the academic and practitioners' literature that ESG factors directly affect a firm's long-term financial performance (Nollet et al., 2016) and shareholder's value (Lahouel et al., 2022). Corporate firms having good ESG performance are considered legitimate by its stakeholders, allowing them an easy access to the capital markets and resulting in better valuation. Top management teams (TMTs) including corporate boards and CEOs are entrusted with the responsibility of driving the ESG agenda in their core strategic plan. Most CEOs now recognize that ESG issues are one of the key drivers of their corporate strategy. However, corporate boards largely remain holdouts in ESG adoption. Annual Corporate Directors Servery conducted by PwC in 2019 provides insights about the perspective of directors on ESG issues. Many directors remained sceptical about the ESG issues, more than 50% of them believe that their board were spending too much time on these issues, and 34% believe that investors provide over emphasis to the ESG issues. Corporate boards around the world have traditionally been focusing on short term financial performance, whereas, ESG issues require long term commitment which may not yield immediate results (Serafeim, 2020). Moreover, conventional corporate boards presume compliance as their primary task and pay less attention to the emerging ESG issues. Growing literature in governance indicates lack of diversity and expertise in the corporate boards to deal with complex and multifaceted ESG issues. Although, the extant literature has examined the impact of board composition and diversity on firm's financial performance, its impact on ESG performance has remained less explored. According to resource dependence theory (Pfeffer & Salancik, 1978) and upper echelons theory (Hambrick, 2007) board composition play a decisive role in steering the corporate strategy. Resource dependence theory postulates that board capital consists of human capital and relational capital. Human capital comprises of experience, expertise, and skills of the board members, whereas, relational capital encompasses their relationship with the external environment and diverse

stakeholders (Hillman and Dalziel, 2003). Recent literature has highlighted the role of boards in encouraging the firm management in ESG adoption (Pucheta-Martínez & Gallego-Álvarez, 2019). Board diversity which is defined as the heterogeneity among board members can be examined from mainly from four perspectives – gender, independence, cultural, and skills. Both academic and practitioners' literature have highlighted the role played by the women directors in improving corporate governance and firm's environmental and social performance (Ginglinger. & Raskopf, 2023). PwC 2022 Annual Corporate Directors Survey reports that a higher proportion of female directors intend to prioritize reducing impact of climate change than the short-term performance, and a higher percentage of female directors envisage a clear linkage between environmental and social issues and corporate strategy than their men counterpart. In academic literature, resource dependence theory postulates that female directors bring different perspectives, skills and experiences to the boardroom, and their presence in the board improve board monitoring (Adams & Ferreira, 2009). Female directors' relational capital helps the board to connect better with the diverse stakeholders and external environment, leading to improved ESG performance (Mallin & Michelon, 2011). Board cultural diversity is a relatively less explored area in the literature. Al-Hiyari et. al. (2023) examined the moderating role of the board's cultural diversity on ESG performance and investment efficiency. Board independence measured as a proportion of independent directors in the corporate board plays a crucial role in reducing agency cost and information asymmetry (Fama and Jensen, 1983; Ntim et. al., 2013). Compared to the internal directors, independent directors have relatively stronger incentives to control managerial discretion. Researchers have reported a positive association between board independence and sustainability disclosures (Pizzi et. al., 2021); environmental disclosures (Rao et. al., 2012), and ESG disclosures (Arayssi et. al., 2020). In the present study, we postulate that to deal with the multiplicity and complexity of the ESG issues, sources of board diversity can play an important role. Using panel data for a period of eight years from 2015 to 2022 for listed firms from the G7 countries, we examine the impact of sources of board diversity namely, gender, independence, culture, and knowledge & skills on firm's Environmental, social, and governance performance. As firm size, age, and profitability can influence its ESG performance, these variables are controlled in our investigation. To tackle the issue of endogeneity, we have used system -GMM method. Our findings suggest that board gender diversity, independence, and board skills positively influence firms' ESG performance. Although these results are consistent for all the three dimensions of ESG namely, environmental, social and governance, impact vary in terms of their magnitude. Gender diversity has most prominent influence on the firm's social performance, whereas board independence and board skills have largest influence on the governance performance. Overall, gender diversity is the main source of diversity to the corporate boards which positively influence firms' environmental, social and governance performance. Our results are consistent with the industry fixed effects and system GMM econometric models. Our findings provide important implications for corporate boards, investors, and regulators.

## TITLE: Analysing the impact of corporate social responsibility on the environmental performance of manufacturing firms in India: the role of sustainability disclosures and ISO 14001 certification

**AUTHORS:** Baikunthanath Sahoo (Department of Humanities and Social Sciences, IIT Madras, Chennai, Tamil Nadu, India), Santosh Kumar Sahu (Department of Humanities and Social Sciences, IIT Madras, Chennai, Tamil Nadu, India) and Krishna Malakar (Department of Humanities and Social Sciences, IIT Madras, Chennai, Tamil Nadu, India)

### ABSTRACT

This study explores the effect of CSR on the corporate environmental performance of manufacturing firms in India. This research is conducted both at aggregate and disaggregated levels. Our sample consists of 21,138 firm-year observations collected from the Centre for Monitoring Indian Economy (CMIE) prowess database from 2009 to 2021 in India. The empirical findings reveal a significant positive relationship between CSR and the environmental performance of firms. Using the Difference-in-difference techniques, we also observe that the firm's environmental performance and energy efficiency are greatly affected by India's mandatory CSR disclosure act. In addition, these findings suggest that mandatory CSR disclosure alters firm behaviour and generates positive externalities. The results also indicate that environmental certified CSR firms are performing well in environmental indicators. Firms' sustainability disclosure has a positive effect on environmental performance. The result is more evident at disaggregate level analysis. The study has potential policy implications for profitability and sustainability in a competitive business environment. The paper concludes that attaining environmental sustainability as part of their social responsibility to care for the environment will require collaborative efforts from business society and policy bodies.

## TITLE: SYNERGIZING DIVERSITY FOR SUSTAINABILITY: EVIDENCE FROM BOARD GENDER DIVERSITY AND ESG PERFORMANCE

**AUTHOR:** Vishakha Jaiswal (Indian Institute of Management Indore, Indore, INDIA)

### ABSTRACT

This study uses 1,511 observations from 2007 to 2023 from 387 firms in 49 sectors. The study provides management, policymakers, and stakeholders with valuable insights. Gender diversity improves ESG performance across all areas, according to findings. The governance pillar had the most significant impact, indicating firms' confidence in gender-diverse boards. The findings favor the token mechanism over the critical mass theory. A considerable representation does not add value, but a small one boosts ESG performance. Committing to best management practices may negatively impact a firm's ESG performance, while a formal policy on a well-balanced board structure can improve ESG performance. Board gender diversity on ESG issues benefits small firms more. This study emphasizes the importance of gender balance on corporate boards for integrated management. Companies should prioritize inclusive governance to achieve their goals.

## TITLE: IT INVESTMENTS: A DOUBLE-EDGED SWORD FOR CORPORATE SOCIAL PERFORMANCE – INSIGHTS FROM THEORY OF SMART MACHINES

**AUTHORS:** Pramendra Singh Tank (Indian Institute of Management Ahmedabad) and Bibek Bhattacharya (Indian Institute of Management Ahmedabad)

### ABSTRACT

We draw on the theory of smart machines to explore the relationship between firms' Information Technology (IT) investments and corporate social performance. The literature presents a theoretical tension regarding IT investments' impact on social performance, which we categorize as the bright side and dark side of technology. The bright side posits that IT investments enhance firms' social performance due to environmental scanning, data analytics and enhanced stakeholder management capabilities. Conversely, the dark side suggests that IT investments can harm social performance due to workforce dehumanization, surveillance, technostress, and information overload. Using the theory of smart machines, we resolve this tension and propose an inverted U-shaped relationship between IT investment and social performance. Additionally, we examine how firms' governance structures and ESG controversy moderate this relationship. Analyzing longitudinal panel data from public United States (US) firms over a six-year period, comprising 9,198 firm-year observations, we find robust support for our hypotheses. Our findings contribute to the literature on the antecedents of firms' social performance, which gains heightened importance in the context of the industry 5.0 framework that emphasizes firms' societal responsibility.

## TITLE: Intersection of ESG Disclosure and Financial Distress: The Differential Impacts Across Varying Levels of Distress Risk

**AUTHORS:** Divyam Jain (PhD Scholar (Finance & Accounting) at IIM Kashipur), K N Badhani (Professor Finance and Accounting IIM Kashipur) and Ashish Kumar (Associate Professor Finance and Accounting IIM Kashipur).

**ABSTRACT**

This study addresses the question: Are ESG disclosures always beneficial for a company? We explore the risk mitigation aspect of ESG disclosures using signaling and agency theory, examining their effects on both distressed and non-distressed companies. Our findings reveal that while ESG disclosures reduce financial distress risk for financially stable companies, they do not aid distressed companies in their turnaround efforts and may even exacerbate their distress. This outcome is due to the differing strategic priorities of distressed versus non-distressed companies. Distressed companies must focus on immediate turnaround actions rather than long-term ESG activities, as diverting resources to ESG can provoke adverse reactions from shareholders and stakeholders. The study has been conducted in the Asian context that provides the unique settings for ESG issues and bankruptcy risks compared to the western counterparts. Our findings are robust, supported by a battery of robustness tests and alternative proxies, and contribute significantly to both academic literature and industry practice.

## TITLE: Roles of CEO and Board Characteristics on Sustainability Reporting

**AUTHOR:** Sreejith Kumar Krishnakumar (IIM Udaipur).

**ABSTRACT**

Sustainability reporting is an essential issue for multiple firms and industries today. Hawn and Ioannou (2016) and other studies demonstrate the importance of responsible disclosures and following specific standards in sustainability reporting. An important standard in this regard is the Global Reporting Initiative (GRI) standard, which helps firms to take "responsibility for their impacts by providing them with the global common language to communicate those impacts (https://www.globalreporting.org/about-gri/)." Disclosure following GRI standards can help stakeholders identify sustainability initiatives that are non-reversible and aligned with a firm's core capabilities (Durand et al., 2019).

Tuggle et al. (2010) and other seminal studies show that several characteristics of the chief executive officer (CEO) and board of directors (board) tend to be important in strategic decision-making. CEO Duality measures the influence that a CEO who simultaneously serves as the board chairperson may have in shaping critical decisions in board meetings. CEO Duality should also theoretically impact the likelihood of enhanced disclosure of corporate social initiatives by following GRI standards.

Bose et al. (2021) show in their study that CEOs serving on other companies' audit committees and boards, referred to as interlocking, can help create positive impacts on corporate social performance. Given this finding, such representation on multiple boards by board members can enhance the likelihood of higher disclosure through more rigorous reporting of various corporate social initiatives. Independent board members are more open to bringing new perspectives to improve corporate social performance. Hence, they can also improve the likelihood of enhancing the level of reporting of corporate social initiatives by following GRI standards.

We plan to test the impacts of the variables mentioned above using a unique and merged dataset spanning

the years from 2012 to 2022. Information on firm-level corporate social initiatives and reporting comes from the Refinitiv Eikon database, and data on CEO and board members, along with other financial performance data, come from the Compustat database. The study aims to understand whether established CEO and board-level factors also enhance the likelihood of firms following GRI standards of corporate social reporting.

## TITLE: Buyer Power and Vertical Mergers in Supply Chain Competition

**AUTHOR:** Srishti Gupta (Institute of Economic Growth).

### ABSTRACT

The main topics of economic study have always been market power between firms, firms's behavior, and market performance. Market power in the supply chain focuses on the seller power (manufacturer/upstream firm) relative to the buyer power (retailer/downstream firm). Wal-Mart is one big retailer that, using its bargaining power, forces upstream firms to reduce the prices of their goods (Alibeiki et al., 2020). In India's agriculture sector, a few retailers exploit farmers with small landholdings through monopoly power (Zavala, 2022). Many studies in the literature focus on the vertical/horizontal relationship in supply chains (Trivedi, 1998; Tsay and Agrawal, 2004; Yao and Liu, 2005). An area that is not much explored is the market structure, where market power is more concentrated with downstream firms relative to upstream firms. Inderst and Wey (2007) analyze the sources and welfare implications of retailer power. Geylani et al. (2007) findings show that retail variety choices and market power between manufacturers and retailers are highly correlated. Nicholson and Young (2012), in their study, highlight a reinforcing structure where European Union buyers happen to have more bargaining power in comparison to suppliers because of their higher retailer power over consumers.Our paper contributes to this growing literature of buyer power by focusing on downstream first mover pricing contracts that make downstream firms leaders and upstream firms followers. We, further, investigate factors that influence firm's decision to vertically integrate in presence of product differentiation and bargaining power. Using these findings, we endogenize the decision of channels to vertically integrate or remain separated and investigate whether the Nash equilibrium of this merger game is the socially preferable outcome.

ModelOur objective is to explore the price competition in this dual exclusive channel system in the presence of buyer power. We refer to qi, i = 1, 2, to represent the demand for product or channel i. Correspondingly, the retail prices are denoted by pi, i = 1, 2, and the wholesale prices are wi, i = 1, 2. To obtain logically consistent demand functions in different channel structures, we adopt the framework established by Singh and Vives (1984) and Wang et al. (2016): $q_i = a - p_i + \gamma p_j \quad i, j = 1,2 \quad ; a, b>0 \qquad (1)$

We will discuss three cases. Case 1 discusses vertically separated structures under the FM regime. Case 2 investigates market outcomes when both supply channels vertically integrate. In case 3, one vertical channel is separated while the other is vertically integrated.

**Results**

wi,j,k* denotes optimal wholesale price. 'i' refers to firm number 1/2 respectively. 'j' explains regime type chosen by firm 1. Thus, j can be FM or VI. Similarly, 'k' defines regime type chosen by firm 2. Thus, k can be FM or VI. Similarly, pi,j,k* denotes optimal retail price.

Proposition 1: For all values of γ,μ belongs to (0, 1), wi,(FM,FM)* > wi,(VI,VI)* = wi,(VI,FM)* = c

Proposition 2: For all values of γ,μ belongs to (0, 1), pi,(VI,VI)*< pi,(VI,FM)*<pi,(FM,FM)*

Proposition 3: For all values of γ,μ belongs to (0, 1), CS(VI,VI)> CSVI,FM>CSFM,FM

Proposition 4: For all values of γ,μ belongs to (0, 1), SW(VI,VI)> SW(VI,FM)>SW(FM,FM)

Comparison of Joint profits of channel 1 for all values of γ belongs to (0, 1) and c belongs to[0, 0.5) shows that for, simultaneous game in case 1 for values of γ belongs to (0, 0.77], VI is the dominant strategy for both the channels, so the subgame perfect equilibrium is that both channels integrate. For case 2 for values of γ belongs to ( 0.77,1), we find that there are two Nash Equilibria {VI, VI} and {No VI, No VI}. Of these two Nash Equilibria {No VI, No VI} is Pareto superior to {VI, VI}. In sequential game, in case 1 where γ belongs to (0, 0.77), both channels vertically integrate, and we observe a merger wave. While in case 2 when γ belongs to (0.77, 1) , (No VI, No VI) is the subgame perfect Nash Equilibrium.

**Conclusion**

We can conclude that it is because of elimination of double marginalization, as discussed in the literature, under vertical integration regime that wholesale and retail prices are lower under it. For example, a Vertical combination between TRIL Urban Transport Private Limited, Valkyrie Investment Pte Limited, and Solis Capital Pte Limited who acquires 19.75% , 14.81% and 9.88% stakes respectively in GMR Airports Limited (Combination Registration No. C-2019/07/676). GMR is operating in the upstream market of operation and maintenance of airport while acquirers are performing in downstream market of provision of air transport services (scheduled/ non- scheduled) and other retail services. In 2017 CCI received a notice of vertical combination between Bayer Aktiengesellschaft (the acquirer), Monsanto Company and KWA Investment Co, wholly owned subsidiary of Bayer (Combination Registration No. C-2017/08/523). In the above cases both the parties were performing activities relating to supply, distribution and sale of products or services at different levels of supply chain. Of the above cases of vertical overlap, there is threat of foreclosure as for acquisition of GMR group by Tata Sons group may lead to conflict of interest where acquirer has an incentive to create entry barriers for competing airlines and GMR is having control in the market for provision of access to facilities. For the Bayer and Monsanto case, Monsanto had 98-100% market share in the upstream market for the licensing of Bt.cotton traits in India and thus had ability to foreclose access to the product in downstream market. The CCI approved these mergers subject to the parties accepting certain conditions which would lessen the anti-competitive harms.

## TITLE: Corporate Sustainability on a Crossroad: The Case of Sunbird Straws

**AUTHORS:** Pallavi Datta (IIM Bangalore), Yugantar Singh (Christ University) and Shailavi Modi (Christ University).

**ABSTRACT**

Social entrepreneurs are vital in tackling pressing societal issues, fostering innovation, and creating lasting solutions for rural communities. However, their unique challenges often go unnoticed. This case study highlights the journey of Dr. Saji Kurungatil Varghese, the co-founder of Sunbird Straws, an eco-friendly startup, and the complexities they faced while considering business expansion. The purpose of this case is to provide insight into the world of social entrepreneurs and emphasize their importance and contribution on a wide scale. The learning objectives are intended to stimulate the students' comprehension of the various challenges faced by Indian social entrepreneurs. The case offers a rich educational experience spanning diverse fields, including business operations, entrepreneurship, sustainable products, social innovation and financial planning. The case on social entrepreneurship and corporate sustainability will guide students to comprehend its concept, significance, challenges and understand how businesses can be a force for positive social impact. The case study serves as a valuable tool for graduate students, helping them improve their critical thinking and solution-focused skills in preparation for their future entrepreneurial endeavors. Students should be able to analyze the case, answer questions, and evaluate the co-founder's business expansion dilemma.

## TITLE: Board Gender Diversity and Climate Risk Disclosure

**AUTHORS:** Abhinav Anand (IIM Banglaore), Jalaj Pathak (IIM Lucknow), Arun Upadhyay (University of Florida, Finance) and Chi Zhang (Manning School of Business, UMass Lowell).

### ABSTRACT

Does board gender diversity influence firms' climate risk disclosure? Textually analyzing U.S. firms' 10-K filings in 2010–2021, we find that adding female directors significantly decreases climate risk disclosure. Our results are robust to alternative variable definitions, alternative model specifications, and difference-in-differences(DiD) approach employing California Senate Bill No. 826. The results are stronger among firms with a female CEO as well as those with a board ESG committee.Further analysis indicates that, due to better monitoring of climate risk handling,firms with more gender-diverse boards engage in textually less complex and positively-toned climate risk disclosures, which in turn, result in a better environment rating and firm valuation. Overall, our study offers evidence that improving gender diversity in the boardroom can enhance firms' climate risk awareness and environmental practices.

## TITLE: Mapping Stakeholders Perceptions of Destination Resilience to Climate Change: An Exploratory Case Study of The Andaman Islands

**AUTHORS:** Ankit Kumar (Central university of Jammu), Sumiran Maheshwari (Central University of Jammu) and Ranjeet Kumar Raman (Central University of Jammu)

### ABSTRACT

**Introduction** : The Tourism industry is multifaceted, reliant on natural attributes, and is highly sensitive, as factors like pleasant environments and science beauty strongly impact destination choice. Coastal tourism is a popular form of recreation and tourism that plays a significant economic role worldwide. However, coastal tourism destinations are highly vulnerable to the impact of climate change, underscoring the need to understand resilience factors from the perspectives of local stakeholders. While theoretical aspects of resilience are extensively covered in tourism literature, there is a critical need to operationalize its concepts and variables. Since tourism is a consumer-driven industry and tourists possess significant adaptive capacity, there is a dearth of literature investigating the demand side perspective of climate change mitigation strategies. Drawing on existing gaps in the literature, the present study seeks to analyze key stakeholders' perceptions regarding the impact of climate change on the Andaman Islands and explore the characteristics influencing the resilience of the coastal tourism destinations in the context of climate change.

**Methodology**: This current study adopted an exploratory case study approach to explore how key stakeholders in the Andaman Islands perceive destination resilience amid climate change. The research is conducted in two phases: initially, an extensive documentary analysis reviews existing literature and documents on climate change impacts and destination resilience specific to the Andaman Islands. This analysis provides a foundation for identifying relevant themes and variables, ensuring a comprehensive understanding of the region's challenges. Subsequently, purposive (non-probability) sampling, followed by snowball sampling, is used to gather 22 semi-structured interviews with stakeholders in the Andaman Islands, including tourists, local government officials, tourism operators, environmentalists, and community leaders. This approach enables the collection of detailed insights from individuals with significant knowledge and experience regarding climate change and tourism resilience. The semi-structured interviews allow for an in-depth and flexible exploration of stakeholder views, offering a nuanced understanding of the complex issues surrounding climate resilience. The data from these interviews are analyzed abductively through thematic analysis using MAXQDA (version 24.2) software. This methodological approach provides a structured understanding of the

various factors influencing destination resilience as perceived by local stakeholders. The abductive analysis ensures that the findings are robust and valid, offering a comprehensive insight into the studied phenomena.

**Findings**: The findings of this study offer nuanced insights into the impact of climate change and resilience factors in the Andaman Islands. The thematic analysis study underscores the climate-related challenges experienced by the region. The 2004 tsunami exemplifies the region's vulnerability to extreme weather events, while persistent biodiversity loss, such as coral bleaching, further threatens the islands' sustainability and impact destination appeal. Stakeholders view these impacts as urgent issues requiring immediate action. In response to the climate change threat, the analysis uncovers the comprehensive array of key drivers influencing the resilience of coastal destinations. Effective stakeholder engagement is essential for resilience; destination stakeholders of Andaman islands, through knowledge sharing, cooperation and partnership, training and skill development, and trust building, possess a strong social network in the region. Innovation, infrastructure development, research and development, marketing and promotion, and management strategies are the significant components of learning and reflexivity, facilitating proactive climate action. The resilience literature suggests that governance of governance (meta governance) is an essential aspect of climate change governance. The thematic analysis revealed that the destination stakeholders of Andaman Islands reflect strong governance channels through public-private partnerships, policy frameworks, cross-scale governance, finance and funding, engaged governance, and supranational governance. The study highlights that inadequate socioeconomic opportunities heighten the vulnerability of stakeholders in the Andaman Islands in the context of climate change.

**Discussion**: This research underscores the importance of local stakeholder perspectives in developing resilience strategies for the Andaman Islands. By emphasizing key stakeholders' perceptions, the study underscores the necessity for resilience strategies to be context-specific, taking into account the distinct ecological, economic, and social dynamics of each destination. Stakeholder engagement, social capital, and adaptive capacity are critical for building resilience and fostering a proactive approach to climate change adaptation and mitigation. The study provides practical and theoretical implications for researchers, policymakers, tourism operators, and community leaders in coastal regions. These insights are crucial for ensuring the long-term sustainability of these vital tourism areas. Moreover, future research should explore the interplay between climate change impacts and destination resilience in diverse coastal and mountain regions. Longitudinal studies could offer deeper insights into how resilience evolves over time and the effectiveness of various adaptation strategies. Comparative studies between different coastal destinations could identify best practices for building resilience.

## TITLE: Virtual Reality in Tourism: Impact of Animistic communication on consumer sentiment

**AUTHOR:** Naveenkumar Hanagandi (Mr)

**ABSTRACT**

**Extended Abstract:**

**Introduction**: Virtual reality is an immersive technology that allows users to experience in a simulated digital environment (Disztinger et al., 2017).This virtual reality technology is used in various industries, including Tourism, Digital Games, Health care, Defence Training, Construction, Education and more (Adachi et al., 2020).In a recent report published by the World Travel and Tourism Council in the year 2023, tourism has contributed 9.1% of the overall global GDP. That means the tourism industry is a global contributor to the economic growth. Tourism destinations have become a very important aspect of the tourism industry, and destination management companies promote the tourism destinations to their potential visitors (Dubois & Gibbs, 2018; Jankova et al., 2023). Tourism destinations are seeking innovative ways to attract tourists and boost their positive behaviour towards the destination (Losada & Mota, 2019)Sustainable communication is one such innovative way that helps tourism destinations build a positive image and enhance consumer sentiment (Beck et al., 2019; Tölkes, 2018).For example, Animism is the belief and faith that every nonmaterialistic world apart from humans, such as trees, rocks, oceans, rivers and mountains, have souls in them, and they are interconnected to humans and can communicate with each other (Martha, 2017; Tylor, 2010). Faith and belief enhances environmental consciousness (Harper, 2011). Environmental consciousness acts as a key factor for sustainability, which can enhance positive attitudes towards tourism destinations (Ahmad et al., 2020; Cheng & Wu, 2015). Hence, this arises to the term Animistic Communication.This research dives deep into the literature and identifies that the relationship between Animistic communication using virtual reality and consumer sentiment is yet to be explored, as well as key variables like social interaction, narrative engagement and user optimism that could shape the relationship between Animistic communication using virtual reality and consumer sentiment is yet to be explored.

**Research Objectives**: To understand the impact of Animistic communication on consumer sentiment•To access how social interaction and Narrative engagement shape consumer sentiment•To access the interaction between user optimism and mediating factors in shaping consumer sentiment

**Research Methodology**: The research objectives are backed by Narrative transportation theory (Gerrig, 1993). The study will be conducted using a controlled experimental research method that integrates an electronic virtual reality headset and mobile/tablet. The total sample size will be 150 samples. The research will be conducted using two different studies. Study 1 will understand the direct effect of the Independent Variable on the Outcome Variable, which is the direct impact of Animistic communication on Destination sentiment. For this study, the participants will be divided into 2 groups: one group will experience using a VR headset set, and the other group will experience using Mobile/Tabs. The total sample size for this study will be 75 samples, where 37 samples will be examined using an electronic virtual reality headset and the remaining 38 samples using Mobile/Tabs. Both groups will be shown a 360 video of a nature-based destination. Which will be viewed using an electronic virtual reality headset and mobile/tab. Simultaneously, Study 2 will understand the effect of mediators and moderators that shape the relationship between the independent variable and the outcome variable. That is, the mediating variables like social interaction and narrative engagement and moderating variables like user optimism would define the relationship between Animistic communication and Destination sentiment. For this study, the participants will be divided into 2 groups: one group will experience using a VR headset set, and the other group will experience using Mobile/Tabs. The total sample size for this study will be 75 samples, where 37 samples will be examined using a VR headset and the remaining 38 samples using Mobile/Tabs. Both groups will be shown a 360 walkthrough of a nature-based destination. Which will be viewed using an electronic virtual reality headset and mobile/tab.Both the studies would be surveyed through a field study considering samples as tourists or visitors to a hospitality industry or a destination. The data will be analysed through regression path analysis using the Hayes process Macro modelling tool to estimate the direct and indirect effects through mediation and moderation.

**Results and Implications**: Virtual reality (VR) is a disruptive technology that changes the way people interact with things and brands(Klein, 2003; Wang & Datta, 2010). Virtual worlds have become very popular due to the ubiquity of smartphones, the cheapness of AR/VR apps and games as well as unforgettable immersive experiences (Ianenko et al., 2023). In recent years, sustainable communication has been an area of increased interest within marketing and consumer behaviour research (White et al., 2019). This involves giving non-human entities – like brands or products – qualities which are characteristic of living beings so as to create deeper connections between people and their surroundings(Portal et al., 2018). In marketing terms, this means treating them as if they were alive by endowing them with human emotions and intentions, thereby making consumers see these objects not only as lifeless matter but also as something animate (Tölkes, 2018). It is rooted in the belief that all things, living or non-living, have spirits or souls which deserve respect and care (Cajete, 2017). Sustainable communication has also been proposed within consumer behaviour literature as an approach toward generating positive attitudes and behaviours among individuals towards brands and products through fostering satisfaction leading to loyalty and then advocacy for such items(Krizanova et al., 2019). This paper investigates the impact of sustainable communication (Animism) on consumer sentiment. Also, this would contribute to the literature on consumer behaviour by providing empirical evidence of the effects of sustainable communication (Animism) on consumer sentiment. This also contributes to the Tourism industry to develop more effective marketing strategies that can help industries navigate consumers towards sustainable practices.

## TITLE: Information Technology enablers for Auto Sector to embrace circular economy

**AUTHOR:** Amar Jadhav (SAP India Pvt Ltd)

**ABSTRACT**

Auto sector can immensely benefit by adopting circular economy practices across their product life cycle stages . Information technology can be a catalyst to unlock the value . This paper provides practical recommendations on how auto sector can embed circularity in their supply chain decision making . It is covered through taking the needs of persona involved in different functions as well as looking at various processes which can be aided with circular decision criteria. The benefits of circular economy adoption has been explained by taking a case of a fictitious auto OEM company , which has adopted circular economy practices . Finally the paper ends with showing some paper mockups how top management of auto company can monitor the impact of circular practices adoptions on financial and environment.

## TITLE: Auditor Familiarity and Audit Quality in Business Groups

**AUTHORS:** Sairam Moturi (IFMR Graduate School of Business, Krea University), Vijaya Bhaskar Marisetty (Indian Institute of Management-Visakhapatnam) and Sanjay Kallapur (Indian School of Business)

**ABSTRACT**

Understanding the motive for extended auditor tenure is difficult as it is simultaneously determined by auditor familiarity and the corresponding switching costs to the firm. We attempt to disentangle this by exploring the motive of auditor tenure in business groups, where auditor familiarity can be extended by transferring the auditor to another affiliated business group firms, with no impact on the switching costs. Using 8363 firm-year observations for the period 2003 to 2019 of Indian business group firms. After controlling for non-audit services and auditor tenure, we show that an increase in auditor concentration, that measures extended auditor tenure, reduces audit quality. We find that even mandatory auditor rotation law is not effective in improving audit quality as business groups reshuffle their auditor portfolio to reappoint existing auditors in other business group affiliated firms. Further, we find that business groups that extend the auditor tenure through reappointments engage in higher intra-group transactions and have poorer audit quality.

# TITLE: Threads of Change: How India can redefine Fashion Sustainability?

**AUTHORS:** Shivangi Jaiswal (GLA UNIVERSITY, MATHURA), Prince Dubey (GLA UNIVERSITY, MATHURA), Abhijeet Tiwari (GLA UNIVERSITY, MATHURA) and Ruchika Joshi (GLA UNIVERSITY, MATHURA)

## ABSTRACT

The concept of sustainable fashion is gaining popularity all around the world as customers become more conscious of the environmental and social implications that their respective choices have. The term "sustainable fashion" refers to clothing that is designed, manufactured, and distributed in a manner that contributes to social equity and reduces the negative impact on the environment. There have been a number of studies that have shed light on the elements that drive customers' intention to purchase sustainable fashion. These aspects include environmental concern, social influence, and perceived consumer effectiveness. Within the scope of this study, the factors that influence the intention to purchase sustainable fashion in North Indian cities were explored. The findings gave useful insights into the behavior of consumers and brought to light the significance of information and education in the fashion industry's efforts to promote sustainable fashion. The findings of this study were expanded to the setting of India, where the fashion sector is an important economic driver and where there is tremendous potential for sustainable fashion. The purpose of this study was to gain an understanding of individuals' shopping habits, the factors that influence their purchasing decisions, and the channels through which they seek information on sustainable fashion. An analysis of the data was performed in order to recognize patterns and trends, which served to provide insights into the tastes and behaviors of consumers. In spite of the increased awareness, there are a number of obstacles that prevent the widespread adoption of sustainable fashion. A few examples of them are increased prices, restricted availability, and a dearth of information. There are considerable issues in India that are associated with price sensitivity and accessibility. Therefore, tackling these obstacles is absolutely necessary in order to increase the use of sustainable fashion. Confirmatory factor analysis and structural equation modeling techniques were extensively utilized throughout this investigation. Based on the findings, it was proposed that businesses should focus on initiatives that encourage more positive sentiments among customers about sustainable fashion. When it comes to sustainable fashion consumption, it is essential to ensure that customers experience positive emotions such as happiness, satisfaction, and a favorable attitude. This involves addressing common concerns such as cost and availability, as well as creating a shopping experience that is enjoyable, highlighting the benefits of sustainable fashion, and promoting the benefits of sustainable fashion. For consumers to be able to make more ethical choices, they require additional knowledge. According to the findings of the study, there are three primary avenues via which information about sustainable fashion can be disseminated: public education, peer influence, and business marketing programs. In the context of India, these channels have the potential to be very effective due to the significant impact that family and social networks have, in addition to the expanding reach of digital marketing.After conducting the research, the researchers concluded that enhancing customer attitudes toward sustainable fashion and offering additional information is essential for raising the intention to purchase sustainable fashion. The dissemination of information regarding corporate marketing and public education is particularly effective in India. This set of methods has the potential to promote sustainable fashion and contribute to a more sustainable future by taking into account the distinctive cultural and economic aspects that are present in India. In subsequent studies, it is recommended to investigate the influence that particular educational and marketing initiatives have on the behavior of consumers. In addition, research might investigate the impact that technology plays in the promotion of sustainable fashion strategies, such as the utilization of mobile applications and social media platforms. Having a better understanding of the regional differences that exist within India can also provide more in-depth insights on the tastes and behaviors of consumers.

# TITLE: Critical Lens: GHG Metrics in the Plastic Circular Economy (A Case Study Approach for Plastic Waste Management in India)

**AUTHORS:** Snehal Jariwala (Nepra Environmental Solutions Private Limited), Ankita Morbia (Nepra Environmental Solutions Private Limited) and Ankrati Jain (Nepra Environmental Solutions Private Limited).

## ABSTRACT

Greenhouse gases (GHGs) are a major contributor to global warming, necessitating urgent action across all sectors to mitigate their impact. The transition towards a circular economy presents a pivotal opportunity for reducing GHG emissions within the waste management sector. Extended Producer Responsibility (EPR) under the Plastic Waste (Management and Handling) Rules, 2016, as amended, is a critical policy approach that mandates producers to take responsibility for the entire lifecycle of their plastic packaging products, including their take-back, recycling, and final disposal. EPR practices reduce direct emissions from waste disposal and curtail upstream emissions associated with raw material extraction and production. India has made notable strides in implementing EPR, which has helped in reducing overall GHG emissions and enhancing climate resilience. While EPR and circular economy practices reduce GHG emissions, their effectiveness depends on several factors, such as waste collection methods, transportation efficiency, recycling processes, processing technology and the use of renewable energy sources. Moreover, the diversion of waste from landfills to recycling and co-processing is well-mapped in terms of GHG metrics, energy savings, and economic impacts. However, emissions from other factors, such as waste transportation and processing techniques are not as extensively documented, potentially obscuring the true impact of these practices on overall GHG reduction goals. This study shall guide strategies discussion at policy level as well as at infrastructure development in the waste sector.In this study, we evaluated GHG emissions associated with the transportation of plastic waste based on our ground-truth data collection. Our company, Nepra Environmental Solutions Private Limited (NESPL), is one of the organizations responsible for implementing EPR for plastic waste across India. In order to effectively implement EPR programs and ensure compliance with regulatory requirements, plastic waste from the various locations of India including mountainous regions, islands, and cities is collected and disposed. To calculate GHG emissions across varied regions, we tracked the journey of waste transportation from collection to disposal stations. We have gathered data like mode of transport, distance travelled by the vehicle, type of vehicle, type of fuel used, vehicle capacity, material load, and fuel efficiency. The emission factor is calculated based on the fuel type used by the vehicle. The emissions are then calculated by considering fuel consumption, which is based on the distance travelled and the fuel efficiency of the vehicle, expressed in kg CO2 equivalent per ton of plastic waste. We have observed that plastic waste generated in hilly regions such as Katra (Jammu & Kashmir), Kalimpong (West Bengal), and Gangtok (Sikkim) is transported to centralized disposal centres located in Madhya Pradesh, Rajasthan, West Bengal, etc often exceeding distance more than 1200 km. The calculated emissions from this transportation mainly range from 100 to 160 kg CO2e per ton of plastic waste, depending on factors such as the density and type of plastic waste, as well as the fuel efficiency of the vehicles used. In contrast, some quantity of waste is transported from Shimla to Solan, Himachal Pradesh, covering a distance of 80 km and emitting approximately 10-15 kg CO2e per ton. The quantum of waste transportation in this case depends upon the acceptance capacity of the disposal station, which may have limitations. Similarly, waste generated on islands is transported to mainland centralized disposal locations via waterways. For instance, waste transported from Port Blair to Chennai port (approx. 1300 km) by ship emits approx. 40-50 kg CO2e per ton. Waste transported from cities likes Ahmedabad to Rajula (300 km) emits 30-40 kg CO2e, from Indore to Dhar (64 km) emits 5-15 kg CO2e, from Pune to Chandrapur (17 km) emits 1-3 kg CO2e per ton, respectively. This variation in emissions underscores how transportation distances, the availability of disposal centres and their capacity to handle waste significantly influence GHG emissions. Additionally, issues such as maintenance and temporary shutdowns of disposal stations can further exacerbate the problem. In geographically challenged areas, such as hilly regions and islands, the limited number of disposal centres and their often-inadequate capacity necessitate long-distance transportation of waste to centralized disposal stations, resulting in notably high GHG emissions. However, these regions generate substantial quantities of waste due to tourism, which is a major contributor to their economies. Urban areas generally benefit from better access to nearby disposal facilities, which helps reduce GHG emissions and contributes to the effective achievement of circular economy goals. Nevertheless, in some urban areas, the lack of sufficient disposal facilities within the desired or appropriate radius can still result in higher emissions in certain situations. Based on our ground truth observations and analysis, we emphasize the urgent need for a comprehensive mapping of all factors influencing the effectiveness of EPR practices

in reducing GHG emissions. It's crucial to recognize that while some companies claim to be plastic positive or plastic neutral, their overall approach to GHG mitigation is often unclear. These claims typically focus on plastic waste management without providing a detailed view of their GHG reduction strategies across value chain. To bridge this gap and truly optimize EPR for sustainable waste management, we need to address these factors and evolve policy frameworks accordingly to develop more robust circular economy models. One key policy recommendation is to establish small-scale processing units and disposal centres closer to collection points. This strategy would enhance transportation efficiency, reducing both costs and emissions. Additionally, partnering with local industries can create a reliable demand for Refuse-Derived Fuel (RDF), ensuring a steady supply and supporting local economies. By implementing these strategies, we can achieve a net positive impact and strengthen our sustainability efforts. This study reinforces the importance of a holistic approach to waste management and GHG reduction, ensuring that policies and practices are aligned with broader climate goals.

## TITLE: Integration of sustainability dimensions with corporate purpose of private actors with specific reference to the Corporate Sustainability Due Diligence Directive (CSDDD)

**AUTHORS:** Priyansha Hajela (National Law University, Delhi and Centre for Trade and Investment Law, Delhi).

### ABSTRACT

The term corporate purpose has re-emerged as a significant topic in the corporate governance regime after being dormant for several decades, undergoing a complete overhaul with the shareholder vs. stakeholder dichotomy. Traditionally, the concept of shareholder primacy was linked to corporate purpose focussing on maximization of returns for the shareholders, derived from a social norm rather than a legal mandate. The gradual evolution of the corporate purpose to integrate sustainability dimensions within the economic objective of the companies gained attention globally, exploring strategies aimed at addressing the broader social and environmental concerns by expanding the ambit to all stakeholders.

The recent advancements in the international corporate governance framework moulded the corporate purpose in such a manner so as to provide solutions to the environmental and social issues while continuing to generate profits. Fast forward to the globalized economy it became imperative for business organisations to change the way of conducting business not only to survive and compete but also to thrive in the evolving business environment. The recent judgement of the European Court of Human Rights in the case of Verein KlimaSeniorinnen Schweiz and Others v. Switzerland observed critical gaps in formulating the adequate domestic regulatory framework and a failure on the part of the Swiss authorities to quantify a carbon budget and national greenhouse gas (GHG) emissions limitations. This placed the liability on states to suitably enact domestic measures in order to fulfil their international obligations. Similarly, in the case of Royal Dutch Shell in Netherlands the plaintiffs extended the argument of inadequate action on climate change to private companies, arguing that given the Paris Agreement's goals and the scientific evidence regarding the dangers of climate change, Shell has a duty of care to take action to reduce its GHG emissions in line with the goals of the Paris Agreement. The Hague District Court rejected Shell's defence of exemptions under the European Union Emission Trading System (ETS) and ordered the company to reduce its carbon emissions. Noticeably there is steady increase in the liability of private actors to fulfil the international obligations taking into account the social and environmental damage.

The movement towards management accountability and director's duty of care has increased the obligations on the private actors (i.e. companies for the purpose of this research) in the governance frameworks. Due diligence has increasingly become an imperative part of corporate governance discourse. There has been a proliferation of instruments to integrate sustainability into the corporate governance and due diligence regime. Particularly within the European Union (EU), the discussions surrounding integration of ESG obligations into the domestic company law frameworks have fuelled the debate on corporate purpose and societal significance as the traditional thinkers restricted corporate responsibility to shareholders alone. The EU is pursuing a number of measures to further the objectives of the European Green Deal in order to achieve climate neutrality by 2050. These measures include the Corporate Sustainability Due Diligence Directive

(CSDDD), Carbon Border Adjustment Mechanism (CBAM), Deforestation Regulations, among others.

The Corporate Sustainability Due Diligence Directive has been adopted by the EU Council and approved by the EU Parliament. The Directive has been published in the Official Journal of the EU on 5th July 2024 and has entered into force on 25th July, 2024. After the entry into force, the Directive must be transposed into the domestic laws of the Member States within two years. The Directive seeks to maintain a uniform standard and act as a consolidated mechanism for enhancing due diligence practices across companies by creating a strong environmental and social governance framework. The Directive has proposed human rights and environmental obligations that will be binding on EU and non-EU entities falling within the prescribed thresholds and shall also extend to the subsidiaries and business partners of these entities. The Directive strives to ensure that the companies contribute to sustainable development and lead to "sustainable transition of economies through the identification, and where necessary, prioritization, prevention and mitigation, bringing to an end, minimisation and remediation of actual or potential adverse human rights and environmental impacts".

In light of the above developments, the research proposes to examine the interactions between CSDDD on the one hand, and its impact in terms of corporate accountability for environmental and social obligations. It explores the manner in which regulatory frameworks enhance the sustainability obligations making it a part of the legal mandate. It seeks to examine the integration of such measures with the business processes in order to promote sustainable business operations aligned with the overall corporate purpose. Through the above understanding, the research seeks to analyse whether such instruments would strengthen sustainable value as a part of the corporate purpose or would be used as a means to escalate management accountability and obligations on the private actors by influencing the domestic legal frameworks of countries outside the EU.

## TITLE: Balancing Growth with Sustainability: A Systematic Review of Tourism Gentrification

**AUTHORS:** Athira C (Cochin University of Science and Technology) and Meera Prathapan (Cochin University of Science and Technology).

### ABSTRACT

Though tourism boosts economic engines and employment markets, it also throws up substantial hurdles in catering to the essential needs of the local residents. As cities prioritise tourism over liveability, residents are mobilising to reclaim their communities. Tourism gentrification, the process of changing the character of a neighbourhood due to tourists or tourism-driven activities, has become a pressing issue in many destinations and a critical area of enquiry within tourism research. Employing the Themes-Context-Methodology (TCM) framework, this systematic literature review critically examines the existing body of knowledge on tourism gentrification, focusing on its impacts, underlying processes, and effective management strategies. Web of Science and Scopus databases were systematically searched using predefined keywords to identify, retrieve, and select relevant articles. After several screening steps, a final set of 66 studies was included in the review. By providing a structured overview of tourism gentrification, this study offers valuable insights for policymakers, urban planners, and researchers to develop integrated strategies that reconcile economic benefits with social justice and cultural authenticity.

## TITLE: Green Bonds and the Inflation Reduction Act (IRA)

**AUTHOR:** Sanjay Kumar Jain (Doctoral Candidate IIM Ahmedabad).

**ABSTRACT**

I study the impact of the Inflation Reduction Act (IRA) 2022 on the cost of green bonds in the USA. In this study, I employ a difference-in-difference methodology to compare the cost of green bonds issued by US firms in USD after the implementation of IRA by taking green bonds issued by non-US firms as a counterfactual. I find that after the implementation of IRA, the cost of green bonds in the USA decreased compared to that in other countries. Findings indicate that Governments can mitigate constraints on the cost and supply of climate financing through fiscal policy interventions that improve business environments for firms and spur the demand for cleaner fuels and products from individuals.

## TITLE: Implementing Vehicle Scrappage Policy in Developing Economies with Informal Scrapping Centers and Diverse Producers)

**AUTHORS:** Karthik Ramaswamy (IIM Bangalore) and Rajeev R Tripathi (Indian Institute of Management Bangalore)

**ABSTRACT**

Academic/Practical Relevance: The issue of developing an efficient end-of-life vehicle (ELV) recycling infrastructure in developing economies is complex, primarily due to the presence of informal scrapping centers and a variety of producers. Informal scrapping centers often operate without regulatory oversight. Additionally, the diversity of producers, with varying levels of commitment to recycling and recovery responsibilities, complicates the creation of an efficient recycling system. These factors introduce unique challenges that have not been thoroughly examined in either academic research or practical implementation. Methodology: Our study investigates three distinct recycling systems using game theoretic models: First, we consider an independent recycling system in which a producer either recycles the recovered product through a unique third-party recycler or manages recycling through its own facility. Second, we consider a collective recycling system with two diverse producers recycling their retrieved products, either through a common recycler or by jointly owning a common recycling facility. Finally, we consider a collective recycling system with homogeneous producers who recycle their recovered vehicles through a common third-party recycler or by owning a common recycling system.Results: Our analysis reveals the following insights:(1) Producer-owned individual recycling systems lead to superior recycling infrastructure in terms of efficiency and product recovery compared to systems contracted by third-party recyclers.(2) Under certain conditions, a collective recycling system with diverse producers with collective producer responsibility (CPR) sharing leads to better recycling infrastructure than individual recycling systems.(3) For a given range of the ratio of Individual manufacturer heterogeneityCollective systems with homogeneous producers yield the best recycling infrastructure.

## TITLE: Towards Sustainable Metallurgy: A Framework Analysis of Charcoal-Driven Steel Production

**AUTHORS:** Rupali Bhakat (Praxis Business School, Kolkata) and Neelesh Mishra (XLRI, Jamshedpur).

### ABSTRACT

**Purpose**: To achieve the global goal of net zero emissions, multiple methods have been studied so far to make the steel manufacturing process sustainable. Biochar as a substitute for coal is one of those methods that can reduce carbon dioxide (CO2) emissions in the steel-making process. This research paper identifies the gaps in the current studies. The objectives of this study are to identify the key enablers to support the adoption of biochar, to evaluate the effective implementation of those enablers, and to determine the influence of those key factors on the supply chain of biochar. This study also provides the implications in the area of research and practices.

**Methodology**: Our methodology consists of several key steps:

a)Literature Search and Data Collection: We searched for peer-reviewed journals on Scopus using keywords that resulted in 421 papers. After the primary screening, it was narrowed down to 136 papers.

b)Relevance Screening and Objective Alignment: Further we analyzed the 136 papers and found 95 papers that align with our objective.

c)Framework Application: Our study follows a systematic literature review (SLR) approach and evaluates the selected papers using three frameworks, TCCM (Theory, Construct, Characteristics, and Methodology) developed by Paul & Rosado-Serrano,(2019), ADO (Antecedents, Decisions, and Outcomes) developed by Paul & Benito, (2018) and 6W (Who, When, Where, How, What and Why) developed by Callahan, (2014).

d)Data Synthesis: We categorized the paper using the three frameworks and synthesized the findings of the papers to compare the gaps, outcomes, and inconsistencies found in the reviewed papers.

e)Temporal and Scope Analysis: We covered papers published from 1990 to 2024 for our research purpose to understand the historical developments and shifting trends in the application of biochar in the steel industry.

**Findings**: The findings of this research present several key dimensions that enable the application of biochar in steel production.

1.Technological Enablers: Advanced technologies are required to utilize biochar in the steel-making process. This dimension presents various technologies for producing biochar and using it in the steel-making processes.•Advanced Pyrolysis Technique•Improved Kiln Designs and Continuous Carbonization•Biomass Selection and Characterization•Optimized Injection System •Exploration of Direct Smelting•Integration into Electric Arc Furnaces (EAFs)•Bio-CCS Technologies

2.Economy and Policy Enablers: This dimension is about creating a suitable economic environment for the adoption of biochar for steel production and creating a cost-effective alternative to fossil fuels.•Cost Reduction•Carbon Pricing Mechanisms•Government Incentives•Financial Mechanisms

3.Industry Collaboration and Integration Enablers: This dimension emphasizes the importance of collaboration among the different players to overcome challenges, share expertise, and drive innovation.•Research Collaboration and Knowledge Sharing•Industry Partnerships•Collaborative training programs

4.Logistics and Supply Chain Enablers: This dimension is about creating a sustainable supply chain, facing transportation challenges, setting standards, and managing storage.•Sustainable Biomass Sourcing•Efficient Transportation and Logistics•Standardization and Quality Control•Storage and Handling•Minimizing Land Use Conflict

5.Social and Environmental Enablers: This dimension stresses the social and environmental responsibility that needs to be taken care of. Utilization of biochar in the steel-making process should not harm any community or environment.•Community Engagement•Consumer Awareness and Education•Biodiversity Conservation•Sustainable Forest ManagementRelevanceThe identified key enablers in this paper highlight research gaps, industrial implications, and direction for future research. It can shape the future of the steel industry making it more sustainable.

**Research Purpose**: Researchers can explore and delve deeper into the how and why of advanced technologies and research more on biochar's potential to be utilized in other stages of steel-making processes. Collaborative efforts and knowledge sharing will help to overcome the challenges associated with biochar-based steel. Practice Purpose: Industrial leaders can invest in advanced technologies, embrace policy support, build networks to foster industry collaboration, ensure the sustainable supply of biomass, and engage with local communities to build trust and shared responsibilities.

## TITLE: GENDER DIVERSITY AND FIRM PERFORMANCE: ROLE OF EQUALITY

**AUTHORS:** Mafruza Sultana (Bharathidasan Institute of Management), Pooja Gupta (Jagdish Sheth School of Management) and Asit K Barma (Bharathidasan Institute of Management).

### ABSTRACT

Beauty in the boardroom celebrates diversity, inclusiveness, and better governance in the boardroom. Gender diversity is one of the most important elements for today's business. At higher management levels, gender diversity in the boardroom is seen as a sign of better corporate governance. Besides ensuring equality, the presence of women directors on the board brings about a balanced and humane touch to aggressive financial and strategic policy initiatives. In India, the rule to have one mandatory female board of directors came with the introduction of the new Companies Act in 2013. By the end of 2015, most of the listed companies had complied with the rule but it seemed more of a token presence of women on the board of directors to fulfill the requirements rather than the real participation of women. The objective of the study is to find whether the presence of a higher proportion of women on the board of directors lead to a higher profitability & a better governance and impact on the capital structure & the quantum of CSR spend of the company. Data has been collected from CMIE-Prowess database from BSE-100 public companies in India. Study found that there is a significant difference between the two sets (one women director and more than one women director) in the case of profitability & capital structure at 95% confidence interval but couldn't find any significant difference in terms of CSR spend.

## TITLE: Examining the Influence of Mental Accounting on Green Investment Intentions: Insights from the Theory of Planned Behavior

**AUTHORS:** Rinky Yadav (Banaras Hindu University) and Jagriti Gupta (Banaras Hindu University)

### ABSTRACT

The theory of planned behavior (TPB) unites intention with behavior by concentrating on attitude, subjective norms, and perceived behavioral control. It claims that the greatest direct predictor of social conduct in humans is behavioral intention. And in the present era, mental accounting plays an important role in directing the behavior of people. By keeping this in mind, this current study aimed to investigate the behavior of investors toward green finance in light of the theory of planned behavior by employing mental accounting as a moderating variable. The study uses the quantitative approach for the data collection from a sample of 400 investors on a purposive basis. By utilizing structural equation modeling (SEM) through the Smart PLS (v 4.1.0.6) software to analyze the data, the findings of the study demonstrate that attitude, subjective norms, and perceived behavioral control positively and significantly impact the intention to invest in green finance and intention to invest further leads to investment behavior positively. The findings also suggest that mental accounting negatively and significantly moderates the relationship between subjective norms and perceived behavioral control and intention to invest. However, this moderating relationship is not true in the case of attitude and intention to invest. The findings of this study also show that the present study is helpful for financial companies, governments, and individual investors; they can keep in mind the behavior-related traits that can influence investment decisions and design their portfolios accordingly.

## TITLE: Do Environmental, Social, and Governance (ESG) Disclosures Influence Corporate Value? Empirical Evidence from India

**AUTHORS:** Neelam Chauhan (University Business School, Panjab University, Chandigarh), Dr. Purva Kansal (University Business School, Panjab University, Chandigarh) and Dr. Keshav Malhota (Department of Evening Studies, Panjab University, Chandigarh)

### ABSTRACT

AbstractPurposeThe rising significance of Environmental, Social, and Governance (ESG) disclosure in corporate reporting reflects a broader shift towards sustainable and ethical business practices. Due to the modern concept of sustainability, the markets have grown more competitive and dynamic, which has created tremendous pressure on corporations to achieve long-term sustainability and profitability (Malik & Kashiramka, 2024). ESG reporting practices focus on transforming corporations into accountable entities that take social and environmental issues seriously through which long-term sustainability can be achieved (Alshehhi et al., 2018). Therefore, Environmental, Social, and Governance (ESG) is critical to businesses and the expansion of the economy as a whole. These factors are being given weightage in any informed investment decision by all types of investors (Maji & Lohia, 2023). Because of the significant effect of these nonfinancial factors on future cash flows of a business, they are considered equally important on par with financial information. Regulatory frameworks across the globe have also begun to promote and regulate the disclosure of ESG information either in annual reports or as separate reports. These ESG issues also have a significant bearing on the financial and market performance of companies. Therefore, it is important to identify the influence of these ESG disclosures on corporate value. To fill this research gap, this study is conducted to examine the impact of ESG reporting disclosures on the value of corporations. The review of literature highlighted that a number of studies have been conducted on examining the association between ESG reporting and firm performance (Ademi & Klungseth, 2022; Hamrouni et al., 2020; Alareeni & Hamdan, 2020) in a country where ESG reporting is mandatory. Similarly, the literature also highlighted studies in the Indian context (Rao et al., 2023; Gopal & Lohia, 2023; Malik & Kashiramka, 2024), conducted based on the scores taken from ESG credit rating agencies and traditional measures of performance. However, this study differs from and extends previous literature in two ways. First, it investigates the influence of ESG disclosures and corporate value using ESG scores collected from a self-developed ESG framework. Second, the ESG disclosure may differ across different sectors, depending on the industry situation. Therefore, this study also highlights the difference in ESG disclosures among different sectors of selected sample companies and their influence on corporate value. As a result, our study provides a comprehensive view of the relationships between ESG disclosure and corporate value. Design/ Methodology•Sample Size and Period of StudyThe initial sample of the study includes all companies listed on the BSE 500 index as of March 31, 2022, over five years (2019-2023). A review of literature indicated that there are certain types of companies, which are not apt for determining their ESG practices. Therefore, different filters have been used to select the actual sample of the study. After the application of different filters, the usable sample size was reduced to 255 companies. •Data Collection and Statistical TechniqueTo achieve the objective of the study, the study has used ESG scores and financial data of sample companies. For ESG scores, ESG framework has been developed for companies in India using different standardized frameworks i.e., GRI framework, Dow Jones ESG index, NASDAQ ESG Index, WEF stakeholder capitalism matrices, and national guidelines provided by SEBI. In order to develop an ESG framework, the questionnaire is prepared, exploratory factor analysis is done and after checking the validity and reliability, the developed framework is finalized. To collect ESG scores of sample companies, content analysis of annual reports is done. The financial data of sample companies is collected through

the Prowess Database. In order to investigate the influence of ESG reporting disclosures on the corporate value of selected 255 companies over five years i.e., 2019-2023, SPSS and Panel data regression technique is used. Both fixed and random-effect model is employed in order to do the analysis.FindingsThe study found that ESG score varies significantly between industries. Due to their exceptional performance across all ESG dimensions, the IT and Energy sectors have emerged as leaders. Due to their low scores on the environmental criteria, cement, construction, and metals and mining sectors are the least successful industries. Companies have been noted to have given the governance aspect a higher importance across all sectors. The study also found the positive impact of ESG reporting on corporate value in India. Companies with high ESG disclosures not only improve their financial performance but also receive higher market performance. The findings emphasise the need to incorporate ESG factors into company reporting frameworks. The findings encourage policymakers to strengthen ESG disclosure regulations and support programs that promote sustainability and transparency.Research ImplicationsThis analysis helps researchers and businesses determine whether providing more ESG information continues to have an impact on a company's performance and valuation. The Study's empirical findings will help government officials and politicians understand how their regulations affect corporate performance and help them to make better policies. The findings will also assist business practitioners in overcoming concerns about the possible detrimental impact of ESG measures on firm performance, thereby promoting innovative and strategic adjustments in business models to capitalise on ESG prospects. The insights will help the management team make better financing decisions by exposing how ESG ratings impact growth and shareholder wealth. Originality/ValueThis study adds to the growing literature on ESG and corporate value, offering useful insights to academics, practitioners, and politicians interested in sustainability and corporate governance. Using SPSS and panel data analysis, the study provides a comprehensive knowledge of the impact of ESG reporting on corporate value in India. KeywordsESG, Corporate Value, Sustainability, ESG Disclosure, ESG Reporting, Sustainability Reporting

## TITLE: WHEN DOES SUSTAINABLE PACKAGING NOT WORK? CONSUMER INFERENCES FOR CORE AND PERIPHERAL CUES

**AUTHOR:** Kashish Gupta (School of Business, Public Policy and Social Entrepreneurship, Ambedkar University Delhi)

### ABSTRACT

Businesses make considerable use of sustainable packaging to attract customers. Numerous businesses have benefited from this form of packaging over the years. This study examined the effect of packaging claims on brand image, purchase intention and brand happiness. A 2 (Packaging: Sustainable and non-sustainable) by 3 (cue: core v/s peripheral v/s both)by 2 (product: hedonic v/s utilitarian ) factorial experimental study was conducted to test the hypotheses. On the other hand, are sustainable packaging strategies effective across all product categories? The current study indicates that sustainable packaging is not always successful and is most effective when specific cues (core vs peripheral vs core plus peripheral) and product categories (hedonic vs utilitarian) are employed. The current study employed an experimental research design to investigate the research questions. Finally, implications for theory and management are discussed.

## TITLE: THE IMPACT OF INTERNAL CARBON PRICING ON CORPORATE CAPITAL STRUCTURE: A PANEL DATA ANALYSIS

**AUTHORS:** Nithin.K. Warrier (Amrita School of Business, Kochi) and Dr.Smitha Nair (Amrita School of Business, Kochi)

### ABSTRACT

Economic growth is not intrinsically good or bad. The growth in an economy implies an improved quality of life among individuals. However, economic growth often involves trade-offs, particularly in the environmental domain. The private sector plays a significant role in economic development, and production designs susceptible to environmental damage are increasingly being scrutinized and encouraged to adopt sustainable practices. In this context, internal carbon pricing, a voluntary mechanism for companies to re-evaluate their production processes by incorporating the additional cost of carbon. This practice nudges companies to align with regulatory oversight. Companies that integrate sustainable practices contribute positively to mitigating climate risk, enhancing customer value, evolving stronger relationships, and achieving long-term growth. Internal carbon pricing is a financial tool that enables companies to assign a monetary value to their carbon emissions, incentivizing emission reductions and informing sustainable business decisions. By internalizing the cost of carbon, companies can identify areas of their business where emission reductions will have the greatest impact. However, internal carbon pricing also entails redesigning production processes or incurring additional costs, which can influence companies' capital structure and financial mix. To explore these impacts, this study employs a quantitative empirical analysis using a panel data approach to capture the dynamics over time and across companies. Data will be collected from financial statements, ICP disclosures, industry databases, and regulatory reports. The study will analyze the effect of different levels of internal carbon pricing on capital structure measures such as the debt-to-equity ratio, while controlling for variables such as company size, industry sector, profitability, board characteristics, etc. This research aims to provide insights into how internal carbon pricing affects financial strategies and performance, ultimately contributing to a deeper understanding of the intersection between environmental sustainability and corporate finance.

## TITLE: Strategic Evaluation of India's Net Zero Roadmap: Assessing Readiness and Resilience in the Transitioning Energy Sector

**AUTHORS:** Anand Acharya (Teri Institute of Advanced Studies, New Delhi), Shruti Sharma Rana (Teri Institute of Advanced Studies, New Delhi) and Akansha Sethi (Delhi Technological University, New Delhi)

### ABSTRACT

IntroductionThis study investigates the feasibility of future projected Greenhouse Gas (GHG) Emissions reductions through calculations as per ghg emission quantification standards such as GHG protocol. The study assesses the potential of Oil, Gas and Energy Sector Companies in India for achieving Net Zero as per their details of future plans officially disclosed in the public through a detailed regression analysis.ResearchIn-depth research of 23 companies was conducted out of which 14 were considered for analysis based on the accessible information disclosed in their Annual Reports, Business Responsibility and Sustainability Reports, Sustainability Reports and Investor Presentations available on their official website. The model comprises of details of GHG emissions disclosed, breakup of multiple current as well as future assets promised by companies, along with the feasibility analysis in achieving Net Zero targets. Various Renewable Assets like Wind, Solar, CBG etc. were considered and their ability to save emissions in future was predicted based on basic conversion formulas (publicly available on the internet) which in turn gave future predicted equivalent GHG Emissions reduced/saved values.Data Collection SourcesData was collected from all the sources disclosed in public of various companies; Annual Reports, Business Responsibility and Sustainability Reports, Sustainability

Reports and Investor Presentations available on their official website. Companies were selected on the basis of two parameters; availability and comprehensiveness of GHG emissions data and future renewable assets plans. This approach facilitated the analysis with reliable and robust data, providing a solid foundation base for regression model.This model incorporates a Regression Equation which is the display of Future Projected Saved/Reduced GHG emissions (Y) ;Y=β0 −β1×Scope 1 −β2×Scope 2−β3×Scope 3 +β4×Future Wind+β5×Future Solar+β6×Future CBG+β7×Future GH+β8×Future Other Assetson a variety of variables and their coefficients where β0 is the intercept, representing the baseline emissions offset when all factors are zero.β1,β2,β3 are the coefficients for the factors currently describing the categories of ghg emissions (Scope 1, Scope 2, Scope 3, respectively),β4,β5,β6,β7,β8 are the coefficients for the factors describing saved emissions/emission reduction in future (Future Wind, Future Solar, Future CBG, Future GH, Future Other Assets, respectively).Feasibility of Regression AnalysisThe model demonstrates high predictive validity with R2 of 0.9913764. The F-statistic of 71.85089 and ($p < 0.005$) confirms the model's statistical significance. Longitudinal analysis over multiple years indicates that strategic enhancement emissions saving factors in future significantly offset emissions, suggesting that achieving Net Zero GHG emissions is feasible with concerted efforts in adopting innovative and effective mitigation technologies. Each company has been analysed individually highlighting real-world prediction analysis. The findings provide a robust framework for policymakers and industry leaders to prioritize investments and overcome the Gap's identified in strategies towards a sustainable, Net Zero Future. Various indicators and parameters are assessed and based on them different trends are observed. Company Specific Analysis and Case Study basisEach of the 14 Companies were analysed individually to highlight real world predictions and identify the gaps in the current on-going strategies. While collecting data, a crucial observation was made showcasing the need to pay special attention to Scope 3 calculation and detailed disclosure.Certain Trends in Emissions were observed as followsSCOPE 1SCOPE 2SCOPE 3TOTAL EMISSIONS CURRENT (FY 2022-23)Current Renewable Assets: Current Wind, Solar, Green Hydrogen, CBG etc were considered. Data not available was considered to be 0 for better quantitative analysis.Future Renewable Assets: Future Wind, Solar, Green Hydrogen, CBG etc were considered. Data not available was considered to be 0 for better quantitative analysis.For calculation of breakup of future Assets:1MW wind with maximum capacity and efficiency was assumed to save/reduce GHG Emissions ~equivalent to 3000 tCO2e.Similarly 1 MW solar with maximum capacity and efficiency was assumed to save/reduce GHG Emissions ~equivalent to 1600 tCO2e. Meanwhile, for 1kg Green Hydrogen the emission saving co2 ~equivalent factor was taken as an average of 10-14 green hydrogen per kg/co2.Meanwhile an average CBG plant saves/reduces emissions ~equivalent to 15000 tCO2e.Then comprehensively to verify these calculations in the same model , individual breakup of each asset for each company was taken and then individual emissions saved/reduced by each renewable asset were converted from tCO2e to MW and on taking the sum of all these individual parameters values were obtained which were equivalent to the mentioned renewable targets by the companies, and thus the analysis was verified . Based on these assumptions and predictions our model evaluates individual projections of saved emissions in future for each company based on their mentioned target year of savings/ reducing emissions.Policy Implications:These researched findings lay a perfect basis for policy formulation. Significant insights from this research can be used by policymakers to design certain beneficiary incentives and regulatory frameworks that highlight and encourage investments in renewables and other GHG emissions reduction technologies in order to achieve Net Zero Targets. By understanding the basis of these factors through our regression and detailed calculative analysis, most significant impact causing factors for GHG emissions can be prioritized by policymakers as they offer the greatest potential for emission reductions ensuring a sustainable future.Conclusion:To achieve Net Zero GHG Emissions in the Oil, Gas and Energy Sector Companies in India the study advises focused efforts towards increase in renewable assets in future and implementation of effective and sustainable reduction strategies. A detailed methodology and valuable insights described pave the way for future research and policy formulation for sustainable and Net Zero future in India. The comprehensive analysis both qualitative and quantitative, provides a clear roadmap for companies and policymakers to achieve their sustainability goals, ensuring that India can meet its climate commitments and contribute to global efforts to combat climate change.

### TITLE: The Shadow of Misconduct: How Unethical Behavior by One Firm Impacts the Valuation of Its Industry Peers

**AUTHORS:** Urvashi Khandelwal (IIM Udaipur) and Chitranshu Khandelwal (Alliance University, Bangalore)

#### ABSTRACT

This study investigates the "shadow of misconduct," examining whether the revelation of unethical behavior by one firm negatively impacts the stock market valuation of its industry peers. Challenging the traditional tenets of finance theory, we draw upon behavioral finance to argue that investors may not always behave rationally and instead rely on heuristics or overreact to negative information, leading to industry-wide valuation effects. We hypothesize that a firm's unethical behavior, even if limited to a single actor, can trigger a cascade of reactions, including reputational contagion, increased regulatory scrutiny, and heightened investor risk aversion, ultimately impacting the entire industry.Using a sample of 2980 U.S. firms from 2015 to 2022, we employ OLS regression method to examine the relationship between a firm's market valuation and the ESG controversy scores of its industry peers. Our findings reveal a significant negative association between a firm's market-to-book ratio and the aggregate ESG controversy score of its peers, even after controlling for firm-specific factors. This effect is amplified when a firm within the industry exhibits exceptionally high ESG controversy or when the industry leader is perceived as engaging in unethical behavior.These findings have important implications for both investors and corporate managers, highlighting the importance of considering industry-level ESG risks and the far-reaching consequences of unethical behavior.

### TITLE: Market Preparedness for Policy Interventions towards Domestic Sustainable Markets: A study on Thai Rice Supply Chain

**AUTHORS:** Gideon Balasingam, Rebecca Anns, Shobana S and Deepthi Krishnan (Fairtrade Network of Asia Pacific Producers)

#### ABSTRACT

Climate change is a critical global issue, impacting environments, economies, and societies. The Brundtland Report 1987, Our Common Future, introduced sustainable development, defined as meeting current needs without compromising future generations. This concept necessitates transformation in various sectors, including business, where sustainability must become a core principle. Integrating sustainability into market strategies allows businesses to attract environmentally conscious consumers, differentiate in a competitive market, and contribute to a sustainable future. For sustainable markets to thrive, they require sustainable production practices, market strategies, policies, and consumer habits. Studies indicate increasing global consumer awareness of sustainability, driving markets to cater to these needs and shift toward sustainability marketing. This paper examines the Thai rice supply chain using Fairtrade as a voluntary sustainability standard, exploring consumer awareness of sustainable sourcing and factors influencing sustainable market practices. It also assesses market readiness for sustainable products and policy measures needed to strengthen the domestic sustainable market ecosystem in the Global South. The paper is based on the research project conducted in Thailand by engaging university students by Fairtrade International using both desk and field research methods. The study is indicative of the market readiness for sustainable products. It also recommends the government take ownership of sustainable market, by ensuring that government policies are synonymous with established sustainable standards.

## TITLE: A comparative study on methodologies for greenhouse gas estimation for agriculture in Tajikistan

**AUTHORS:** Gideon Balasingam, Rebecca Anns, Shobana S and Deepthi Krishnan (Fairtrade Network of Asia Pacific Producers)

**ABSTRACT**

Global climate change poses a significant threat to sustainable development. This is evident through rising temperatures and resulting phenomena such as glacier melting, extreme weather events, and agriculture challenges. This impact extends across ecological, social, and economic systems worldwide. Agriculture, in particular, faces significant risks, with traditional crop production becoming increasingly untenable. This study, based on fieldwork in Tajikistan, conducted by Fairtrade NAPP, on one hand traces the current agriculture practices in Tajikistan that contributes to the greenhouse gas emission. On the other, it attempts to estimate GHG emission through these agricultural practices and explores different methodology appropriate for different crops based on feasibility of methodology and availability of data. It relies on an online tool, Cool Farm Tool and quantitative formula based on earlier research to estimate the emissions of Green House Gas in agriculture practices of crops like cotton, apricots and vegetables. In connection to this, the study identifies the causes of greenhouse gas emissions and the carbon sinks, and thereby draws attention to the sustainable agricultural practices.

## TITLE: Mundra Port – Shining example of Growth with Goodness

**AUTHOR:** Rahul Agrawal (Adani Ports and Special Economic Zone Ltd)

**ABSTRACT**

Mundra port, India's largest most technologically advanced port celebrated its 25th anniversary last year. What was once a barren wasteland has now evolved into a deep draft, all-weather port that has diverse capabilities in handling an array of commodities, including dry bulk, break bulk, liquid cargo, containers, Ro-Ro, LPG, LNG, and project cargo. Mundra Port has solidified its position as India's largest container handling port, housing India's largest port-based special Economic Zone (SEZ).

Over the years, Mundra has contributed over Rs. 2.25 lakh crore to the central and state exchequer and generated over 7.5 crore man-days of employment. Mundra port was recently ranked #27 in World Bank's Container Port Performance Index 2023, based on parameters such as productivity, efficiency, and reliability. While being at the forefront of India's economic growth, Mundra has also been the country's most sustainable port. Mundra has been at the forefront of sustainable operations, driven by large renewable energy capacities, efficient water consumption, responsible waste management, biodiversity conservation, and use of electrified cranes & battery-operated vehicles. Relative to the base year (2016), Mundra port has achieved over 40% reduction in energy intensity, during the FY 2023-24 financial year. Likewise, Mundra port's water consumption intensity has reduced by 45%+ during FY 2023-24 financial year (relative to 2016 base year). Mundra port is on track to be operated entirely by renewable energy later this year. The Port already has 8.6MW installed rooftop solar capacity and will draw renewable energy from Khavda shortly. Mundra port's efforts to lower carbon footprint has transcended the port's boundary as well. The port electrified the Adipur-Mundra railway line that has significantly reduced carbon footprint from the previous locomotive line. An extremely unique achievement of the port is the mangrove afforestation and conservation initiative. Port has achieved total mangrove afforestation and conservations of 3,285 and 2,596 hectares respectively. Such vast tracts of high carbon absorbing mangrove plantations have become a significant source of carbon

sequestration. The Port also conducted a restoration initiative on a 40-hectare grassland region surrounding the nearby Guneri village, with an objective to rehabilitate degraded ecosystems and promote the recovery of native species and habitats.

The Port replaced 217 diesel-powered vehicles with battery-operated vehicles. The Port has also banned single-use plastic and has been certified zero waste to landfill. Mundra's biodiversity management plans are aligned with IFC Performance Standards and the Equator Principles.

We operate the Mundra port under a robust Oil Spill Action Plan aimed at the prevention and swift mitigation of hazardous substance spills, which pose significant threat to the environment. This meticulous plan aligns with both the National Oil Spill Disaster Contingency Plan (NOS-DCP) and standards set by the International Petroleum Industry Environmental Conservation Association. Mundra port operates under a supplier code of conduct and is governed by a procurement policy that is designed based on the principles of UN Global Compact, the fundamental conventions of the International Labor Organization (ILO) and the United Nations' Universal Declaration of Human Rights. Compliance with the sustainable procurement policy is a requisite for all vendors. Through periodic assessments, the Port scrutinizes suppliers' compliance with established ESG criteria. Mundra port is committed to efforts to prevent work-related illnesses and injuries. The Port operates under a comprehensive Occupational Health and Safety (OHS) governance framework that spans the entire workforce. Understanding the pivotal role that contractors play in operations, the Port instituted a comprehensive Contractor Safety Management (CSM) initiative. This initiative encompasses strategic planning, routine safety meetings, and an online CSM portal to authenticate contractors' adherence to safety practices. Toolbox talks and ongoing site surveillance further incorporate contractors into the safety culture, with contingency plans in place to suspend operations if required to uphold safety standards. OHS criteria is integrated across all procurement and contractual obligations. The Port also plays a crucial role in the overall development of the community within which it operates. For example, 800+ farmers in Mundra villages embraced natural farming with the help of Adani Foundation. The Foundation also runs multiple mobile health care units and remote areas of Mundra and ensures doorstep delivery of primary healthcare services. Adani Foundation's Samajik Suraksha Labh Abhiyan in Mundra, served as a crucial link between the government and eligible beneficiaries, offering a single-window solution for citizens to access various government schemes. The Foundation has also facilitated various one-time support schemes such as Gobardhan Yojana, etc. The above are just some of the various measures in force at and around the Mundra Port. We look forward to an opportunity to present a complete paper on the sustainable operations at the Mundra Port.

## TITLE: Impact of Corporate Innovation Culture on Emission Reduction Target Disclosure

**AUTHORS:** Urvashi Khandelwal (IIM Udaipur), Dr. Prateek Sharma (IIM Udaipur), Dr. Alok Raj (XLRI Jamshedpur) and Dr. Samit Paul (IIM Calcutta).

### ABSTRACT

We study whether corporate innovation culture motivates companies to disclose emission reduction targets. Using a novel dataset on corporate innovation culture from Kai et al. (2021), we show that innovative firms that disclose their emission reduction targets have significantly higher premiums than their counterparts. We posit that this financial incentive encourages these firms to disclose their emission targets. Additionally, our analysis reveals that innovative companies revealing emission targets not only decrease their emissions in the future but also set more ambitious goals. For robustness, we use Instrumental Variable regression and show that the results corroborate our main findings.

## TITLE: The Strategic Role of Green HRM in Transforming Stakeholder Pressure into Sustainable Performance

**AUTHORS:** Nanditha Dev (School of Management and Business Studies, Mahatma Gandhi University, Kottayam) and Dr. Johney Johnson (School of Management and Business Studies, Mahatma Gandhi University, Kottayam).

### ABSTRACT

**Introduction**: Today, companies all over the world experience pressure from the government or from other stakeholders to take necessary initiatives to combat sustainability issues mainly related to the natural environment and society (Yong et al., 2020). To safeguard the environment, firms must undergo vital measures to meet the stakeholder claim regarding environmental issues (Z. et al., 2018). As a way forward, organisations began to incorporate green human resource management (GHRM) along with business practices over the last two decades. GHRM is a newly recognised field in the management sciences that integrates environmental management techniques with traditional HRM strategy (Gardas et al., 2019). Researchers believe that GHRM helps the firm to get a competitive advantage by developing environmentally friendly employee behaviour, shaping environmental policies, enhancing eco-friendly performance, and their implementation at the workplace (Anwar et al., 2018). Previous studies also highlighted the need for the involvement of GHRM in sustainability matters, for example, Jackson and Seo (2010) and Zaid et al. (2018).A recent stream of studies provides empirical support and confirmed the potential of GHRM in addressing stakeholder pressure for sustainability (Guerci et al., 2015) and also to achieve sustainable performance (Khan & Mukhtar, 2024; Mousa & Othman, 2019; Saqib et al., 2021; Tanveer et al., 2023; Zihan & Makhbul, 2024). However, considerable uncertainty remains regarding the role of GHRM in answering the stakeholder pressure for sustainability in Asian country contexts and other institutional settings. Further, the underlying process (mediation) and boundary conditions (moderation) that govern the relationship between GHRM and sustainable performance are also unknown in the Indian context.The following hypotheses were developed for the study. H1: Stakeholder Pressure is positively related to Sustainable PerformanceH2: GHRM is positively related to Sustainable PerformanceH3: Stakeholder Pressure is positively associated with GHRMH4: GHRM is mediating the relationship between Stakeholder Pressure and Sustainable PerformanceH5: Stakeholder Pressure has a significant effect on Green InnovationH6: Green Innovation has a significant effect on Sustainable PerformanceH7: The relationship between stakeholder pressure and sustainable performance is positively mediated by green innovationH8: GHRM is positively related to green innovationH9: Effect of stakeholder pressure on green innovation is positively mediated by green HRM H10: The relationship between GHRM and sustainable performance is positively mediated by green innovationH11: There is a serial mediation of GHRM and green innovation between stakeholder pressure and sustainable performanceH12: Resource commitment of the organisation moderates the direct effect of GHRM on Green InnovationH13: Resource commitment of the organisation moderates the relationship between GHRM and Sustainable performance

**Research Methodology**: The research design adopted for the study includes both exploratory and conclusive research design using the survey method. A pilot study was carried out to check the reliability and validity of the questionnaire. Cronbach's alpha coefficient was computed for all the multi-item scales used in the questionnaire, and the alpha values obtained were above 0.7, which means they are internally consistent and reliable.Managerial-level employees of ISO 14001-certified large-scale manufacturing companies in the geographical area of Kerala are taken as the population. Simple random sampling is employed to draw samples from the frame. The study has a population size of 864 and is known. Hence, the study considers the estimated population size and uses the Yamane (1967:886) formula to obtain the required sample size (n =273). The present research obtained both primary and secondary data, which was essential and, therefore, gathered. The researcher developed a well-framed questionnaire to obtain primary data and administered it in person to the respondents. Secondary data were obtained from numerous sources, including information published by pioneers in the relevant domain, books, past literature, periodicals, case studies, regional publications, and governmental, media, and commercial sources. The questionnaire was administered to respondents directly through pen and paper, indirectly through sharing Google forms via email, and through professional platforms like Linked In. The scales given below have been adopted to measure the variables. Total - 43 Items1. Green HRM- Singh et al (2020)- 13 items2. Sustainable Performance –Zaid et al (2018)- 16 items3. Green Innovation- Lai and Wen (2006)- 6 items4. Stakeholder Pressure- Lee et al. (2018)- 4 items5. Resource Commitment - Konadu et al. (2020) and Wu (2017)- 4 itemsThese indicators were assessed on a 5-point Likert scale that ranged from Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree. From the five equally

scaled categories, Strongly Agree represents very high, agree describes high, Neutral demonstrates average, Strongly Disagree depicts very low, while Disagree implies low scores. Structural equation modelling (SEM) is used to test the proposed hypothesis.

**Results**: The quantitative analysis revealed a significant positive relationship between stakeholder green pressure and adopting GHRM practices. Organisations experiencing higher levels of green pressure were more likely to implement GHRM initiatives. Furthermore, the results show that GHRM positively mediated the relationship between stakeholder green pressure and the sustainable performance of firms. It also confirmed the mediation of green HRM between stakeholders' green pressure and green innovation. The serial mediation of GHRM and GI is also verified between stakeholder pressure and sustainable performance. The analysis also supports the boundary condition played by resource commitment between GHRM and sustainable performance.

**Conclusion**: The findings of this study provide strong evidence that GHRM serves as a vital link in translating stakeholder green pressure into corporate sustainability. By integrating sustainability principles into HR practices, organisations can effectively internalise and act upon stakeholder expectations for sustainability. By highlighting the mediating role of green innovation, it provides a nuanced understanding of how organisations can achieve sustainability. However, the role of resource commitment highlights the need for a balanced approach, where organisations must strategically allocate resources to maximise the benefits of GHRM and green innovation. Future research should explore these relationships in different industrial contexts and examine the long-term impacts of GHRM on corporate performance.

## TITLE: The CSR Puzzle: Decrypting its Influence on Financial Distress in India

**AUTHORS:** Priya Dhawan (Department of Management Studies, Indian Institute of Technology, Delhi, India) and Neeru Chaudhry (Department of Management Studies, Indian Institute of Technology, Delhi, India).

### ABSTRACT

For a sample of Indian firms, we find that as the firm's engagement in corporate social responsibility (CSR) increases, the financial distress risk decreases. This negative relationship persists during the 2007-2009 financial crisis and Covid-19 pandemic. It exists both before and after the Insolvency and Bankruptcy Code 2016 became effective. The negative effect of CSR spending on financial distress is more dominant when firms engage in social-and-community and employee-related activities and when firms are in the younger stages of the firm life cycle. Domestic promoters (institutional and foreign institutional investors) weakens (bolsters) the negative effect of social-and-community related CSR spending on financial distress risk. In addition to institutional and foreign institutional investors, foreign promoters strengthen the negative relationship between employee-welfare spending and financial distress risk. Firms that engage in social-and-community-related and employee-related CSR activities have lower cost of debt and better credit ratings, which provides such firms with better access to capital markets and hence lowers the risk of financial distress. Our study highlights the importance of integrating CSR in the policymaking directed towards mitigating the financial distress risk. It in turn would reduce the chances of bankruptcy and reduce crises in an economy. Therefore, the findings of this study will be useful for policymakers, regulators, managers, investors, and employees.

## TITLE: The Green Fallacy: Investigating the Relationship between Greenwashing and Firm Risk

**AUTHORS:** Bhagya Bhutani, and Sonali Jain
(Indian Institute of Technology, Delhi)

### ABSTRACT

The article aims to investigate the role of greenwashing behaviour on the firm's financial risk. Using empirical data from the US, the UK, and India from 2016 to 2023, this study employs ordinary least squares (OLS) and Fama MacBeth regression and various robustness checks, including White cluster, Newey West, and 2SLS, to analyse the relationship between greenwashing and firm risk.The findings indicate an overall positive relationship between greenwashing and a firm's risk, particularly pronounced in large firms and firms with low liquidity and high leverage. The study finds a negative impact of greenwashing on firm risk in the USA and UK, while Indian firms show a positive reaction, likely due to lagged regulatory enforcement and higher information asymmetry. Additionally, the research highlights a negative impact of greenwashing on a firm's value, suggesting a decline in investor's trust and overall firm's wealth.The study adds to the literature by delving into the consequences of a firm's unethical communication practices and cautions management to avoid short-term cost-efficiency business communication strategies such as greenwashing that could backfire.

## TITLE: Visualizing the ESG Performance: The Case of Photographs in Indian Financial Reports

**AUTHORS:** Divya Soni (Indian Institute of Management, Sirmaur), Advaita Rajendra (Indian Institute of Management, Sirmaur) and Kirti Saxena (Indian Institute of Management, Sirmaur).

### ABSTRACT

The emerging risk of climate change revises companies' use of more visuals to communicate sustainability initiatives in their annual reports. Given the qualitative nature of this information, it is crucial to explore their focal points and the message these images convey to articulate their sustainable practices within the Environmental, Social, and Governance (ESG) framework. Using a sample of 2031 images from 10 Indian companies listed in Nifty-50 for 2019 and 2023, this study investigates the changes in ESG visual reporting systems. By utilizing AI models to categorize and describe these visuals according to the ESG framework established by Harvard Law School, we find a shift in the image's focus from social to environment. Exploring further, we find that in communicating environment performance companies highly focus on biodiversity by using aerial view images, and production of products. Social images highly promote community relations by showing ethical and diversified group images. Governance is highly focused on showing boards' leadership by showing managers' portraits. Overall, this study investigates corporate impression management tactics and aims to empower investors through enhanced awareness and informed decision-making.

## TITLE: GREEN PRODUCT MANAGEMENT: THE LINCHPIN OF A STARTUP'S SUSTAINABILITY

**AUTHORS:** Eswar Prasad Manapuram (PhD Research Scholar, School of Commerce and Management Studies, Dayananda Sagar University) and Dr. Truptha Shankar (Associate Professor and Assistant Dean, School of Commerce and Management Studies, Dayananda Sagar University).

**ABSTRACT**

Despite growing recognition of the importance of environmental sustainability in the global business landscape, many established companies still prioritize revenue growth over sustainable practices. This trend is also prevalent among startups, where quick profitability often takes precedence. In this context, it is crucial to educate startups on transitioning from a linear to a circular economy by integrating sustainability in business strategy and product development. To address this need, the researchers surveyed 63 Indian Startup founders to gauge their awareness and approach toward achieving Sustainability. The study's findings indicate a substantial lack of awareness regarding environmental sustainability, its incorporation into product design, and its role in business growth strategy. Founders also perceive environmental sustainability as an additional burden, considering it a priority only after the business has grown. On the other hand, some successful founders believe that contributing to environmental sustainability can foster their startup's growth.

## TITLE: On Forest, Environmental Policies, and Rainfall: Evidence from India's National Forest Policy

**AUTHORS:** Neeraj Katewa, Lavanya Lavanya and Shreya Mishra (IIM Lucknow)

**ABSTRACT**

Environmental policies provide a promising avenue for mitigating and adapting to climate change, but the complex relationships between climate, resources, and policies necessitate empirical evidence to guide effective policymaking. This study investigates the effect of India's National Forest Policy of 1988 using district-level data from the Village Dynamics in South Asia (VDSA) dataset. The 1988 policy, notable for its emphasis on community participation, has positively influenced forest cover. Our analysis includes an event study showing a significant and sustained increase in forest cover post-implementation. A Bootstrap Quantile regression further reveals the policy's strongest effects on dense forests. We conjecture that the policy aligns conservation efforts with community benefits by sharing the use rights of non-timber forest products, thus reducing illegal logging and enhancing reforestation and forest density. Further, we find that rainfall intensity moderates the policy's effect, highlighting the intertwined dynamics of forest, environmental policies, and rainfall.

## TITLE: Climate Change Financing and Regulatory Framework - Lessons from European Union

**AUTHORS:** Kriti Johri (National Law University, Jodhpur) and Kriti Johri (NLU Jodhpur).


### ABSTRACT

**Introduction**: Financing climate and environmental projects has been gaining traction around the world. Several instruments facilitating the process are now part of various capital markets. Green Bonds, sustainable debts, both activity and behaviour based, are emerging as relevant tools to bolster the transition to green economies. However their effectiveness is often forms part of market discourse, majorly concerning investors decisiveness. Green washing, impact washing, lack of global standards, market preparedness are often seen impeding their effectiveness. In India, these challenges are augmented due to the limited ecological awareness and inadequate government support. Meanwhile, the European Union (EU) has, so far, been able to establish regulatory framework that has fostered comprehensive strategies for sustainable finance. This, however can offer significants insights to regulate Indian endeavour to enhance green finance and climate risk preparedness. Green bonds are crucial in financing sustainable projects, yet India's green bond market struggles with ecological awareness, regulatory issues, and market maturity. The Debt-for-Climate Initiative (DCI) underscores the need for effective debt relief and climate action coordination, while the EU's Sustainable Finance Strategy, including the EU Taxonomy Regulation and SFDR, provides a framework for enhancing transparency and closing the investment gap for climate goals. This research proposal aims to explore the integration of climate risk into sovereign debt management and public finance, with a specific focus on enhancing green finance mechanisms in India.Problems and Issues:The integration of climate risk into sovereign debt management and public finance is complex and requires robust regulatory frameworks, increased investor awareness, and comprehensive implementation strategies. In India, developing the green bond market and sustainable finance instruments faces significant challenges, including market maturity, regulatory issues, and limited ecological awareness. Its market faces challenges such as greenwashing, a lack of global standards, and low investor awareness. The Debt-for-Climate Initiative poses complexities in coordinating debt relief with climate actions and managing debt swap operations. Sustainable finance in Asia is hindered by financing gaps, market adaptation issues, and regulatory obstacles. In India, green financial instruments are limited compared to global standards, and systemic issues in carbon trading must be addressed. Additionally, integrating climate risk into sovereign debt management is problematic due to the absence of common guidelines and comprehensive disclosure of climate risks. Critical challenges include increasing ecological awareness and securing government support for green finance. Developing robust regulatory frameworks is essential to support green finance and integrate climate risk into debt sustainability analysis. Enhancing investor communication about sovereign climate debt management and creating effective risk-sharing instruments are also necessary. Addressing market maturity issues and expanding the range of green financial instruments are crucial for advancing green finance in India. To enhance India's green finance landscape, the study suggests systematizing factors driving the green bonds market, introducing new green financial instruments, and adopting best practices from the EU Emissions Trading Scheme (ETS). Improving investor relations through better transparency and communication, developing a comprehensive climate risk framework, and encouraging private sector engagement are vital steps. Additionally, expanding country-specific strategies for sustainable finance will support India's transition towards a greener economy. A thorough analysis of regulatory frameworks is essential to identify best practices, enhance regulatory support, and promote private sector engagement in green finance.Research Questions:Upon referring to existing literature and data, following research questions have been crafted to execute this study. What is the relevance of green bonds and other sustainable finance instruments in India's fiscal growth and track challenges hurdling their implantation?How does the regulatory framework of the EU, including key directives and regulations, support the development and implementation of sustainable finance and green bonds? How do the EU's strategies contribute to effective climate risk management, and what lessons can be applied to India's green finance framework?How can these practices be tailored to increase ecological awareness and encourage private sector participation in India?

**Methodology**: The study will employ a literature review of existing research on green bonds, sustainable finance, and climate risk management in India and the EU. The comparative analysis has been adopted with the view to EU's harbours an advanced jurisprudence on sustainable finance and therefore, by juxtaposing

it with Indian framework offers opportunity to cull out best practices, principles, regulating policies and strategies to navigate through existing challenges. Thus, the study aims to provide recommendations for developing a robust green financial market in India and integrating climate risk more effectively into public finance.

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## TITLE: A Comprehensive Analysis of Discrepancies in Assurance Statements among Energy Sector Corporations: A Gap Assessment and Strategic Implications for Enhanced Sustainability Reporting Practices

**AUTHORS:** Anand Acharya (Teri Institute of Advanced Studies, New Delhi), Shruti Sharma Rana (Teri Institute of Advanced Studies, New Delhi) and Bhawna Singh (Indian Institute of Forest Management Bhopal).

### ABSTRACT

The evaluation of sustainability assurance within the energy sector is still developing, despite its critical importance. A significant issue is the quality of the assurance process, which has substantial practical implications. However, there remains a notable gap in understanding what constitutes assurance quality and how it should be assessed. This paper aims to bridge this gap by analyzing and identifying areas for improvement in the assurance statements of leading energy sector companies, both national and global, such as ExxonMobil, Chevron, Shell, Reliance Industries, among others.Our analysis begins by comparing assurance statements against key indicators: scope, approach, limitations, final observations, and measures of independence declared by the assurance providers for each company. Previous studies have highlighted the linkage between the effectiveness of a firm's sustainability performance and the thoroughness of its assurance process. Thus, the assurance processes for the selected companies are scrutinized to address the following gaps:1. Inconsistency in Defining Assurance Boundaries: Companies like ExxonMobil, Chevron, and Shell exhibit a lack of clarity in defining the boundaries of their assurance engagements. This inconsistency hinders stakeholders' understanding of the scope and limitations of the assurance provided, leads to incomplete data for inventory (Scope 1, 2, and 3) calculations, reduces credibility, and impedes effective risk management and strategic planning.2. Inadequate Detailing of Methodologies: Specific methodologies used in the assurance processes are not uniformly detailed. For instance, Chevron does not provide a comprehensive description of its approach, making it difficult to evaluate the thoroughness and reliability of its assurance process. The lack of detailed methodology impacts the transparency and accountability of the assurance process, leading to questions about the rigor and robustness of the evaluations conducted.3. Unclear Statement of Limitations: The limitations of assurance engagements are often not clearly stated. ExxonMobil, Chevron, and Shell do not explicitly mention the limitations, leading to potential misunderstandings about the scope and accuracy of the findings. This gap is critical, as limitations outline areas for improvement and allow for public disclosure of a company's performance. Consequences of this gap include misleading stakeholders, reduced accountability, regulatory and compliance risks, and hindered benchmarking and comparisons. The lack of clear limitations can also lead to an overestimation of the assurance's comprehensiveness, giving stakeholders a false sense

of security.4. Varying Detail in Final Observations: Final observations vary in detail and comprehensiveness. For example, Chevron's final observations are less detailed, providing limited insights into the key findings and overall effectiveness of the assurance process. Addressing this gap is essential, as final observations offer an overall understanding of the assurance process and areas for improvement. Failure to address this can result in missed improvement opportunities, inadequate stakeholder confidence, and ineffective decision-making. Detailed final observations are crucial for understanding the nuanced findings of the assurance process and for identifying specific areas that require further attention.5. Independence and Conflict of Interest Issues: The measures taken to ensure the independence of the assurance providers are not always thoroughly documented. This lack of transparency can lead to concerns about potential conflicts of interest and the impartiality of the assurance process. For instance, if an assurance provider has other business relationships with the company being assured, it could compromise the objectivity of their findings. Ensuring the independence of assurance providers is fundamental to maintaining the credibility and reliability of the assurance process.6. Stakeholder Engagement and Materiality Assessment: Another area of concern is the extent to which stakeholder engagement and materiality assessments are integrated into the assurance process. Effective stakeholder engagement ensures that the assurance process addresses the concerns and priorities of those most affected by the company's operations. However, in many cases, the level of stakeholder engagement is not clearly articulated in the assurance statements. Similarly, the process of determining materiality—what is significant to stakeholders and the company—is not always transparent. This lack of clarity can lead to gaps in the assurance process, where critical issues may be overlooked or insufficiently addressed.To address these gaps, it is recommended that companies:- Clearly define and document the boundaries of their assurance engagements to ensure transparency and clarity for all stakeholders.- Provide comprehensive descriptions of the methodologies used in their assurance processes to enhance the rigor and transparency of the assurance.- Explicitly state the limitations of their assurance engagements to provide a realistic understanding of the scope and accuracy of the findings.- Include detailed final observations to summarize key findings and insights, helping stakeholders understand the assurance process and identify areas for improvement.- Thoroughly document the measures taken to maintain independence and avoid conflicts of interest, ensuring the objectivity and credibility of the assurance process.- Enhance stakeholder engagement and clearly articulate the materiality assessment process to ensure that the assurance process addresses the most relevant and significant issues for stakeholders and the company.This comprehensive analysis aims to enhance the quality and transparency of sustainability assurance in the energy sector, fostering improved stakeholder confidence and more effective sustainability practices. By addressing these critical gaps, energy sector companies can improve the robustness and credibility of their sustainability assurance processes, ultimately contributing to better sustainability outcomes and more informed decision-making.

## TITLE: Blessed with Resources, Cursed with Poverty: A Cooperative Game Solution to Deal with the Paradox

**AUTHORS:** Rajeev R Tripathi and Ronit Neogy
(Indian Institute of Management Bangalore)

### ABSTRACT

Many resource-rich countries exhibit a paradox known as the 'resource curse' where, despite their abundance of natural resources, they struggle to fully benefit from their natural resource wealth. Contrary to expectations, these nations often demonstrate lower economic stability and growth rates compared to their resource-poor neighbors. In this paper, we offer a cooperative game theory-based solution to address this paradox, focusing on the cocoa industry. In African countries likeIvory Coast, Ghana, and Nigeria, where climatic conditions are ideal for cocoa cultivation, cocoa farmers often face extreme poverty despite their crucial role in the global chocolate supply chain. In contrast, chocolate manufacturers reap substantial benefits. Farmers, in a desperate attempt to increase their income, frequently expand cocoa cultivation into protected forests, causing deforestation, and resort to child labor in cocoa farms. This paper proposes a cooperative game solution where major cocoa-producing countries form an inter-governmental organization to control the cocoa supply. Such an organization could enhance its bargaining power within the supply chain, ensuring a more equitable distribution of profits and promoting social and environmental sustainability in their

countries. This also helps chocolate manufacturers improve the sustainability of their global supply chains as the regulators are increasingly scrutinizing them in their own countries.

## TITLE: The Tripod of Modern Banking: Digital Payment Adoption, ESG Performance, and Financial Performance of Indian Banking Sector

**AUTHORS:** Shivani Jain and Jagadish Prasad Sahu
(Indian Institute of Management Kashipur)

### ABSTRACT

This study examines the relationships between digital payment adoption, Environmental, Social, and Governance (ESG) performance, and financial performance of Indian banking sector from 2011 to 2023. Employing panel data regression, the study hypothesizes a positive association between digital payment adoption and both ESG performance and financial performance of Indian banks, while anticipating a non-linear relationship between ESG practices and bank's financial performance. Initially, increases in ESG activities enhance bank financial performance. However, beyond a certain point, the benefits of ESG activities diminish, resulting in diminishing marginal returns. By examining these dynamics in India's banking ecosystem, this research aims to illuminate the interlinkage between sustainability commitments and overall performance for an environmentally conscious banking future. The contributions and implications of this research are discussed.

## TITLE: SUSTAINABLE 'INNOVATIONS' THROUGH REVERSE LOGISTICS AND LEAN PACKAGING

**AUTHORS:** Nagamalini Thiravidamani (RESEARCH SCHOLAR, VIT) and Reeves Wesley J (PROFESSOR, VIT)

### ABSTRACT

Abstract: The circular economy is an ideological economy where all the finite resources are optimised, and a closed-loop supply chain is practised. Business innovations help in manufacturing a product in a unique way that results in resource circularity and optimisation. A product or process has to be active on the environmental checklist that governmental agencies have laid down. This paper attempts to analyse corporations and their product and process innovations leading to total waste minimisation .a-Cola and Amazon India's examples are taken to cite their product and process innovations. The social and practical implication of these companies' sustainable innovations sets the trend for waste reduction and collection seamlessly concludes with some takeaways for other corporations to follow and outlines the other detractors in the quick commerce ecosystem.Keywords :Product innovation, process innovation, waste management, UNSDG 12, Waste minimisation 1.0 Introduction:Circularity in an economy is quintessential to tackling resource crises and depletion. The United Nations' 17 sustainability goals (UNSDG) drafted in 2015 (DESA,2016) is a benchmark for the economies and corporations to follow. These goals have reshaped how businesses and corporations operate. UN SDG 12(Responsible Consumption and Production) has created an outline for enterprises to instil recycling behaviour and waste minimisation techniques in their production and consumption process (Buchholz, 2023; Sachs et al., 2023) This paper analyses the primary product and process innovations made by transnational corporations in bringing circularity in the market by combating plastic waste management.1.1 Social Innovations: Innovation is a significant incubator for attaining the UNSD goals. Transnational corporations have been ethically aligned to give back to society through CSR initiatives (Sachs et al., 2023; DESA,2016). Companies like Amazon and Coca-Cola play a significant role in giving back to the communities and countries in which they operate. This qualitative study /paper outlines

the CSR initiatives taken by the two MNCs (Amazon and Coca-Cola) to bring about waste minimisation and management in developing economies.

Fig 1. a Reverse vending machine of Coca-Cola Fig 1. b (Authors' capture)1.2 Sustainable Product Innovations: RVMs: Through the case study approach, the study will analyse the sustainable products developed by Coca-Cola. How a soft drink manufacturer uses social and ethical responsibility to climate action and brings circularity in the supply chain through reverse logistics. The UN's mission to attain SDGs by 2030 is not very far (DESA,2016). 1.3 Sustainable Process Innovations:Amazon India has been innovative about its waste minimisation, focusing on process sustainability. The paper examines Lean and Six Sigma methodologies, which enhance operational efficiency while reducing waste and emissions (Pongrácz et al., 2004). It presents case studies of organisations implementing sustainable processes, detailing the techniques and tools employed. Amazon is an electronic commerce marketplace that has penetrated the Indian market, catering to B2B and B2C segments (Kapur-Bakshi. et al., 2021). The company was known for its rigid corrugated packaging and carton-boxed packages. The packaging waste has been recently replaced with the manufacturers' 'own package' disclaimer. To a great extent, the initiative minimised the packaging cost and resultant landfills.

Fig 2. Amazon's disclaimed lean packaging (Authors' capture )2.0

**Objectives of the study**:

2.1The paper will analyse and study the role of reverse vending machines(RVMs) in minimising plastic waste.2.2The paper will outline practices used by Amazon in packaging waste reduction

**Expected Study Methodology**: The study will comprise mixed methodologies.3.1 Qualitative study - Case Studies: Coca-Cola has set up waste collection points to recycle pet and glass bottles. In India, their waste collection methodology is crafted so consumers can rationally discard the waste using their collection points. This has been simplified by introducing reverse vending machines (RVM) in educational institutes with high consumption patterns. 3.2 Quantitative study- Survey/questionnaire: Data will be gathered through surveys and interviews with customers and end users, and the data will be analysed using analytical techniques to ensure validity and reliability. This study will examine the packaging waste from last-minute purchases and additional packages created by quick commerce operators like Blinkit, Zepto, Swiggy Instamart, Dunzo and Big Basket. The brands are creating more saleability and marketability for their brand, yet they are the emerging contributors to the additional packaging waste. Though these companies have redesigned their delivery packages to paper bags (replacing plastic), they seem to fuel the unplanned packaging cost in the ecosystem.

**Research Implications**: The study will analyse the problems and pitfalls in our current waste management system. It will address the stakeholders' concerns about adopting sustainable recycling practices. The study will have the following implications.

**Monetary Implications**: The companies have been actively minimising manufacturing costs by reducing packaging costs. Amazon was able to achieve it through lean packaging. Coco-Cola reduced heirs by collecting the used plastic containers through the RVMs.

**Social Implications**: The environmental and social implications will exhibit society's problems and how the MNCs' role in lean waste management can ultimately lead to waste minimisation.4.3 Technological Implications: Technology plays a significant role in RVMs' success; the study will also focus on its achievements and challenges through the lens of technology

**Findings and Discussion**: The paper will analyse the findings and outline the process of minimising. It will also conclude with suggestions that can ultimately result in zero waste in the production and consumption process by 2050. The impact of technology and artificial intelligence would be instrumental in lean management, which would be easily derived from the study.6.0Originality/value : The paper will add value by summarising the essential findings and implications for industry and academia. t will recommend future research and practical strategies for companies to enhance their sustainability practices through behaviour modelling using ADKAR(Angtyan, H. (2019).

### TITLE: Study of Impact Investment

**AUTHOR:** Swati Mulani and Dr. Vidhisha Vyas
(IILM AHL JAIPUR)

**ABSTRACT**

The research investigates the dynamics of impact investment in our developing nation, focusing on the motivations and hurdles surrounding its adoption, employing the Behavioural Reasoning Theory (BRT) as a guiding framework. Through a mixed-method approach combining qualitative (thematic analysis) and quantitative (structural equation modelling) methodologies, the study aims to elucidate the factors influencing stakeholders' decisions regarding impact investment.Thematic analysis uncovers both drivers ("reason for") and barriers ("reason against") perceived by stakeholders. These insights are then integrated into a questionnaire survey, yielding 33 usable responses for testing hypothesized relationships. Key findings indicate that personal and social values significantly influence stakeholders' attitudes and intentions toward impact investment. Moreover, the study highlights the moderating effect of domain-specific innovativeness on these associations.Adapting these findings to the realm of impact investment, stakeholders can leverage insights into motivations and barriers to enhance the effectiveness of initiatives aimed at promoting impactful investments in developing nations. By aligning investment strategies with identified motivators and addressing barriers, impact investors can play a pivotal role in driving positive social change and sustainable development. This approach not only contributes to addressing pressing social and environmental challenges but also underscores a commitment to creating lasting impact through innovative investment solutions.

### TITLE: On the Relationship between ESG and Default Risk.

**AUTHORS:** Rajat Rakshit and Dr. Preeti Roy
(Indian Institute of Technology (Indian School of Mines), Dhanbad, Jharkhand)

**ABSTRACT**

The following research paper investigates the relationship between Environmental, Social, and Governance (ESG) disclosure by the Indian companies & their associated default risk. Taking the sample from the National Stock Exchange (NSE) listed companies that are contributing towards environmental sustainability, the research work attempts to examine if ESG disclosure by the companies aligns with Merton's distance-to-default or not. In other words, based on the analysis, the research suggests that the companies that disclose more ESG-related information have a lower risk of default than the firms that disclose less. Among the different types of risks, we have taken credit risk into account for our research work, thereby focusing on the creditor's perspective. The outcomes of the research may be useful for all the stakeholders, including the shareholders as well as the bondholders, to consider the firm's ESG disclosure parallelly with the chances of default on credit before making their investment decisions. The results have been inferred by testing various models of panel regression & then analysing the most significant models.

## TITLE: Impactful Company Secretaries Insights from Indian Public Listed Companies

**AUTHORS:** Biju Varkkey (Faculty, HRM Area, IIMA), Virangi Shah (RA, IIM Ahmedabad / Pre Phd Candidate, University of Waterloo Canada), Varsha Kandala (RA IIMA) and Jaseena Mol (RA IIMA).

### ABSTRACT

In public listed companies, Company Secretaries (CS) are designated KMPs (Key Management Personnel) who hold high levels of responsibility and accountability in listed companies. With increased focus on corporate governance, much attention is given to this role holder who works closely with the board of directors. While the legal roles and responsibilities of CS are defined by the Companies Act 2013 and other regulators, anecdotal evidence indicates that the personal agency of the CS does contribute to distinct impact making in the organisation.

Global attention around regulatory disclosures pertaining to Environmental, Social, and Governance (ESG) have lately amplified, with India being no exception (Z. Zhang & Zhang, 2024) . For instance, Securities and Exchange Board of India (SEBI) mandates Business Responsibility and Sustainability Reporting (BRSR) for the top 1000 listed entities (by market capitalization). With Indian public listed companies gearing up focus on ESG initiatives and reporting, the role of CS is emerging to encompass newer responsibilities, requiring them to redefine roles and interaction patterns.

A preliminary literature review indicates gap in research examining the role of CS in shaping the ESG agenda within public listed companies. While there is extant literature on ESG practices and corporate governance (Krueger et al., n.d.; Wang et al., 2023; C. Zhang & Xie, 2024), the unique contributions made by CS in this context remain unexplored. This study aims to address this gap by investigating the role expansion, role conflicts, and practices adopted by CS within the ESG domain to enhance their personal and professional legitimacy in the organisation.

Anchored on role theory and organisational legitimacy theory and using ESG agenda as anchor, the study gives insights about the dynamics of CS role in Indian companies. We contribute to the emerging discourse on KMP's role, and board level impact creation in highly constrained/regulated roles like CS of a listed company. The findings also contribute to understanding of Top Management Team dynamics, and how professionals in the side-lines gain legitimacy through planned actions and contribution. At practical level, the insights will provide inputs to organisations, including boards and top management on how KMP performance can be supported and enhanced. A larger practical impact will be to the professional institute of CS's, the regulators and individuals for their personal career management.

## TITLE: Navigating the Green Labyrinth: A Framework for Integrating AI and Digital Sustainability

**AUTHOR:** Sachin Choubey (Indian Institute of Management Kashipur)

### ABSTRACT

The convergence of digital sustainability and artificial intelligence (AI) presents a fascinating landscape for workplace transformation. This paper explores how digital sustainability can reframe our understanding of AI and its augmentation within the workplace, particularly during COVID-19's disruptive impact. Practical strategies for integrating AI are crucial to building resilient organisations. We delve into the role of critical success factors (CSFs) in implementing AI augmentation, aiming to enhance work quality and navigate the

challenges and opportunities presented by this confluence. Eleven propositions are formulated through a narrative review of existing research, providing a framework for integrating AI with a lens towards digital sustainability. This paper provides valuable insights for organisations seeking to unlock the full potential of AI while embracing a greener future of work.

### TITLE: Board interlocks and technological knowledge transfer

**AUTHOR:** Shikhar Bhardwaj (IIM A)

**ABSTRACT**

In this paper we explore the role of board interlocks as a mechanism for technological knowledge transfer. Knowledge is a key organizational resource, and firms often need to build on knowledge residing outside firm boundaries to achieve and sustain competitive advantage. Firms engage in an interorganizational tie formation in the form of a board interlock with other firms when there is knowledge dependence (Howard, Withers and Tihanyi; 2017). Thus, while we know the antecedents to formation of director interlocks, the outcome of such tie formation is neglected in previous research.

Board interlocks happen when an individual linked to one company serves on the board of another. Many studies have examined the relationship between board interlocks and firm-level results, like adopting governance practices (Davis and Greve, 1997) and implementing strategies (Tuschke, Sanders, and Hernandez, 2014). These studies show that board interlocks, like other connections between organizations, offer an informational advantage that helps firms access crucial external knowledge for technological exploration (Ahuja et al., 2008; Li, 2021).Thus, prior work recognizes that interlocks formed by board of directors act as conduits of information between firms and can serve as means of knowledge transfer (Shropshire, 2010).

We build on the work of Howard et al. (2017) to examine the consequences of when board interlocks are formed to manage knowledge dependence. Using the resource dependence theory, Howard et al. (2017) find that a focal firm is more likely to form an interlock with a firm whose innovations are closely aligned with the focal firm's core technology. We examine the consequences of director interlocks formed to manage resource dependence and argue that technological knowledge transfer from the interlocked firm to focal firm is more likely when the technological relatedness between the focal firm and interlocked firm is higher. Furthermore, we examine the firm-level and interlock-level characteristics are likely to influence the process of knowledge transfer. Using arguments from the absorptive capacity perspective Cohen and Levinthal, 1990; Zahra and George, 2002), we argue the technological focus of the focal firm will moderate the knowledge transfer owing to its ability to assimilate and apply knowledge from the interlocked firm. At the interlock-level, we argue that interlocks formed by focal firm CEOs will be most effective in ensuring knowledge transfer compared to those by other directors of the focal firm. Given that CEOs are more likely to have a deeper understanding the technological requirements and the operations of the firm, along with the power to allocate resources, we argue that the process of knowledge transfer to focal firm will be strengthened when director interlock is formed by the focal firm's CEO.

## TITLE: A case study on Climate Risk Assessment and Management in Indian Financial Institutions

**AUTHOR:** Manish Ranjan (HPE)

### ABSTRACT

A case study on Climate Risk Assessment and Management in Indian Financial Institutions.

**1. Executive Summary**: This case study delves into how Indian financial institutions are implementing climate risk assessment and management in line, with the Reserve Bank of India (RBI) Draft Disclosure Framework on Climate related Financial Risks for 2024. It discusses the hurdles, strategies for mitigation and effects on stakeholders all while incorporating climate risk management practices.

**2. Introduction**: Given the challenges that climate change presents to the financial sector Indian financial institutions are tasked with navigating these risks while adhering to new regulatory standards. This study advocates for an approach that integrates climate considerations into existing risk frameworks stressing the importance of both adherence and adopting best practices in managing climate risks.

**3. Regulatory Context**: The RBI's Draft Disclosure Framework applies to:•All Scheduled Commercial Banks (excluding Local Area Banks, Payments Banks, and Regional Rural Banks)•All Tier-IV Primary (Urban) Co-operative Banks (UCBs)•All All-India Financial Institutions•All Top and Upper Layer Non-Banking Financial Companies (NBFCs)The framework is structured around four thematic pillars: Governance, Strategy, Risk Management, and Metrics and Targets.

**4. Understanding, Key Challenges and Mitigation Strategies**

4.1 Governance Structure ImplementationChallenge: Establishing a robust governance structure for climate-related issues, including board oversight and management roles.Mitigation Strategies:•To define clear responsibilities for climate-related issues in board and management mandates.•To develop competencies through targeted training programs.•Implementation of regular reporting processes on climate-related issues to the board.

4.2 Comprehensive Risk Identification and AssessmentRisk Factor Identification¬Comprehensive Risk MappingA crucial first step in climate risk assessment is the identification of relevant risk factors across various domains:¬Credit Risk: To assess the impact of climate-related drivers on credit risk profiles, including potential changes in borrower creditworthiness due to physical or transition risks.¬Market Risk: To analyse how climate factors may influence market risk positions, including potential asset price volatility and valuation adjustments.¬Liquidity Risk: Evaluation of the effects of climate-related events on liquidity profiles, such as increased credit line drawdowns or accelerated deposit withdrawals.¬Operational Risk: To Identify potential disruptions to operations due to extreme weather events or regulatory changes.

Integrated Risk AssessmentIn order to ensure a holistic view of climate-related risks, financial institutions must develop methodologies that:•To incorporate both quantitative and qualitative assessments•Need to consider interconnections between different risk types•To assess short-term, medium-term, and long-term impacts•To account for both direct and indirect effects of climate changeChallenge: Identifying and assessing climate-related risks across various domains.Mitigation Strategies:Need to develop methodologies for assessing climate impact on credit, market, liquidity, and operational risks.•To implement integrated risk assessment approaches that consider interconnections between risk types.•To assess short-term, medium-term, and long-term impacts of climate risks.

4.3 Strategy Development and Scenario Analysis: > Scenario DevelopmentWe need to create a robust scenario analysis framework is essential for understanding potential climate-related outcomes and their financial implications. Key considerations include:

•Need to align with scientific climate transition pathways (e.g., IPCC, NGFS)•To incorporate national and international climate policies (e.g., Nationally Determined Contributions)•To Develop of both physical risk scenarios (e.g., increased frequency of extreme weather events) and transition risk scenarios (e.g., policy changes, technological advancements)•To consider of multiple time horizons to capture both short-term shocks and long-term trends¬Stress Testing CapabilitiesAdvanced stress testing methodologies should be employed to assess the resilience of financial institutions under various climate scenarios. This includes:

•Top-down and bottom-up approaches to measure climate risk•Static and dynamic balance sheet analyses•Integration with existing stress testing frameworks•Capability to perform sensitivity analyses to understand model uncertainties

Challenge: Developing climate-resilient strategies and conducting complex scenario analyses.Mitigation Strategies:•Align scenario analysis with scientific climate transition pathways and India's Nationally Determined Contribution.•To develop both physical and transition risk scenarios with the use of technology •Integrate climate considerations into strategic planning processes.

4.4 Data Collection and ManagementChallenge: Gathering and managing comprehensive data for climate risk assessment.Mitigation Strategies:•Invest in geospatial data integration for accurate physical risk assessment.•Implement robust data governance and quality assurance processes.•Develop centralized climate risk data repositories.4.5 Impact Assessment on Credit Risk MetricsChallenge: Incorporating climate risks into credit risk models and portfolio analysis.Mitigation Strategies:•Develop methodologies to adjust PD and LGD based on climate scenarios.•Conduct sector-specific vulnerability assessments and geographical concentration analysis.•Perform stress testing of capital adequacy under severe climate scenarios.4.6 Metrics and Targets DevelopmentChallenge: Establishing and disclosing appropriate climate-related metrics and targets.Mitigation Strategies:•Develop capabilities for quantitative reporting of financed emissions (Scope 1, 2, and 3).•Establish science-based targets for portfolio decarbonization.•Implement systems to track progress against targets.4.7 Model Integration and Uncertainty ManagementChallenge: Integrating climate risk models into existing risk frameworks and managing inherent uncertainties.Mitigation Strategies:•Incorporate Integrated Assessment Models (IAMs) and energy transition models.•Develop in-house models tailored to the institution's specific portfolio.•Utilize ensemble modelling approaches to manage uncertainty.•Conduct regular back-testing and model validation.4.8 Disclosure and ReportingChallenge: Meeting comprehensive disclosure requirements across all four thematic areas.Mitigation Strategies:•Develop robust internal reporting frameworks aligned with RBI's requirements.•Implement systems for tracking and reporting financed emissions by sector and asset class.•Establish processes for regular review and validation of disclosures by the Board or a Board Committee.

**5. Tech Led consulting support to overcome challenges**: Leveraging latest Technology can be instrumental in enabling financial institutions to comply with the RBI's climate-related financial risk disclosure framework. 6. ConclusionIn conclusion the effectiveness of implementing climate risk assessment and management hinges not, on meeting regulations but on nurturing a culture of climate consciousness across the organization.

## TITLE: Connecting Through Anthropomorphism: How Human-Like Messages Enhance Empathy, Warmth, and Authenticity in Green Product Purchases with Nature Connectedness as a Moderator

**AUTHORS:** Pooja, Vaishali Pandey and Vibhuti Tripathi (Motital Nehru National Institute of Technology Allahabad)

### ABSTRACT

**Introduction**: Businesses have embraced green innovation techniques in response to the growing environmental concerns they face, and by doing so, they have gained new competitive advantages through a win-win strategy. The idea of "green marketing" was born out of this trend (Tseng & Hung, 2013). As a result of numerous crises compelling consumers to focus more on environmental preservation, product safety, and other features, green consumption has emerged as a new consumer trend (Maniatis, 2016). Although consumers are open to changing their consumption habits, their motivation to purchase green products is impeded by insufficient knowledge about the products' environmental benefits and skepticism about

the authenticity of company claims (Prakash, 2002). As a result, encouraging green consumption among consumers has emerged as a key research priority, and increasing consumers' willingness to buy green products has become a topic of discussion among many scholars. A key component of the effectiveness of green product marketing is marketing communication and using anthropomorphism for this can lead to a positive impact on the green purchase intention of green products (Chen et al., 2017). Anthropomorphism involves assigning non-human entities human-like traits, intentions, and behaviors (Mota-Rojas et al., 2021). The common anthropomorphic implementation tactics in the context of green behaviour outlined by previous researches includes product design (Tong et al., 2020) and verbal communication (Touré-Tillery & McGill, 2015). Consumers having a strong desire for effectance or social connection are more motivated to engage in conservation behavior and respond more positively to anthropomorphic appeals (Tam, 2015). Anthropomorphism is inherently linked to human socio cognitive development (Epley et al., 2007). Empathic emotion is likely to arise when people encounter an object with human-like qualities (i.e., anthropomorphism) because these qualities suggest an ability to feel (Ketron & Naletelich, 2019). It has been shown that anthropomorphizing nature enhances individuals' sense of connection to it, fostering a deep natural empathy that boosts conservation behaviour (Tam, 2013). Therefore, this study proposes that anthropomorphic green message can induce the sense of empathy in consumers towards the green product which will further lead to perceived empathy and perceived authenticity. Warmth perceptions are likely to arise when a brand is depicted with human-like qualities, as these suggest that the brand has the capacity to feel (Zhou et al., 2019). Also, anthropomorphized green messages create authenticity by making brands more relatable and emotionally engaging, fostering social connections, reinforcing consistent messaging, and enhancing trustworthiness among consumers. The study also examines the moderating role of connectedness to nature on relationship between anthropomorphic green message and sense of empathy. Connectedness to nature refers to the relationship and interdependence between humans and the natural environment (Schultz, 2002). Therefore, this study suggests that the greater a consumer's connection to nature, the stronger their sense of empathy will be towards anthropomorphic green messages.

**Research Questions:** 1.How do anthropomorphic messages influence the sense of empathy in consumers? 2.How does empathy generated through anthropomorphic messages impact the perceived warmth and authenticity of green message? 3.How does the connectedness to nature moderate the relationship between anthropomorphic green message and the sense of empathy in consumersResearch

**Objectives:** The aim of the study is to investigate how anthropomorphic messaging influences consumer empathy, perceived warmth, and perceived authenticity, and how these factors collectively impact the willingness to purchase green products, with a particular focus on the moderating role of connectedness to nature. Particularly the study aims:1.To examine the effect of anthropomorphic green messaging on consumers' sense of empathy towards green products.2.To analyze the impact of empathy on perceived warmth and perceived authenticity of green products.3.To evaluate the influence of perceived warmth and perceived authenticity on consumers' willingness to purchase green products.4.To investigate the moderating role of connectedness to nature in the relationship between anthropomorphic green messages and consumer responses.

**Research Methodology**: This study adopts an empirical approach using a between-subjects experimental design to explore the impact of anthropomorphic message framing on customer empathy, perceived warmth, and perceived authenticity, and how these factors collectively influence consumers' willingness to purchase green products, with an emphasis the moderating role of connectedness to nature. Employing a quantitative methodology, data will be gathered through a structured questionnaire, incorporating validated scales from existing literature to measure empathy, perceived warmth, perceived authenticity, willingness to purchase green products, and connectedness to nature. Convenience sampling will be used to recruit participants, who will be randomly assigned to conditions featuring either an anthropomorphized message or a non-anthropomorphized message. The data will be analyzed using IBM SPSS and MS Excel, and Structural Equation Modeling (SEM) will be conducted using Smart PLS 4 to test the hypothesized relationships and moderating effects.Data

**Analysis and Results**: The study is still in its data analysis phase.

**Implications of the Study**: Theoretical Implications:First, the study contributes to the body of knowledge on anthropomorphism by demonstrating its influence on consumer emotions, particularly empathy, and how these emotions translate into perceptions of warmth and authenticity. Secondly, the investigation of connectedness to nature as a moderating variable adds depth to the understanding of how personal traits influence the effectiveness of anthropomorphic messages, offering insights into individual differences in consumer responses to green marketing. Thirdly, this research integrates theory of anthropomorphism and green marketing, illustrating how anthropomorphic messaging can be an effective strategy for enhancing the appeal of environmentally friendly products.

**Practical Implications**: First, companies can significantly improve their green marketing campaigns by incorporating anthropomorphic elements into their messages. Secondly, Marketers can better tailor their advertising efforts by segmenting their audience based on their level of connectedness to nature. Anthropomorphic messages may be particularly effective for consumers with a high sense of connectedness to nature, allowing for more personalized and impactful marketing strategies. Thirdly, Brands can leverage anthropomorphic characters or narratives in their product design and packaging to create a more relatable and emotionally engaging brand image. This can foster a deeper emotional connection with consumers, leading to higher brand loyalty and increased sales of green products.

## TITLE: Assessing the significance of relationship between ESG factors and financial performance on energy intensive companies in India

**AUTHORS:** Digantika Ghosh (TERI School of Advanced Studies) and Dr. Shruti Sharma Rana (TERI SAS)

### ABSTRACT

**Introduction**: Environment, Social & Governance (ESG) performance is increasingly becoming important to investors for making responsible investment decisions across all industrial sectors. Energy Sector is no exception. The Indian power sector is one of the most diversified in the world, considering it generates power from both conventional and non-conventional sources. According to the Central Electricity Authority (CEA), India will need to build 817 GW of generation capacity by 2030 and to keep up with our COP26 commitment 500 GW of this will have to come from non-fossil fuel sources. Oil & Gas sector is one of the most sensitive industries that needs considerable efforts to ensure disclosure on ESG information as required by investors. However, some ESG issues like practices on climate change goes beyond ESG ratings and needs deeper qualitative evaluation. Various theories are present which provides the justification for voluntary reporting by companies such as stakeholders theory, legitimacy theory, resource-based theory etc. The company's reporting on material topics is relevant to critical stakeholders only and is an instrument in either stakeholder theory. the study indicates that materiality analysis can strategically be misused to define report content without considering the interests of legitimized stakeholder groups and thus, does not improve the reports to those groups. Companies should provide a detailed description of their materiality analysis if stakeholders are their primary target. Studies indicate that materiality analysis can strategically be misused to define report content without considering the interests of legitimized stakeholder groups and thus, does not improve the reports to those groups.

**Material and methods**: Research Method to Assess ESG Disclosure of Material IssuesAs a part of the research objective content analysis of Integrated Annual Report/Sustainability Report of companies listed on the Indian Stock Exchange and a part of Energy Sector will be carried out. Furthermore, in line with a similar study, this study will use two sample selection criteria, first, companies that prepare sustainability reports for the period 2018- 2022; second, the company conducts a materiality analysis and reports this information in the sustainability report. For this reason, all reports will be screened using specific keywords (ESG topics, materiality, materiality analysis) and map their materiality disclosure to ESG Rating performance (Refinitiv). Based on sample review of top 1000 NSE listed companies total 58 Energy sector companies were identified. Data Points for Measurement:Correlation analysis and Multiple regression analysis on panel data would be performed to analyze the relationship between ESG rating and Firm value. Correlation Analysis can be used to see if there is any connection between the ESG Rating and factors like Tobin's Q, ROA and ROE correlation tool is used to determine whether two data sets move in tandem, i.e., whether large values in one set are positively correlated with large values in the other, whether small values in one set are negatively correlated with large values in the other, or whether values in both sets are unrelated (correlation near zero). Profitability is gauged by both Return on Assets (ROA) and Return on Equity (ROE.); leverage using Debt to Equity Ratio (DER); and company size using total assets. ROA defines how effectively a company uses its assets to make a profit. ROE is a value that indicates how efficiently the company manages the resources invested by its

investors. DER is a ratio that compares the company's debt with shareholder equity. The higher the DER means the company has higher debt than its equity. This condition is considered less good for the company. Multiple Regression Analysis: The strength of the association between the ESG Rating and the independent factors is assessed using regression analysis. Initially, an ADF unit root test is used to determine whether the series is stationary. The Hausman Test (test for model misspecification) can be used to discover endogenous regressors in a regression model (predictor variables). The test evaluates the consistency of an estimate with respect to another, less accurate estimator that is previously known to be consistent. It helps assess how well a statistical model fits the data.

**Results and conclusion**: This research has the following contributions: the first is to provide an overview of stakeholder and legitimacy theory and the differences in the company's materiality analysis process evident through its ESG disclosure. Furthermore, this study will identify the relationship between the company's financial characteristics as measured by profitability (ROA and ROE).

## TITLE: Are Developing Country Firms Facing a Downward Bias in ESG Scores?

**AUTHORS:** Jairaj Gupta (University of York), R. Shruti (Indian Institute of Technology, Madras) and Xia Li (Birmingham City University)

### ABSTRACT

Policymakers in emerging economies are increasingly concerned that global ESG scoring firms based in developed countries are 'unfairly punishing' their companies by assigning lower scores compared to those in developed countries. This study investigates and provides empirical evidence supporting this concern. Using panel regression analysis on a comprehensive cross-country sample of 7,904 listed firms from 2002 to 2022 across 50 countries, we find that corporate ESG scores in developing economies are significantly lower than those in developed economies. Further analysis indicates that this disparity is linked to institutional bias and measurement issues within ESG scoring agencies, stemming from information asymmetry. Our empirical evidence also suggests that ESG scoring agencies can mitigate these information problems by incorporating analyst coverage and experience into their algorithms. This study, therefore, contributes to the ongoing debate on the subjectivity of the global rating industry by demonstrating that the biases affecting the credibility of corporate credit and corporate governance ratings also extend to corporate ESG scores.

## TITLE: Steering green initiatives: role of environmental management teams and board attributes

**AUTHORS:** Vidya Mahadevan and Sowmya Subramaniam (Indian Institute of Management, Lucknow)

### ABSTRACT

This study investigates the role of specialized environment management teams and board attributes, such as board independence and board gender diversity, in driving the firm's green initiatives (GI). The study uses listed US firms for the period 2015-2022. The results suggest specialized environment management teams are more inclined towards implementing environmental protection and resource efficiency initiatives, ensuring that firms consistently work towards reducing their environmental impact. The results also suggest that an independent and gender-diverse board enhances monitoring and resource-provisioning roles and drives this socially responsible behavior. The results are robust to other green initiatives proxies across all sub-samples, even after addressing potential endogeneity issues. The study supports the upper

echelon and gender socialization and ethicality theories, and legitimacy theory. It provides evidence that the environment management teams, and board attributes are substantive governance mechanisms to pursue green initiatives effectively. Green initiatives offer promising prospects for businesses to reduce their carbon footprint successfully. Understanding the drivers of these initiatives is crucial for assisting companies and policymakers in managing environmental concerns and making informed policy decisions, thereby efficiently assisting them in achieving national and international environment-related objectives.

## TITLE: Consequences of Mandatory Environmental Social and Governance (ESG) Reporting Policy on ESG Disclosure Quality

**AUTHORS:** Muhammad Sani Khamisu and Ratna Achuta Paluri
(Symbiosis Institute of Operations Management)

**ABSTRACT**

Environmental, social, and governance (ESG) information disclosure requirements have gained vast attention globally. Stock exchanges in many countries like the United Kingdom,Japan, India, and several other European countries have already set mandatory ESGdisclosure in place. This gradual transformation from voluntary to mandatory stimulates other nations to adopt mandatory disclosure policies for sustainable development. Consequently,stakeholders are concerned about ESG issues and how firms respond to them. Nowadays,investors rely on ESG information before deciding to invest in companies. The reliance on stakeholders; non-financial disclosures to recognize sustainable companies has led to an increasing supply of ESG reports.Despite the growing concern, other regulatory authorities are facing the dilemma as to whether to make ESG disclosure mandatory or maintain the existing voluntary standards.Countries like the United States are not willing to adopt the mandatory disclosure policy.Therefore, it could be deduced that the dedication to implementing mandatory ESGdisclosure seems to vary across boundaries. This can be attributable to the major assertions that mandatory ESG disclosure is likely to bring about unintended consequences. It might increase the costs of dealings across the board or devalue the gravity of any company-specific or material industry-specific essential disclosures. Mandatory disclosure can also result in increased ESG-management costs as some corporations may likely disclose poor ESGinformation to their stakeholders just to comply with disclosure directives

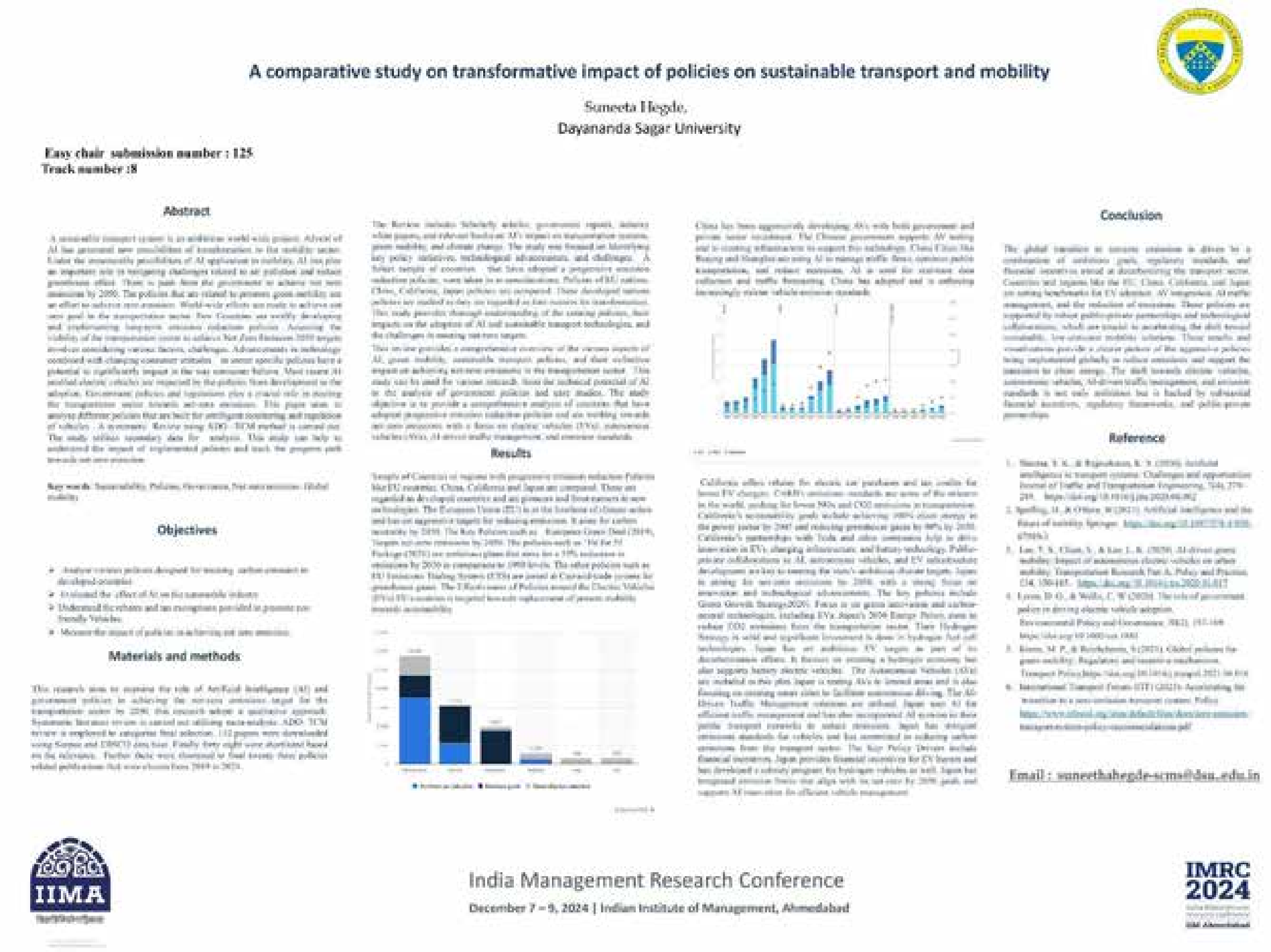
# POSTER PRESENTATIONS

## TITLE: Sustainable Value Creation through Community Participation in Ecotourism in Uttar Pradesh using PLS-SEM Approach

**AUTHORS:** Supriya Shukla, Jyoti Shukla and Kamal Sharma

# TITLE: A comparative study on transformative impact of policies on sustainable transport and mobility

**AUTHOR:** Suneeta Hegde



## TITLE: Integrating ESG Principles into Business Strategies of Indian MSMEs: Pathways to Sustainable Growth and Enhanced Performance

**AUTHORS:** Amresh Ray and Hakeem Mohammed Khalid

Easychair Submission Number 346

Track 08

### Integrating ESG Principles into Business Strategies of Indian MSMEs: Pathways to Sustainable Growth and Enhanced Performance

Amresh Kumar Ray, Student of MA Economics at Kaling Institute of Industrial Technology

#### Abstract

Indian MSMEs are crucial to the economy but struggle with adopting ESG practices due to financial and awareness gaps. This research examines integrating ESG into MSME strategies to enhance resilience, competitiveness, and sustainability. Key findings show improved financial performance, market access, and reduced climate risks through phased adoption. The study offers insights and a roadmap for MSMEs to align with global ESG standards, ensuring growth and compliance.

#### Introduction

Indian MSMEs, contributing approximately 30% to the nation's GDP and accounting for 45% of exports, are vital to India's economic landscape. Employing over 110 million people across 63 million units, MSMEs are essential for job creation and economic diversification. However, only about 10% of MSMEs currently engage in structured ESG initiatives, primarily due to limited resources, lack of awareness, and the absence of supportive frameworks. The urgency of climate change, rising stakeholder demands, and evolving regulations such as India's BRSR mandate require MSMEs to integrate ESG into their business strategies. Studies show that firms adopting ESG principles experience a 10-15% improvement in operational efficiency and a 20% higher likelihood of accessing green financing. This paper explores the integration of ESG practices in MSMEs to enhance competitiveness and resilience, addressing a critical need for sustainable growth.

#### Challenges & Opportunities for MSMEs

**Challenges**

Financial Constraints, Lack of awareness, Evolving nature of regulations and ESG frameworks, Supply chain Dependencies etc.

**Opportunities:**

Access to new markets, Improved Stakeholder Relationships, Enhanced Financial Performance, Climate Resilience, Enhanced Competitiveness

#### Materials and Methodology

**Materials Referred:**

- Government data, reports and regulations
- Peer-reviewed journals and Scopus-indexed articles
- Success stories of MSMEs adopting ESG
- Reports of WRI India and CII.

**Research methodology involves:**

- Literature Review: Examination of existing studies on ESG practices in MSMEs.
- Thematic Analysis: Identification of recurring challenges and opportunities for MSMEs in ESG adoption.
- Framework Development: Creation of a phased ESG integration framework: Compliance, Integration, and Value Creation.
- Case Study Approach: In-depth analysis of MSMEs successfully implementing ESG practices.
- Comparative Analysis: Evaluation of pre- and post-ESG adoption performance metrics such as profitability, reputation and market access.

#### Results and Discussions

Strategic Framework for ESG Integration The framework for integrating ESG into Indian MSMEs is divided into three phases:

**Phase 1: Compliance**

- ESG Governance: Establish ESG oversight through a dedicated officer or committee.
- Reporting Requirements: Adhere to BRSR guidelines and global standards like the UN Global Compact.
- ESG Policies: Develop policies using global guidelines (GRI, SASB).

**Phase 2: Integration**

- ESG in Operations: Implement circular economy practices and ISO 14001.
- Digital Tools: Use platforms like Sustainalytics for efficient ESG management.
- Employee Engagement: Offer ESG training and create internal ambassador programs.

**Phase 3: Value Creation**

- Innovation: Explore sustainable products and services in sectors like green hydrogen.
- Market Differentiation: Use ESG as a competitive advantage, leveraging certifications like B Corp.
- Resilience: Adopt risk management frameworks to build long-term resilience.This phased approach supports MSMEs in effectively integrating ESG, driving value and resilience.

#### Conclusion

Integrating ESG principles into Indian MSMEs' strategies is crucial for growth and sustainability. A phased approach—compliance, operational integration, and value creation—can help MSMEs overcome resource challenges and tap into global markets. Collaboration between government, industry, and financial institutions is key to facilitating this transition. This study offers a roadmap for MSMEs to align with global sustainability standards, ensuring their competitiveness and resilience.

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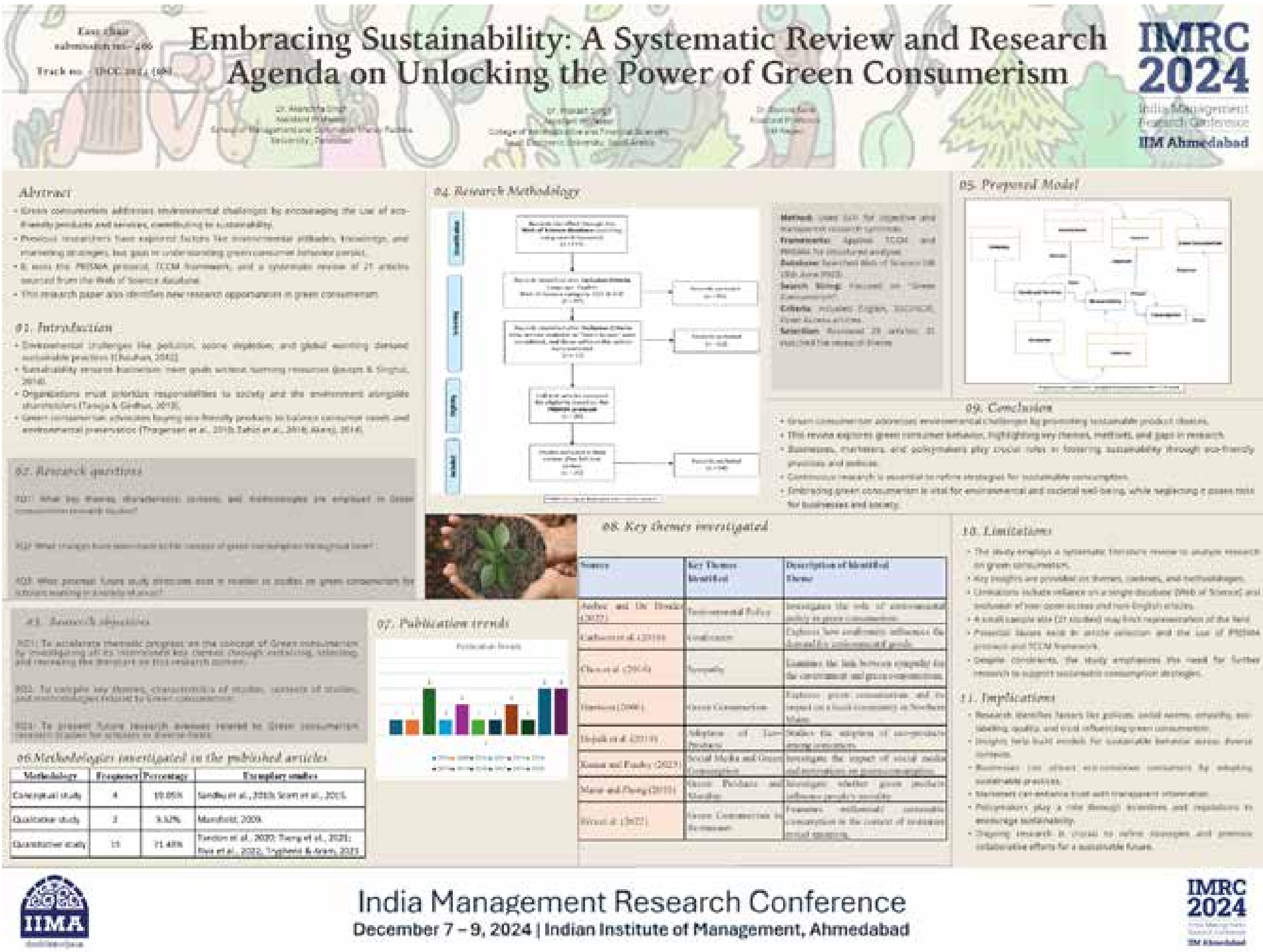
IMRC 2024

## TITLE: Embracing Sustainability: A Systematic Review and Research on Unlocking the Power of Green Consumerism

**AUTHORS:** Dr. Akanchha Singh, Dr. Prakash Singh and Dr. Damini Saini



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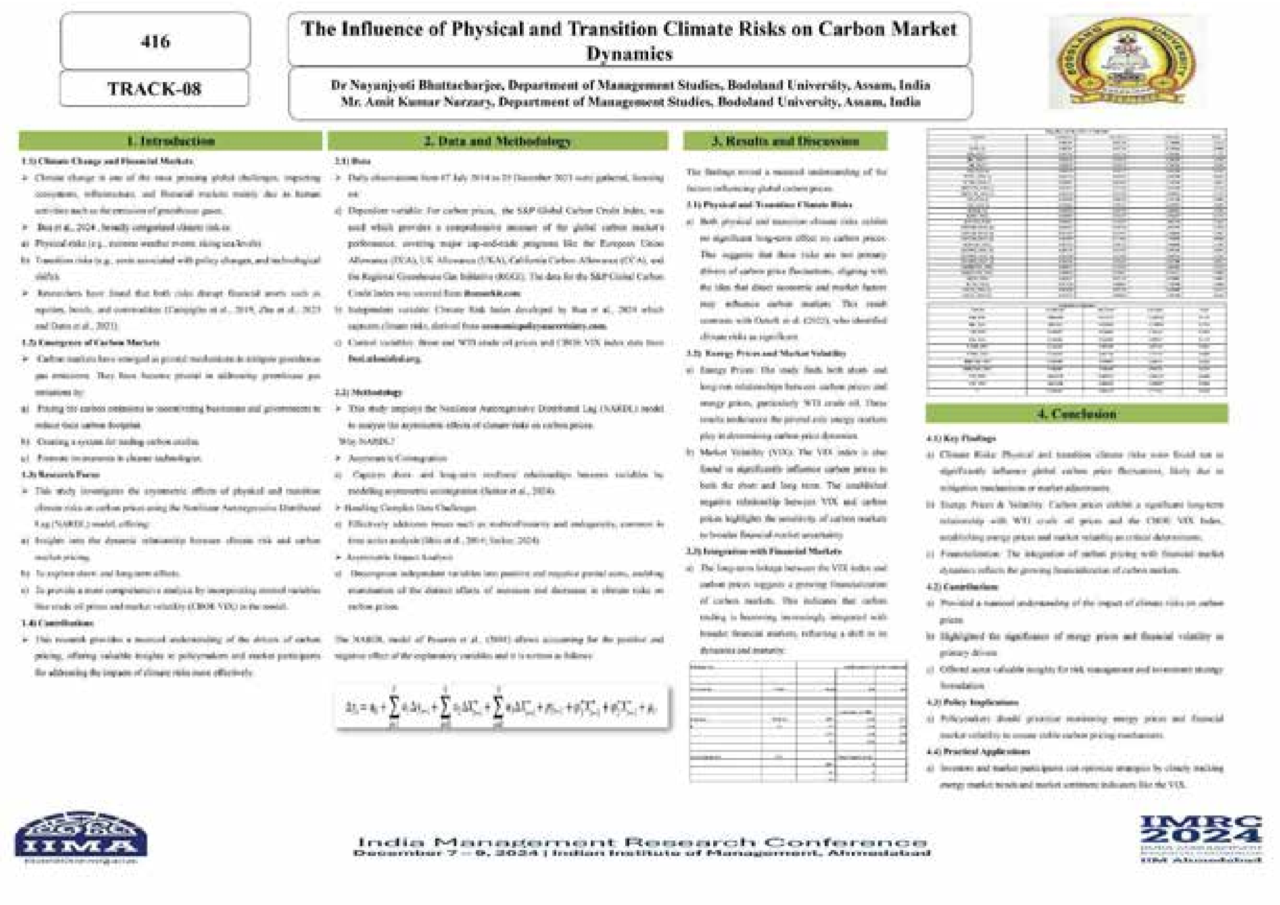
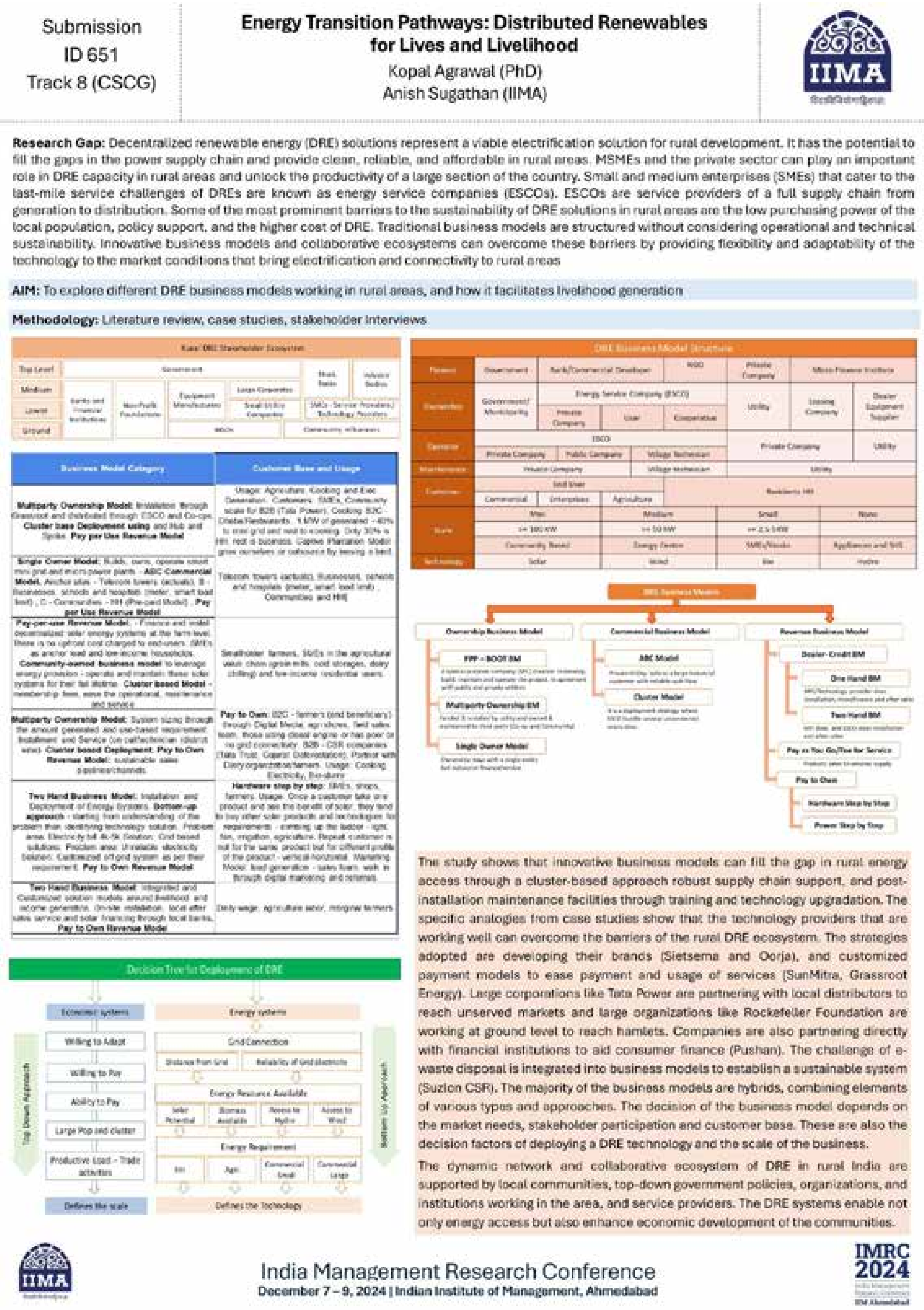
**TITLE: The Influence of Physical and Transition Climate Risks on Carbon Market Dynamics**

**AUTHORS:** Dr. Nayanjyoti Bhattacharjee and Mr. Amit Kumar Narzary



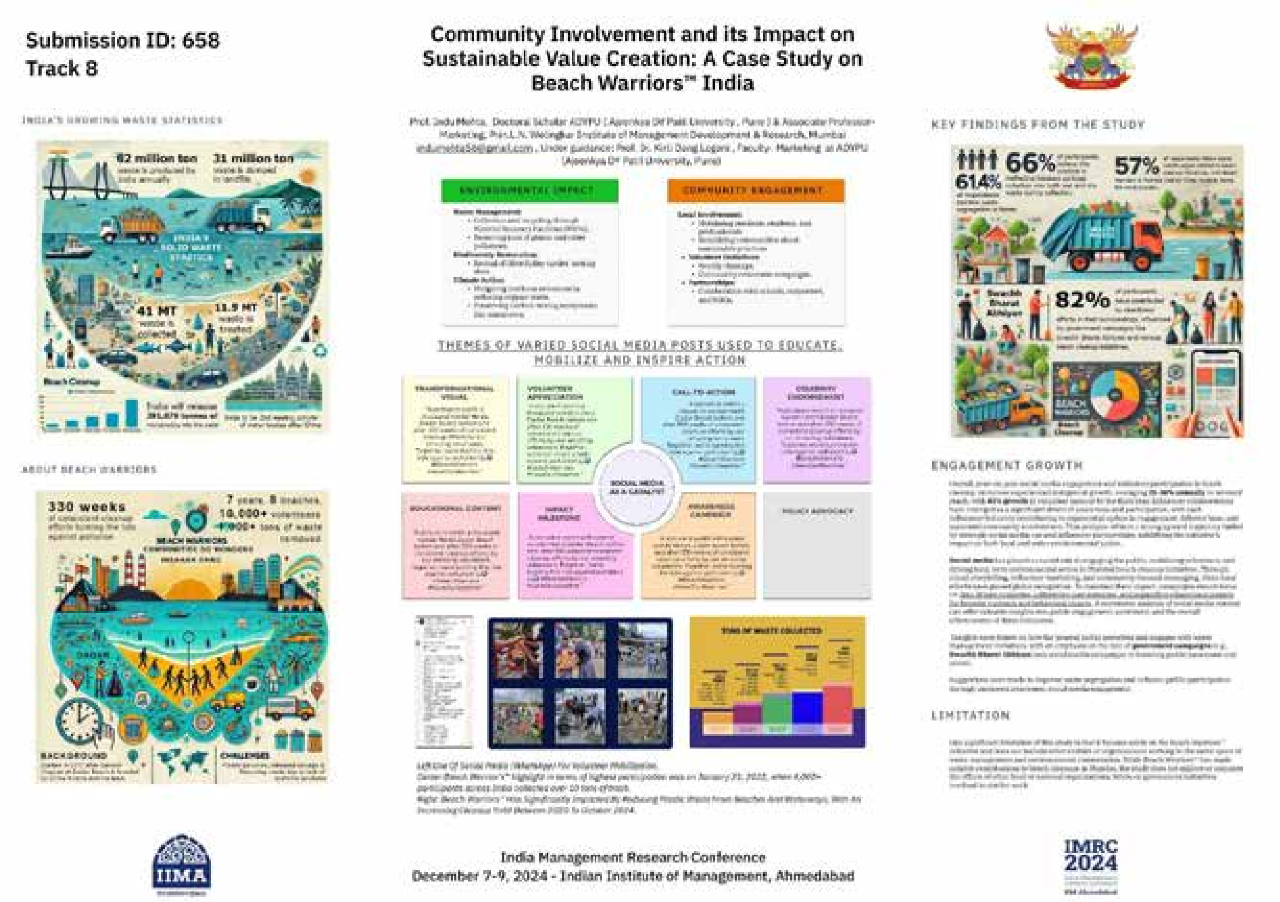
## TITLE: Energy Transition Pathways: Distributed Renewables for Lives and Livelihood

**AUTHORS:** Kopal Agrawal and Anish Sugathan



# TITLE: Community Involvement and its Impact on Sustainable Value Creation: A Case Study on Beach WarriorsTM India

**AUTHORS:** Indu Mehta and Dr Kirti Dang Longani



# TITLE: A case study of bio-packaging start up based in Shimla, Himachal Pradesh, highlighting its innovative sustainable packaging solutions and its impact on global market and business performance

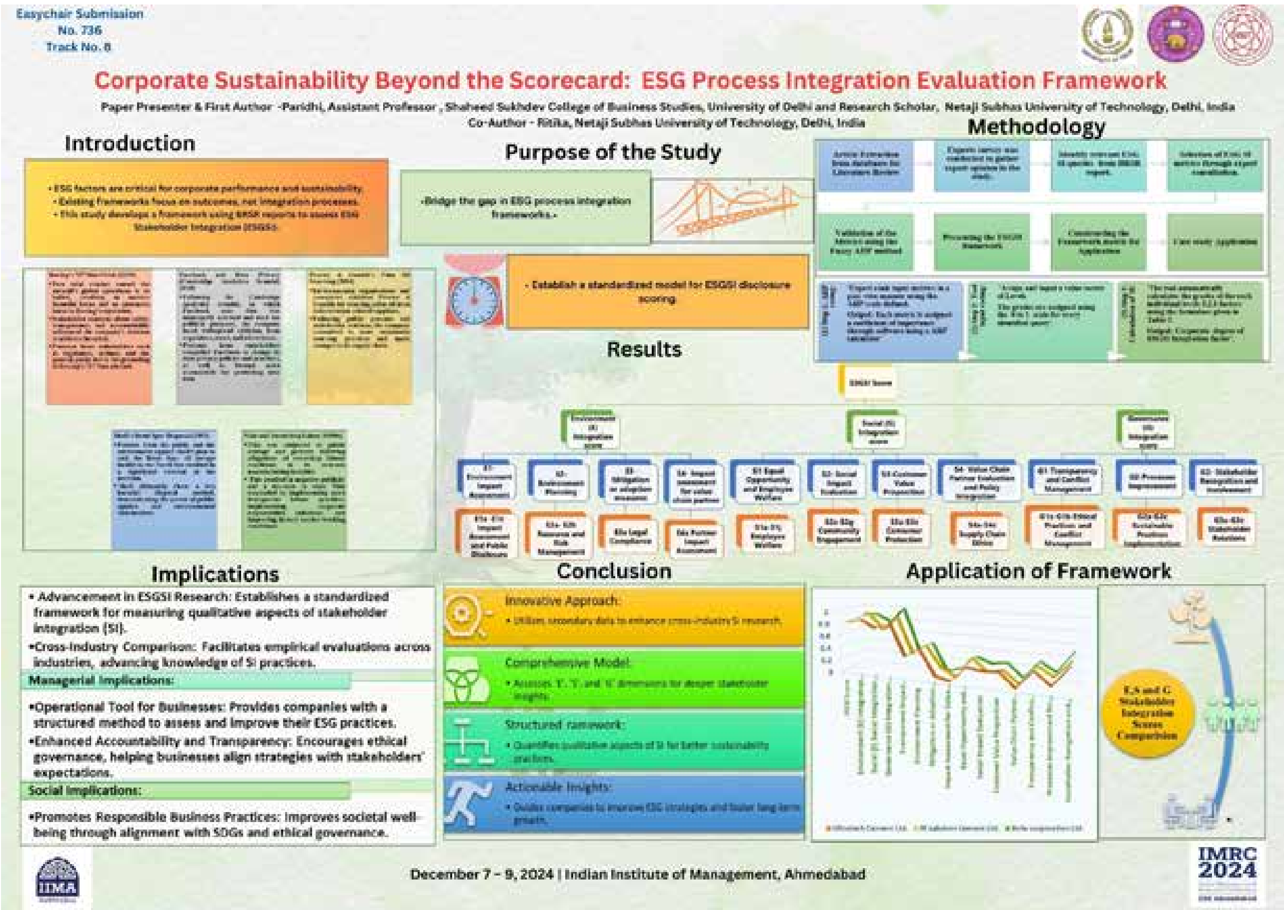
**AUTHOR:** Shivani Chauhan

## ABSTRACT

Being sustainable is not a choice anymore it's the need of hour. While considerable attention has been given to the implications, influencing factors, and selection methods of green technology innovation, there has been limited research systematically examining the pathways through which green technology innovation impacts economic performance and strategies of business. Green technology refers to the development and application of technologies designed to reduce environmental impact and promote sustainability. This encompasses a range of innovations and practices including advancements in renewable energy, waste management, water conservation, and sustainable agriculture, all contributing to a more eco-friendly and sustainable future. Green technology innovation can be divided into green product innovation and green process innovation. Green product innovation and green process innovation are becoming more important for company performance each of which can enhance both environmental and economic performance of company. Green technology helps businesses by improving cost efficiency, enhancing brand reputation, ensuring regulatory compliance, driving innovation, and fostering operational efficiency, all while contributing to environmental sustainability and long-term success. Green Packaging is integral to green technology innovation. Green packaging refers to packaging solutions that are designed to minimize environmental impact throughout their lifecycle. This includes using materials that are renewable, recyclable, biodegradable, or compostable, as well as adopting production processes that reduce energy consumption and waste. It aims to reduce the ecological footprint of packaging by promoting resource efficiency, supporting a circular economy, and enhancing sustainability in product packaging. It not only reduces environmental impact but also leads to advancements in processes, materials, resource efficiency and sustainable practices. Green Packaging can be perceived from two perspectives i.e. consumer and company. In this case study the author tends to explore tangible and intangible aspects and benefits of green packaging for business enterprises like competitive advantage, operational efficiency, regulatory compliance, enhanced brand image, customer loyalty and satisfaction, risk management, cost savings. In the new era of sustainable packaging, the focus is on transforming waste into wealth through innovative approaches. Therefore, this case study extensively examines start up that, through its robust research and development, are creating bio-based packaging solutions from waste. Also this case study explores how green packaging not only enhances business operations but also demonstrates how waste can be effectively utilized to create sustainable products, thereby reducing environmental impact and fostering innovation. In-depth interviews were conducted to measure the effects of green product innovation and green process innovation practices on the local and broader market and company performance by creating sustainable packaging solutions. The sections of this paper are as follows: 1) Concept of Green Technology 2) Concept of Green Product 3) Concept of Green process 4) Concept of Green Packaging 4) Literature Review 5) In depth interview at Green Viables start up 6) Results 7) Discussion

## TITLE: Corporate Sustainability Beyond the Scorecard: ESG Process Integration Evaluation Framework

**AUTHORS:** Paridhi Saini and Ritika Aneja



## TITLE: Systematic Literature Review on Sustainable Business Practices: Using TCM-ADO Framework

**AUTHORS:** Juhi Agarwal and Usha Lenka

### ABSTRACT

Sustainability is a compelling issue that is gaining attention across the globe, particularly with the involvement of the United Nations, which has already set ambitious goals for the world to adhere to for the survival of all. This cannot be tackled individually. Rather, it requires a concerted, immediate effort across geographical boundaries, societies, and groups, among others. However, this urgency is often lacking, especially among organizations and corporations that are the largest exploiters of the resources to carry out their business functions. These entities still lack the strategic interventions and policy frameworks needed to combat the ongoing interventions and contribute to global efforts for sustainable development. They are grappling with the right approach to implement and execute the right strategies due to multiple barriers co-existing. In response to this, the present research builds on the systematic literature review of 274 articles, identified using SCOPUS database, from the year 2008, the time period when the United Nations introduced the MDGs (Millennium Development Goals). To address the gaps in the literature on sustainable business practices (SBPs), the paper adopted the TCMADO framework to analyze and synthesize the findings by establishing integrated theories, context, methodology and the antecedents, decisions, and outcomes, used in the SBP literature. This paper makes a theoretical contribution on SBP literature by providing conceptual and practical rigor. A TCM-ADO based Framework is developed that reflects on the interrelations between the antecedents and the barriers, in specific context with theoretical support, to arrive at the desired outcomes of adhering to the SBPs, showcasing the effect of already adopted practices.

## TITLE: Confluence Of Growth, Sustainability And Resilience Redefining Menstrual Hygiene: Sustainable Alternatives For Better Health And Environment

**AUTHORS:** Sresthaa Saxena and Vanshit Yadav

### ABSTRACT

Sanitary pads are many of the most frequently used items for menstrual hygiene around the world. According to a 2020 paper released through the World Bank, about 500 million women and women worldwide lack adequate facilities for menstrual hygiene In those extreme conditions even a large percentage of menstruating women, around 70-80%, use sanitary napkins. Adoption costs are pushed through with factors including convenience, ease of use and wide availability.

## TITLE: Going green- Export and adoption of green technology in India

**AUTHORS:** Shreya Biswas and Sneha Thayyil

**ABSTRACT**

This study examines whether the exporting status of Indian firms is a critical determinant of green practices at the firm level in the context of India. Using the nationally representative World Bank Enterprise data of 2022, we observe that exporting firms are more likely to adopt green practices across 5 domains, namely, energy management, water management, waste management, reducing air pollution, and other pollution. The trade-induced technique effect can possibly explain the positive relationship between export orientation and green technology adoption. Our heterogeneity analysis that underscores the effect being driven by manufacturing firms and those in more polluting industries, indicates the influence of theories like institutional theory, stakeholder theory, the natural resource-based view, and ecological modernization. Our results highlight that export promotion policies of the government can complement the efforts towards nudging firms to adopt green practices.

## TITLE: AI-Powered Governance: Leveraging Artificial Intelligence to Improve Corporate Governance and Ethical Decision-Making

**AUTHORS:** Harsh Andani and Manya Shrivastava

**ABSTRACT**

This research paper, titled "AI-Powered Governance: Leveraging Artificial Intelligence to Improve Corporate Governance and Ethical Decision-Making," examines the transformative potential of artificial intelligence (AI) in enhancing corporate governance practices and supporting ethical decision-making. As AI increasingly influences business operations, its integration into governance frameworks offers innovative approaches to improving board decision-making, shareholder engagement, audit processes, and executive compensation management. However, the adoption of AI also presents challenges related to ethics, transparency, and data security.

The paper begins with an extensive literature review that explores the current state of corporate governance and the ethical complexities in decision-making. It then analyzes AI's potential to address these challenges through primary research and comparative studies. A key contribution of this research is the proposal of an AI-powered governance framework that provides a structured approach to systematically incorporating AI into corporate governance models. In addition to governance, the paper explores AI's role in advancing corporate sustainability initiatives, including its applications in green finance, climate risk management, and sustainable supply chain strategies. By examining case studies and analyzing real-world data, the research demonstrates how AI can drive sustainability efforts and create long-term value for stakeholders.

The study also addresses the ethical and regulatory concerns associated with AI, emphasizing the importance of fairness, transparency, and compliance. The paper concludes by discussing future trends and innovations in AI-driven governance, offering insights into how AI may further evolve corporate governance and ethical decision-making in the coming years. The research findings provide practical guidance for business leaders and scholars, contributing to the ongoing discourse on the intersection of AI, corporate governance, and ethics. The paper's recommendations serve as a foundation for future research and implementation strategies, ensuring that AI integration in governance is both effective and aligned with ethical principles and sustainability goals.

## TITLE: Sustainability Marketing enablers: A Systematic Review and Future Research Direction

**AUTHORS:** Golden Singh, Ajay Kumar Pandey and Nirmalya Bandyopad

### ABSTRACT

Sustainability has been gaining momentum and is emerging as a megatrend. This is primarily because it has attracted the undivided attention of different sectors of society, viz business, government, NGOs, and education. However, as different environmental challenges and socioeconomic disparities continue to rise, sustainability has become a cause of concern, especially in business and marketing (Layton, 2016; Peterson, 2022). In this regard, marketing is crucial at any organization's functional level, as it attracts stakeholders toward the organization while integrating and emphasizing the aspects of sustainability. From a scholarly perspective, Fuller (1999) explained Sustainability Marketing (SM) as "the process of planning, implementing and controlling the development, pricing, promotion, and distribution of products in a manner that should satisfy the three conditions (a) customer needs are met; (b) organization goals are attained, and (c) the process is compatible with eco-system." Interestingly, SM has become a rapidly evolving discourse without which contemporary marketing practices cannot be considered aligned with socio-economic and environmental objectives. Sustainability is a complex phenomenon for marketing managers as they grapple with the rising challenges of identifying, implementing, and communicating SM (Fodness, 2015; Kemper & Ballantine, 2019; Sivarajah et al., 2020). Therefore, companies must focus on and utilize enablers to acquire the practical capability to move toward sustainability and implement their organization's marketing practices. Further, marketing managers can effectively use enablers across the organization's marketing department to help them collaborate, engage with their stakeholders, and enhance sustainability performance. Notably, researchers have identified enablers such as SDGs implementation within the private sector (Palau-Pinyana et al., 2023) so that private firms can implement SDGs in their firm's strategy to improve environmental sustainability and social inclusion. Yadav et al. (2018) identified enablers of human resources development for sustainability in the Indian power sector to improve the quality of work life of employees. On the other hand, Ali et al. (2019) studied the motivators, barriers, and enablers of change management toward the sustainable energy sector of the UAE. Further, enablers of sustainable supply chain management in industries like the electronics industry (Menon & Ravi, 2021) and textile case (Diabat et al., 2014) were identified to reduce environmental and societal causes and improve sustainability performance in supply chain management. Enablers of sustainable sourcing and networking in a supply chain (Khan et al., 2024) were identified to help managers adjust sourcing decisions rapidly.

However, to the best of our knowledge, identifying and documenting key enablers of SM in the context of an organization has not been addressed so far. Therefore, this study attempts to answer the research question: "What are the current key enablers of SM"? Here, an enabler is defined as "one that enables another to achieve an end, where the word "enable" means to make able, to give power, means, competence, or ability" (Grzybowska, 2012).

## TITLE: The Effectiveness of Eco-Labels in Promoting Sustainable Consumption among Indian Consumers

**AUTHORS:** Mayank Sharma, Abhishika Sharma and Priyanka Sharma

### ABSTRACT

Ecolabels serve as credible communication tools. The objective of this paper is to examine the influence of ecolabels on sustainable consumer behaviour. The conceptual model proposed in this paper investigates the impact of environmental awareness, brand trust, and perceived quality on consumer outcomes, including purchase intention, willingness to pay a premium, word-of-mouth, and perceived sustainability. This is mediated by different ecolabel strategies (no label, mono label, and dual/multi-label). The model suggests that higher levels of these antecedents enhance consumer outcomes, with the strength of these relationships influenced by the type of ecolabel. The outcomes of this research will guide FMCG brands in optimising their labelling practices to enhance sustainable consumption among Indian consumers

## TITLE: Impact of ESG initiatives on consumer behaviour in the FMCG sector in India

**AUTHORS:** Medha Doshi, Dr. Dipasha Sharma and Ragini Balaine

### ABSTRACT

**Purpose:**

Companies engage in ESG activities to achieve higher financial returns and signal market compliance to their stakeholders. (Khan, 2022) This study extends the scope of Environmental Social Governance (ESG) research to non-financial parameters, namely consumer behaviour in the Fast-Moving Consumer Goods (FMCG) sector, a very under researched area in India. The research entails the tangible significance of ESG reporting on consumers in the Indian context compared to consumers in advanced countries(Aboud, 2018).

**Study design/methodology/approach:**

The study employs primary research; consumer surveys will be undertaken. Data sources include academic journals, industry reports, financial databases, corporate ESG reports, and government and NGO publications. The survey was conducted on a focus group between 20 and 30 years of age. The data is analysed in Smart PLS software using structural equation modelling (Khalil & Khalil,2022).

**Findings:**

The findings of this study reveal that the ESG initiatives taken by FMCG companies positively impact consumer behaviour aged between 20-30. Among the individual pillars, Environmental scores impact consumer behaviour the most, followed by social scores(Hasan, et al., 2024). ESG initiatives allow companies to enhance their market performance; positive ESG reports can lead to increased consumer trust, while negative ESG reports can lead to decreased consumer trust and demand, especially in a sector as versatile as FMCG. It has been observed that there are changes in consumer patterns, particularly in regions like Europe and North America, which have higher environmental awareness and stricter regulations. Consumers increasingly prefer products and services from companies that demonstrate firm ESG commitments. The research titled "Investigating the Interconnection between Environmental, Social, and Governance (ESG),

and Corporate Social Responsibility (CSR) Strategies (Nugroho, et al., 2024): An Examination of the Influence on Consumer Behaviour" highlighted that consumers in countries like Taiwan and Indonesia are becoming more aware of ESG factors and prefer companies with firm ESG commitments. The study reveals the growing importance of ESG considerations in shaping consumer preferences and purchasing decisions. (Nugroho, et al., 2024). It is generally seen that Indian consumers tend to follow Western consumer trends. While ESG reporting does not significantly impact the consumer behaviour of most Indians, it is expected to play a significant role in consumer decisions in the next 2-5 years, considering the awareness created among young Indian consumers. These findings underscore the importance of ESG practices in shaping consumer preferences and behaviours, highlighting the need for companies to prioritize ESG initiatives to maintain competitive advantage and meet evolving consumer expectations.

**Originality/value:**

While ample research is conducted around ESG, there is little to no research showing the impact of ESG on consumer behaviour in the FMCG sector. This study fills that gap by providing insights into how ESG practices influence consumer preferences and purchasing decisions while highlighting how foreign national consumers influence Indian consumers when considering ESG practices for their buying behaviour. The findings offer valuable contributions to both academic literature and practical business strategies. The beneficiaries will include FMCG companies planning to introduce ESG initiatives and win the consumers' trust (Tripopsakul & Puriwat, 2022). Companies need to understand the impact of each ESG pillar when taking initiatives and informing their customers about the same thing. The researcher would also help the marketers communicate the relevant ESG initiatives through the proper communication channels to get the trust and loyalty of their customers. It can also create awareness among consumers and make them aware of ESG reporting.

## TITLE: Indian Family Firm Board Structure and Their Corporate Philanthropy in an Emerging Market

**AUTHOR:** Abhisek Verma

**ABSTRACT**

**Background and Introduction:**

Indian family firms (IFF) had consistently allocated a portion of their profits towards social welfare initiatives for a significant period, even before India gained independence (Ashwin et al., 2015; Bhatnagar, N et al. 2020; Chahal, H et al., 2020). Post-independence, they actively participated in constructing the nation and played a prominent role in expanding the Indian domestic market. The market reforms implemented in 1991 facilitated IFF's expansion and partnership opportunities in the global market. The new family members on board (Millennials—born 1981 to 2000) consider that an opportunity to grow their family business geographically.

However, corporate philanthropy at the IFF centered around family religious beliefs and values, highlighting the family's tradition of caring for the health and education of the deprived sections of society. Some family firms (FF) reserve their family religious beliefs, and therefore, they have considerably contributed to secular causes for purely social reasons. Some companies are reluctant to donate or engage in social welfare activities. Historically, IFF fulfills its social responsibilities by making religious donations and constructing public infrastructure that specifically addresses the health and educational needs of the underprivileged segments of society. This profit-sharing for public goods endorses their family's beliefs as a value-based, business-oriented household. Some families have shared their profits with local civic bodies that do not specifically reveal their family values. Another type of FF has shown the slightest interest in sharing their profits for public welfare. With the enactment of the Companies Act 2013 by the Ministry of Corporate Affairs, the Government of India (GoI) initiated one of the world's most extensive experiments to introduce CSR as a mandatory provision by imposing a statutory obligation of 2% of net annual profit on companies covered under section 135 to take up CSR projects towards social welfare 2 activities. Previously, companies were reluctant to reveal their net annual income to minimize their tax liability.

**Purpose:**

Hence, this study aims to investigate IFF's corporate philanthropy initiatives in an emerging market. The board members continue to explore better avenues in emerging markets for their family businesses while considering family values to cater to the larger society. It is, therefore, essential to learn whether the board's structure fosters or deviates from family philanthropy for profit sharing. The existing management literature on the board structure of family-owned businesses in emerging markets mainly focuses on European and United States (US) experiences (B Oba et al., 2014; S Sikandar, W Mahmood, 2018; MF Basheer et al., 2021). Some literature has covered the emerging market experiences of developing countries (Teixeira S. et al., 2020; Cha et al., 2021; Mariani M. et al., 2023). However, studies mainly cover the cross-national FF. Therefore, this study magnifies IFF's board structure and response to philanthropic activities in an emerging market between 2017 and 2023. Previous work documented the activities of family firms (FF) until 2016 (Sahasranamam et al., 2020). The year 2020-2021 data on the pandemic is kept constant.

**Design/Methodology/Approach:**

We examine the annual reports from 2017 to 2023 of IFF listed in the National Stock Exchange of India to learn the piece of profit donated to philanthropy and a share of profit to build a skilled workforce. We apply the stewardship and stakeholder theories to explain the link between board structure and philanthropic activities. We use regression analysis to test our subsequent hypothesis:

H1: The IFF's board structure supports their families' corporate philanthropy.

H2: The board members of IFF consider the CSR activities to align with their family values.

H3: The board structure considers IFF philanthropic endeavors in high-risk emerging markets.

**Findings:**

Our study supports all the hypotheses that the board structures of IFF endorse corporate philanthropic activities. It also positively supports the fact that board members of IFF consider CSR activities to be something that fulfills and promotes their cherished family values and 3 traditions. The test also claims that philanthropic activities through CSR are now widely used to build competitive advantage and project family businesses in a high-risk emerging market. Interestingly, more IFFs are willing to share their profit for innovation and skill development programs as a significant measure to support both the firm's non-profit ambitions and government initiatives under the National Policy for Skill Development & Entrepreneurship (NPSDE), 2015.

**Scope and limitations:**

This work studies the composition of board members in the IFF and their approach toward family philanthropic activities. As existing research suggests, the board composition of Indian family businesses endorses their family religious values of sharing profit, and a significant number of them now look to spend their share of profit to enhance skills for a better workforce. Family businesses and values are contextually different in Europe, the US, and developing countries like India. Also, Millennial members of boards in developed societies have different experiences from those of board members in developing societies like India. In India, FFs are carried mainly by immediate members for whom internal decisions are sacrosanct rather than relying on independent external members on board. Therefore, this study tries to understand 2% of the IFF's profit distribution towards corporate philanthropy and skill development in an emerging market.

**Importance and managerial implications:**

As the FF does not just participate in CSR activities, they actively use them as a strategic tool to portray their family business and practice philanthropic values as a competitive advantage. Therefore, it is essential to learn what makes the board members participate or practice nuanced ideas to propagate their family traditions by sharing profits. This study helps to know the IFF's contribution towards CSR activities; the critical portion of their profit board members approve to spend on family philanthropic activities and enhancing skills for gainful employment. The effort is to access the FF board members' initiatives to carry their businesses competitively.

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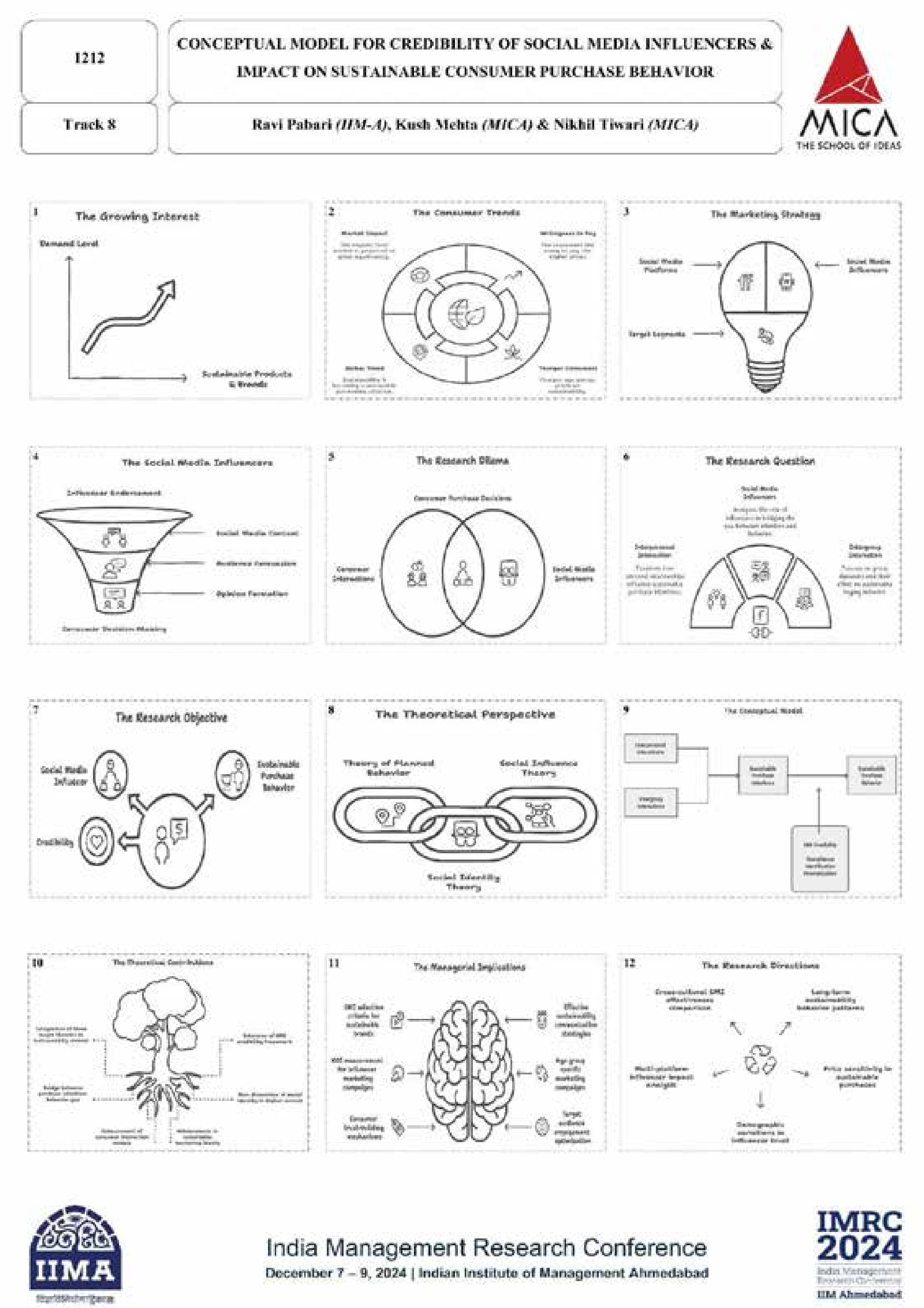
# TITLE: Conceptual Model For Credibility Of Social Media Influencers & Impact On Sustainable Consumer Purchase Behavior

**AUTHORS:** Ravi Pabari, Kush Mehta and Nikhil Tiwari



# TITLE: Navigating Ethical Complexities in CSR and ESG: A Multi-Stakeholder Analysis

**AUTHORS:** Saurabh Khakhkhar and Dr. Parag Rijwani

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## Navigating Ethical Complexities in CSR and ESG: A Multi-Stakeholder Analysis

Track No : 08

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**Objective** :Analyze ethical complexities in CSR and ESG through a multi-stakeholder perspective.

**Context:** CSR and ESG are vital for responsible business and long-term value creation.

CONTEXT

**Focus:** Incorporates views from specialists, executives, academicians, and workers.

**Data Collection:** Qualitative data collected through in-depth interviews and structured discussions with CSR/ESG specialists, company executives, academicians, and workers.

**Participants:** Sample size: 11 CSR/ESG specialists, 29 company executives, 34 academicians, 23 workers (total 134 qualitative responses).

**Framework:** Utilized multi-stakeholder analysis to explore ethical complexities in CSR and ESG.

**Key Findings**

- Ethical CSR and ESG practices **significantly influence organizational reputation and stakeholder trust.**
- Operational and external challenges **hinder effective implementation** despite recognized importance.
- **Positive outcomes include enhanced employee engagement and improved financial performance.**
- Effective integration of CSR and ESG practices **strengthens alignment with societal expectations and organizational goals.**

**Discussion and Implications**

- Balancing profit with ethical CSR and ESG goals **requires clear frameworks and priority alignment.**
- Transparent KPIs and metrics **enhance accountability and measurable impact.**
- Addressing implementation barriers **demands practical strategies and cross-department collaboration.**
- Organizations should **embed agility to adapt swiftly to societal and regulatory shifts.**
- Policymakers can drive adoption by **offering incentives for ethical, sustainable practices.**


**primary challenges encountered when implementing CSR and ESG projects**


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# AWARDS AND RECOGNITIONS

The conference presented the following awards for the Best Paper, Best Case Study, and Best Doctoral Research (with the first author being a doctoral student), each carrying a prize of ₹25,000, to qualifying entries.

**Doctoral Student Papers:**

1. Title: "Analysing the impact of corporate social responsibility on the environmental performance of manufacturing firms in India: the role of sustainability disclosures and ISO 14001 certification"
   Authors: Baikunthanath Sahoo, Santosh Kumar Sahu, and Krishna Malakar

2. Title: "On Forest, Environmental Policies, and Rainfall: Evidence from India's National Forest Policy"
   Authors: Neeraj Katewa, Lavanya, and Shreya Mishra

**Industry Case/ Research Papers:**

1. Title: "Corporate Sustainability on a Crossroad: The Case of Sunbird Straws"
   Authors: Pallavi Datta, Yugantar Singh and Shailavi Modi

2. Title: "Market Preparedness For Policy Interventions Towards Domestic Sustainable Markets: A Study On Thai Rice Supply Chain"
   Authors: Gideon Balasingam, Rebecca Anns, Shobana Subramanian, and Deepthi Krishnan

**Research Paper:**

1. Title: "Board Gender Diversity and Climate Risk Disclosure"
   Authors: Abhinav Anand, Jalaj Pathak, Arun Upadhyay, Chi Zhang

# EXPRESSION OF GRATITUDE

## Acknowledgements

CSCG extends its sincere gratitude to the following individuals for their invaluable contributions to the conference:

- Prof. Rohini Pande for delivering the Keynote Address
- All the panellists for their participation and valuable insights: Mr. Alpan Raval, Mr. Atul Mittal, Mr. Chetan Savla, Mr. P.S. Narayan, Prof. Rohini Pande and Mr. Syed Farhan
- All the moderators for skillfully moderating the sessions: Prof. Anish Sugathan, IIMA; Prof. Rama Mohana Turaga, IIMA
- All the faculty for conducting workshop sessions: Prof. Adrija Majumdar and Prof. Anirban Adhikary
- All the event guests, attendees, participants, presenters, volunteers and all the Ph.D., PGP and PGPX students for their active participation.

## Testimonials

"I really enjoyed this prestigious conference. Look forward to having more such occasions".

**- Manish Ranjan**
Participant

"The conference was thought-provoking and guided further research activity. We wish the Centre more academic success".

**- Nithin.K.Warrier**
Participant

"It was a well-organised event. Personally, it was worth the effort to travel from Bangalore for this conference. I will look forward to greater collaborations in the future".

**- Suneeta Hegde**
Participant

# CONCLUDING REMARKS

The India Responsible Capital Conference 2024 (IRCC 2024) successfully built upon the legacy of its inaugural edition, emerging as a pivotal platform for advancing discussions on corporate sustainability, corporate governance, and responsible capital. Organized by the Centre for Sustainability and Corporate Governance Research (CSCG) at IIM Ahmedabad, the conference brought together a diverse group of academicians, researchers, policymakers, and industry leaders to foster a multidisciplinary dialogue on the evolving landscape and to address some of the most pressing challenges in these pivotal topics. Over three days of engaging sessions, IRCC 2024 provided a comprehensive exploration of innovative ideas, actionable insights, emerging trends and interdisciplinary approaches to tackle global and local sustainability issues.

The conference delved into critical themes such as voluntary carbon markets, sustainable finance, clean technology solutions, corporate governance, and environmental policy. The keynote address set the stage by providing a sharp analysis of voluntary carbon markets, emphasizing their potential to bridge the gap between high-emitting nations and low-income countries while addressing challenges related to additionality, market credibility, and equitable resource allocation. Panel discussions further enriched the discourse by addressing sector-specific sustainability challenges, corporate strategies for climate action, and the transformative role of AI-driven solutions in optimizing ESG reporting and supply chain emissions tracking.

Workshops on text mining applications for management research and AI's role in addressing critical sustainability challenges equipped participants with practical tools and methodologies to address real-world challenges. These workshops demonstrated how advanced technologies could be leveraged to enhance ESG analysis, improve data transparency, and highlighted how advanced technologies can be effectively integrated into sustainability strategies to drive impactful decision-making.

Papers presented by PhD scholars, faculty members, and practitioners covered a wide range of topics such as climate economics, corporate social responsibility (CSR), sustainable finance, and environmental governance. These presentations provided both quantitative and qualitative insights into emerging trends in sustainability while offering practical solutions to pressing challenges. Poster presentations further enriched the discourse by showcasing innovative ideas and projects aimed at advancing responsible capital initiatives. The recognition of outstanding contributions through awards further underscored the conference's commitment to fostering excellence in research and practice. The conference underscored that achieving meaningful progress requires collective action from corporates, governments, nonprofits, researchers, and academics alike.


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