



# RNS FIRST GRADE COLLEGE

(A Unit of R N Shetty Trust)

An Autonomous Institution Affiliated to Bangalore University

NAAC Accredited with 'A' Grade

Dr. Vishnuvardhan Road, Channasandra, R R Nagar, Bengaluru-560098



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Dr. R N Shetty  
Founder

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**A National Student Research  
Conference**

**on**

**“Innovating a Sustainable Future:  
Business, Technology and Society.”**

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**DEPARTMENT OF MBA**

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Bengaluru-560098



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# Sustainable Marketing in The Digital Age: A Study of Millennials and Gen Z

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## Abstract

In the digital age, sustainability has become an important consideration influencing marketing strategies and consumer purchasing behaviour. Brands increasingly use digital platforms to communicate eco-friendly initiatives and responsible business practices. This study aims to examine how sustainable marketing in the digital environment influences eco-friendly consumer behaviour, with a comparative focus on Millennials and Generation Z consumers in India. The primary objective of the study is to analyse and compare the level of awareness, perception, and responsiveness of Millennials and Gen Z toward sustainable marketing initiatives communicated through digital channels such as social media, online advertisements, influencer marketing, and e-commerce platforms. A descriptive research design is proposed, and primary data will be collected through a structured online questionnaire administered to respondents from both generations. Simple statistical tools such as percentage analysis will be used to interpret and compare consumer responses. The study seeks to explore generational differences in trust toward sustainability claims, the influence of digital content and influencers, and willingness to support eco-friendly brands. It also intends to examine consumer perceptions regarding the authenticity of sustainability messages and concerns related to greenwashing in digital marketing. The research is expected to provide meaningful insights into how digital sustainable marketing strategies can influence responsible consumption patterns among Millennials and Gen Z. The findings may help marketers and businesses design targeted, transparent, and ethical digital marketing campaigns that effectively promote eco-friendly consumer behaviour while supporting long-term sustainability goals.

**Keywords:** Sustainable Marketing, Digital Marketing, Eco-Friendly Consumer Behaviour, Millennials, Generation Z



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## A Study on Green Leadership and Its Influence on Green HRM Practices

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### Abstract

**Purpose of the research:** This study explores the concept of green leadership and examines its influence on the adoption and effectiveness of Green Human Resource Management (GHRM) practices within organizations. The research focuses on how leadership commitment toward environmental sustainability affects key GHRM practices such as green recruitment, training and development, performance appraisal, and reward systems. It investigates the extent to which leaders who demonstrate eco-conscious values and behaviours can embed sustainability into HR policies and influence employees to support environmental goals.

**Methodology:** A quantitative research design was employed, with data collected from employees and HR professionals across selected organizations. Statistical tools were used to analyse the relationship between green leadership and the implementation of GHRM practices. The findings reveal that strong green leadership positively influences the consistency and seriousness with which GHRM practices are applied, thereby strengthening organizational environmental initiatives.

**Principal findings:** The study reveals that green leadership plays a significant role in strengthening Green Human Resource Management practices within organizations. Leaders committed to environmental sustainability effectively integrate green values into recruitment, training, performance appraisal, and reward systems, thereby encouraging eco-friendly employee behaviour. The findings are based on responses collected from a sample size of 80 respondents, reflecting consistent support for the influence of leadership on sustainability initiatives. Overall, the study highlights that effective green leadership is essential for embedding environmental responsibility into HR practices and achieving long-term organizational sustainability.

**Major conclusions:** The study concludes that green leadership plays a strategic role in translating sustainability vision into actionable HR practices. By fostering a supportive environment for green HRM, leaders can enhance employee engagement in sustainability efforts and improve overall organizational performance. The research provides valuable insights for managers, HR practitioners, and MBA students seeking to integrate leadership and human resource strategies with long-term environmental sustainability goals.

**Keywords:** Green Leadership, Green Human Resource Management (GHRM), Environmental Sustainability, Sustainable HR Practices, Leadership Commitment, Organizational Culture.



## Impact of AI-Enabled HR Training Platforms on Employee Environmental Awareness and Sustainable Work Practices

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### Abstract

**Purpose** – The purpose of this study is to examine the impact of AI-enabled HR training platforms on employee environmental awareness and the adoption of sustainable work practices. The study aims to assess how AI-driven training interventions influence employees' understanding of environmental responsibility, promote pro-environmental attitudes and behaviours at the workplace, and function as a Green HRM practice, while evaluating their overall contribution to organizational environmental sustainability.

**Design/Methodology/Approach** – This study adopts a quantitative research design. Primary data will be collected through structured questionnaires administered to employees and HR professionals from organizations using AI-enabled HR training platforms, supported by secondary data sources. The questionnaire measures environmental awareness, effectiveness of AI-based training, adoption of sustainable work practices, and its role as a Green HRM initiative. Statistical tools such as percentage analysis, correlation, regression, and ANOVA are used to examine relationships and measure impact.

**Findings** – The findings indicate that AI-enabled HR training platforms positively influence employee environmental awareness and the adoption of sustainable work practices. AI-driven training enhances understanding of environmental responsibility and promotes pro-environmental behaviour at the workplace. Regression analysis confirms a positive relationship between AI-enabled training and sustainable practices, highlighting its role as an effective Green HRM initiative supporting organizational environmental sustainability.

**Social Implications** – The study highlights the role of AI-enabled HR training in fostering environmental responsibility and sustainable behaviour among employees. It suggests that digital, personalized training can build eco-conscious mind sets, encourage responsible resource use, and support inclusive learning. The findings encourage organizations to adopt AI-driven Green HRM practices that balance technological advancement, employee development, and social and environmental sustainability.

**Originality/Value** – The originality of this research lies in examining AI-enabled HR training platforms through a Green HRM lens by linking artificial intelligence, employee environmental awareness, and sustainable work practices. The study contributes new empirical evidence from the Indian organizational context, highlighting how AI-driven training can be strategically leveraged to promote environmental sustainability and responsible employee behaviour.

**Key words** – AI-enabled HR training, environmental awareness, sustainable work practices, Green HRM, organizational sustainability.



## Integrating ESG Principles into Brand Management: A Framework for Ethical and Eco-Friendly Marketing Strategies

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### Abstract

**Purpose of the Research:** This study aims to investigate how Environmental, Social, and Governance (ESG) principles can be systematically integrated into brand management to foster ethical, eco-friendly marketing strategies and enhance stakeholder value. Specifically, it seeks to develop a conceptual framework linking ESG criteria with brand identity, assess its influence on consumer perceptions, and evaluate its impact on trust, loyalty, and reputation.

**Methodology:** A quantitative research design was employed using a structured online questionnaire distributed to 230 consumers aged 18–45 who are familiar with sustainability-oriented brands. The instrument measured respondents' perceptions of ESG integration, ethical marketing practices, and brand outcomes using validated 5-point Likert scales. Data were analyzed through descriptive statistics, reliability testing, correlation, and multiple regression analysis in SPSS.

**Principal Findings:** Results reveal a statistically significant positive relationship between perceived ESG integration and consumer trust. Ethical marketing practices—such as transparent sourcing, inclusive messaging, and eco-conscious packaging—significantly mediate the link between ESG alignment and brand loyalty. Additionally, governance transparency strongly predicts corporate reputation.

**Major Conclusions:** Authentic ESG integration—not merely promotional claims—is critical for building credible, resilient brands. The proposed framework offers marketers a practical roadmap to embed sustainability and ethics into core branding activities, thereby strengthening stakeholder relationships and competitive differentiation. For student researchers and practitioners alike, this study affirms that purpose-driven branding, grounded in genuine ESG commitment, is pivotal to long-term brand success in a socially conscious marketplace.

**Keywords:** ESG integration, brand management, ethical marketing, consumer trust, sustainable



## HR Policies Supporting Green HRM Practices for Effective Organizational Climate

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### Abstract

Green Human Resource Management (Green HRM) has emerged as a strategic approach that integrates environmental objectives into HR policies and practices, thereby fostering a supportive and responsible organizational climate. This paper examines how HR policies supporting Green HRM practices contribute to the development of an effective organisational climate. It focuses on key HR functions such as green recruitment and selection, eco-friendly training and development, performance appraisal linked to environmental goals, and reward systems that encourage sustainable behavior among employees. By embedding environmental values into HR policies, organizations can promote employee awareness, engagement, and commitment towards environmental sustainability. Such practices enhance job satisfaction, strengthen organisational culture, and build a positive organisational climate characterized by trust, shared values, and environmental responsibility. The study highlights that well-designed Green HRM policies not only improve environmental performance but also support long-term organisational effectiveness and competitiveness. The paper focuses on the fact that HR policies aligned with Green HRM play a crucial role in shaping an environmentally conscious organisational climate, enabling organizations to achieve sustainable growth and social legitimacy. In the contemporary business environment, organizations are increasingly recognizing the importance of sustainability not only in operations but also in human resource management. Furthermore, the paper emphasizes that environmentally responsible HR policies strengthen organisational reputation and contribute to sustainable competitive advantage. HR practices that promote eco-friendly recruitment, training, and performance appraisal encourage employees to adopt environmentally responsible behavior at the workplace. Integrating environmentally sustainable into HR policies help create a positive organizational culture and strengthens employee's commitment to green initiatives. Green human resources management create an organizational climate that is supportive, responsible, and employee-friendly, leading to improve organisational effectiveness. When employees follow green practices, they develop shared environmental values, which strengthen organisational culture. Additionally, Green HRM practices foster a positive organisational climate by promoting shared environmental values, employee engagement, and a sense of responsibility towards sustainable development. Such a climate enhances trust, collaboration, and employee morale, thereby supporting long-term organisational effectiveness.

**Key words:** Strategic Approach, Sustainability , Legitimacy



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## Leadership And Innovation for Sustainable Organization

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### Abstract

This study examines the role of leadership in driving sustainable innovation within organizations. The main purpose of the research is to understand how leadership styles, behaviours, and strategic decisions influence the adoption of innovative practices that support long-term environmental, social, and economic sustainability. In today's competitive and environmentally conscious business environment, leaders play a critical role in shaping organizational culture, motivating employees, and allocating resources toward sustainable innovation. The research uses a primary data collection approach through a structured questionnaire survey. Data were collected from employees and managers working in various organizations across different sectors. The questionnaire focused on leadership style, support for innovation, employee involvement, sustainability practices, and organizational performance. Descriptive and basic statistical analysis methods were applied to interpret the data and identify patterns and relationships between leadership behaviours and sustainable innovation outcomes. The principal findings indicate that transformational and participative leadership styles have a strong positive impact on sustainable innovation. Leaders who encourage creativity, provide clear vision, and involve employees in decision-making are more successful in promoting eco friendly practices and innovative solutions. The study also finds that organizational support, training programs, and open communication further strengthen the link between leadership and innovation. The major conclusion of the study is that effective leadership is a key driver of sustainable innovation. Organizations that invest in leadership development and foster a supportive innovation culture are more likely to achieve long-term sustainability goals. The research highlights the importance of aligning leadership strategies with sustainability objectives to ensure continuous innovation and responsible growth.

### Keywords:

Leadership, Sustainable Innovation, Organizational Sustainability, Transformational Leadership, Innovation Culture



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## Impact Of Digital Transformation on Sustainable Business Practices

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### Abstract

The increasing environmental issues, social responsibilities concerns and economic uncertainties have made sustainable business practices to gain greater significance to organizations. Simultaneously, the fast development of the digital technologies has changed the business model and competition. Digital transformation with the implementation of data analytics, cloud computing, automation, and digital platforms is now considered an effective strategic tool that can help maintain long-term sustainability. This paper looks at how digital transformation can be used to improve sustainable business practices. The primary goal of the research is to examine the effects of digital transformation on the environmental sustainability, economic performance, and the overall corporate sustainability (ESG performance). The study is aimed at discerning the extent to which enhancing digital adoption can enable companies to minimize the environmental risks and enhance financial performance and sustainability development objectives. The research relies on the secondary data that will be gathered in the publicly listed multinational corporations in various industries. The digital transformation is also measured in terms of indicators like the digital revenue share and IT investment, and the environmental sustainability is measured in terms of environmental risk score provided by the ESG rating agencies. Economic performance is measured using financial measures such as profit margin, return on assets and return on equity. The main analytical tool that is applied to analyze the relationships between the variables is the correlation analysis. The results indicate that digital transformation and environment risk are moderately negatively associated, meaning that the more digital a firm is, the more positive the environmental performance of the firm is. Moreover, there is also a high positive correlation between the investment in IT and the profit margin, implying that the digital transformation plays a significant role in enhancing the economic performance. The findings also show that digitally developed companies achieve enhanced overall corporate sustainability performance. The paper concludes that digital transformation is important in the enhancement of sustainable business practice in terms of environmental management, financial performance, and corporate sustainability objectives. The study adds to the already existing literature by offering an empirical research on the sustainability benefits of digital transformation, and also valuable insights to managers and policymakers aiming at attaining sustainable development through digital innovation.

**Keywords:** Digital Transformation; Sustainable Business Practices; Environmental Sustainability; Economic Performance; Corporate Sustainability (ESG)



## A Study on Juvenile Delinquency

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### Abstract

Juvenile delinquency has emerged as a serious social concern affecting the moral and social fabric of society. The present study aims to examine the nature, causes, and patterns of juvenile delinquency in Tumakuru district, with specific focus on the demographic profile of juvenile offenders, types of crimes committed, and the role of the Juvenile Justice Board (JJB) in handling such cases. The study also seeks to understand the influence of family environment and socio-economic conditions on juvenile behaviour. A descriptive research design with a qualitative approach was adopted for the study. Primary data were collected through interviews with the Principal Magistrate Director and members of the Juvenile Justice Board, Tumakuru. Purposive sampling was used, as the study required expert insights. Descriptive statistical tools were applied using Microsoft Excel for analysis. The findings reveal that out of 110 juvenile cases studied, the majority involved heinous offences, followed by petty offences, with very few serious offences. Boys aged between 15 and 18 years constituted the highest proportion of offenders. Traffic rule violations accounted for the largest share of crimes, followed by assault, sexual offences, theft, and murder. Most juveniles belonged to lower middle-class labour families, indicating a strong link between poverty, parental negligence, and delinquent behaviour. Notably, the study found no evidence of drug addiction or psychological illness among the juveniles, emphasizing the dominant role of environmental and family-related factors. Approximately 15% of juveniles discontinued their education after committing offences. The study concludes that juvenile delinquency is largely influenced by socio-economic instability and weak family support systems. It highlights the importance of preventive strategies, parental awareness, educational continuity, and a reformatory justice approach to ensure effective rehabilitation and long-term social reintegration of juveniles.

### Keywords:

Juvenile Delinquency, Juvenile Justice Board, Family Environment, Rehabilitation, Socio Economic Factors.



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## Legal Literacy as a Pillar of Ethical Governance and Social Sustainability: A Study of Tumkuru Citizens

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### Abstract

Legal literacy is a critical component of ethical governance and sustainable societal development in a democratic country like India. Awareness of legal rights, laws, and procedures enables citizens to demand accountability, promote transparency, and participate effectively in governance. This study examines the level of legal literacy among citizens of Tumkuru district and analyses its role in strengthening ethical governance and social sustainability.

The study adopts a descriptive research design based on primary data collected from 114 respondents representing both rural and urban areas of Tumkuru district through a structured questionnaire. The research assesses awareness related to fundamental rights, the Indian Constitution, Domestic Violence Act, Consumer Protection Act, POSH Act, IT Act, and procedural aspects such as filing First Information Reports (FIRs). Data were analysed using simple statistical tools, including percentages and graphical representation.

The findings reveal a moderate level of legal literacy among respondents, with higher awareness of protective and social laws such as the Domestic Violence Act, Consumer Protection Act, and POSH Act. However, limited understanding of certain legal provisions, complex legal language, court delays, high legal costs, and fear of legal authorities were identified as major barriers to accessing justice. The study also highlights the significant role of education, media, and social platforms in spreading legal awareness.

The study concludes that enhancing legal literacy is essential for promoting ethical governance, reducing inequality, and ensuring long-term social sustainability. Strengthening legal awareness programs, simplifying legal procedures, and providing local-language support can empower citizens and contribute to transparent, accountable, and ethical management practices.

### Keywords:

Legal literacy, Ethical governance, Access to Justice, Social sustainability, Inclusive growth



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## From Linear Disposal to Circular Solutions: Strategic Approaches to Menstrual Pad Waste in India

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### Abstract

The problem of sanitary pad disposal in India is an increasingly complex environmental issue, fueled by increasing use, high plastic content, and a lack of disposal options (Kaur et al., 2018; Elledge et al., 2018; Sudhakar, 2025). The main disposal practices of sanitary pads in India are landfilling and small-scale incineration (Elledge et al., 2018; Sudhakar, 2025). Although incineration practices can lead to short-term waste reduction, there are concerns about environmental persistence, greenhouse gas emissions, and the release of toxic pollutants when such practices are carried out in suboptimal conditions (Elledge et al., 2018; Sudhakar, 2025). Resource recovery practices based on recycling for sanitary waste have started to gain prominence; however, their use is still limited (Sudhakar, 2025). This study investigates the strategic considerations that underpin the large-scale implementation of disposable menstrual pad recycling in India by combining secondary evidence from peer-reviewed literature. By employing a comparative analytical framework, this discussion assesses landfilling, incineration, and recycling alternatives on the basis of critical parameters such as environmental sustainability, technological feasibility, cost-effectiveness, and institutional preparedness (Sudhakar, 2025). This analysis is presented in the context of an urban setting by employing examples of institutional and commercial-scale recycling projects that have been implemented in Bengaluru to illustrate the feasibility of implementation at the city level (Sudhakar, 2025). In this scenario, new approaches such as those proposed by PadCare Labs are employed to illustrate the challenges and opportunities associated with scaling up recycling-based interventions. From the study, key barriers to the widespread adoption of the solution have been identified, including fragmented waste collection systems, lack of clarity in sanitary waste regulation, high initial infrastructure costs, and lack of institutional awareness (Sudhakar, 2025; Elledge et al., 2018). The conclusion is that urban collection systems, extended producer responsibility, and the circular economy can help to ensure that strategic decisions are made, which will enable the scaling up of the environmentally sustainable menstrual waste recycling practices from the current city-level implementation to the wider regional and national level (Sudhakar, 2025; Sreekumar & Pandey, 2024).

**Key words:** Menstrual waste management; Disposable sanitary pads; Recycling; Incineration; Strategic decision-making; Circular economy



## Measuring Sustainability Performance of Indian Companies Using Business Analytics: Development of A Sustainability Performance Index (SPI)

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### Abstract

The concept of sustainability has become a pressing priority of companies because of the increased ecological awareness, the social importance of responsibility, and the rules of governance. Companies are now judged on the basis of their Environmental, Social and Governance (ESG) performance over and above financial performance. The purpose of the study is to evaluate the sustainability performance of the chosen Indian companies through business analytics to come up with a Sustainability Performance Index (SPI). The study lumps together environmental, social, and governance metrics into a compound index to offer a valid data-based analysis of corporate sustainability. The secondary data were gathered based on annual reports, sustainability reports, and CSR reports of five large Indian firms, that is, Tata Steel, Reliance Industries, Infosys, Hindustan Unilever, and ITC, during the years 2016 to 2025. The standardization of ESG indicators was performing a min-max normalization operation; statistical tools that were used included descriptive analysis, correlation analysis, trend analysis and correlation regression analysis. The results demonstrate that the governance and CSR expenditures have a crucial effect on the sustainability performance, whereas environmental performance is one of the challenges that have become increasingly important. The paper can be used in sustainability measurement literature as a systematic analysis framework to address performance evaluation based on ESG in new economies.

### Keywords:

(Sustainability Performance, Business analytics, ESG, Sustainability Performance Index, CSR, Indian Companies)



## **Consumer Attitudes Towards Eco-Friendly Products and Their Impact on Purchase Decisions: A Business Analytics Approach.**

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### **Abstract**

This study examines consumer attitudes towards eco-friendly products and their influence on purchase decisions using a business analytics perspective. Adopting a descriptive research design, primary data were collected from 282 consumers through a structured Google Form questionnaire, employing convenience sampling. Analytical techniques were applied to evaluate the impact of key attitudinal factors - environmental awareness, perceived product quality, pricing sensitivity, and social influence - on eco-friendly purchase behavior. The findings indicate that environmental awareness and social responsibility exert a stronger influence on purchase decisions than price considerations, highlighting a shift in consumer priorities toward sustainability-driven consumption. The results further suggest that businesses can enhance adoption of eco-friendly products by leveraging data-driven insights to build consumer trust, increase awareness, and improve product accessibility. The study contributes to sustainability and marketing literature by demonstrating how business analytics can support evidence-based strategies for promoting eco-friendly consumption.

### **Keywords:**

Consumer attitudes, eco-friendly products, purchase decisions, sustainability, business analytics, environmental awareness.



## The Role of Leadership in Driving Sustainability-Oriented Innovation

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### Abstract

Leadership is critical in driving sustainable innovation by integrating environmental, social, and economic goals into core business strategies, fostering a culture of creativity, and enabling long-term value creation. Sustainability-oriented innovation has emerged as a critical driver of long-term organisational competitiveness and responsible growth in the face of environmental, social, and economic challenges. Leadership plays a pivotal role in shaping the vision, culture, and strategic direction necessary to embed sustainability into innovation processes. This paper examines the role of leadership in driving sustainability-oriented innovation within organisations. It explores how leadership styles, particularly transformational and ethical leadership, influence organisational commitment to sustainable practices, encourage creative problem-solving, and support the integration of sustainability goals into product, process, and business model innovation. The study highlights the importance of leaders in fostering a supportive organisational culture, allocating resources for sustainable initiatives, and aligning stakeholder interests with sustainability objectives. By synthesising existing literature and conceptual insights, the paper proposes a framework linking leadership behaviours to sustainability-oriented innovation outcomes. The findings underscore that effective leadership is essential not only for initiating sustainable innovation but also for sustaining it over time, thereby contributing to organisational resilience, competitive advantage, and sustainable development.

### Keywords:

Sustainable leadership, sustainability-oriented innovation, transformational leadership, ethical leadership, organisational sustainability.



## **Role of FinTech in promoting Green Finance: A Study with reference to sustainable Financial Practices in India**

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### **Abstract**

The growing emphasis on environmental sustainability has brought Green Finance and Financial Technology (FinTech) to the forefront of sustainable economic development. Green Finance seeks to mobilize capital towards environmentally responsible investments such as green loans, sustainable funds, agricultural finance, renewable energy projects, and carbon credit trading, thereby supporting long-term economic growth. Simultaneously, rapid advancements in digital technology have transformed the financial ecosystem, with FinTech emerging as a key enabler of efficiency, transparency, and financial inclusion. This study examines the role of FinTech in promoting Green Finance in India, with a specific focus on sustainable financial practices adopted by banks, mutual funds, non-banking financial companies (NBFCs), and other investment institutions. The research analyses the relationship between FinTech adoption and the growth of sustainable investments, while also evaluating the effectiveness and challenges associated with digital green finance initiatives. The findings indicate that FinTech significantly enhances accessibility, operational efficiency, and transparency in Green Finance by reducing transaction costs and improving monitoring and reporting mechanisms. The study concludes that FinTech-driven innovations play a crucial role in supporting Environmental, Social, and Governance (ESG) objectives and accelerating India's transition towards sustainable economic development.

### **Keywords:**

Green Finance, ESG goals, Mutual funds, NBFCs



## The Strategic Imperative of Sustainability: An Integrated Framework for Modern Business Models

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### Abstract

This paper examines the paradigm shift in contemporary business, where sustainability has transitioned from a peripheral, often voluntary, concern to a central, strategic imperative for long-term value creation and organizational resilience. Moving beyond the narrow view of environmental compliance, the paper argues for a holistic conception of sustainability that integrates economic viability, environmental stewardship, and social equity into the core DNA of business models. Framed by key thematic tracks in modern management including strategy, leadership, human resources, digital transformation, and governance this research synthesizes theoretical perspectives with emerging best practices. It develops an integrated, multi-level framework for embedding sustainability, comprising strategic vision, operational integration, cultural transformation, and performance measurement. The analysis reveals that successful transition to a sustainable enterprise requires a synergistic approach: visionary leadership to champion the cause, innovative digital tools to enable efficiency and transparency, aligned HR systems to build internal capability, and robust governance to ensure accountability and ethical conduct. Ultimately, the paper contends that the pursuit of sustainability is no longer a trade-off with profitability but a powerful driver of innovation, risk mitigation, stakeholder trust, and competitive advantage in the 21st-century global economy. The findings offer a structured pathway for scholars and practitioners to navigate the complexities of this essential transformation.

### Keywords:

Sustainability Strategy, Corporate Governance, Organizational Resilience, Digital Transformation, Sustainable Value Creation



## **An Analysis of Sustainable Marketing and Responsible Brand Management in the Indian Food Industry.**

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### **Abstract**

The growing emphasis on sustainability has significantly influenced marketing strategies and brand management practices within the food industry. Food brands increasingly lean on sustainable marketing and responsible management to appeal to eco-conscious consumers, yet gaps between bold claims and reality often spark backlash. This study fills that void by examining how ethical promises stack up against sectoral practices, spotlighting deceptive tactics amid rising scrutiny. Prior work touches on perceptions but overlooks integrated case analyses of hype versus harm. Previous research demonstrates that health claims on food packaging, such as "low fat" or "heart healthy," often fail to correlate with actual nutritional quality, as shown in a 2025 analysis of 597 U.S. grocery items where claim counts did not predict better Nutri-Scores. These studies reveal that such labels can mislead consumers into selecting less healthy products, with nutrient content claims appearing frequently on processed foods high in sugars and fats despite promotional messaging. The study underscores the critical role of authenticity in sustainable branding and highlights its impact on long-term brand success in the food industry. It suggests that aligning profitability with ethical and environmental values is essential for building resilient brand equity. The findings emphasise the need for transparent and responsible practices as consumer expectations continue to evolve toward greater sustainability and accountability.

### **Keywords:**

Sustainable Marketing, Brand Authenticity, Greenwashing, Food Industry, Consumer Perception, Ethical Branding



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## Corporate Governance and Ethical Management Practices: Governance Frameworks Ensuring Ethical Conduct

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### Abstract

In the contemporary business environment, corporate governance and ethical management practices have emerged as essential factors influencing organizational sustainability and stakeholder confidence. Frequent corporate failures, ethical lapses, and governance breakdowns have emphasized the need for effective governance frameworks that promote transparency, accountability, and responsible conduct. This paper seeks to examine how corporate governance structures contribute to the adoption and strengthening of ethical management practices within organizations. The study follows a descriptive and conceptual research approach and is based on secondary data collected from academic literature, corporate governance reports, statutory regulations, and documented case studies. It focuses on key governance mechanisms such as the structure and functioning of boards of directors, the role of independent directors, audit committees, disclosure and reporting practices, and stakeholder participation. In addition, the paper analyzes ethical management practices including ethical leadership, organizational codes of conduct, whistle-blower protection mechanisms, and corporate social responsibility initiatives. The analysis indicates that organizations with well-defined corporate governance frameworks demonstrate higher standards of ethical decision-making and accountability. Effective governance mechanisms help reduce agency conflicts, strengthen internal controls, and promote a culture of integrity across organizational levels. The study also highlights the significance of Indian regulatory provisions, particularly the Companies Act, 2013 and SEBI (Listing Obligations and Disclosure Requirements) Regulations, in encouraging ethical corporate behavior and improving governance standards. The paper concludes that corporate governance and ethical management practices are closely interconnected and jointly contribute to long-term business sustainability. Ethical values must be embedded within governance structures rather than being treated solely as compliance requirements. Strengthening governance systems and ethical leadership is crucial for ensuring responsible organizational conduct and maintaining societal trust.

**Keywords:** Corporate Governance, Ethical Management, Corporate Ethics, Board Accountability, Sustainable Business Practices.



## **A Study on Consumer Perception and Buying Behavior Towards Organic Food Products with Reference to Bengaluru City**

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### **Abstract**

This study aimed to assess consumer perception and buying behaviour towards organic food products in Bengaluru city. The objectives were to examine the level of consumer awareness, identify the factors influencing purchase decisions, analyse the relationship between consumer perception and buying behaviour, and provide suggestions to promote organic food consumption. The research methodology involved a survey of 100 consumers using a structured questionnaire, supported by secondary data from journals, articles, and reports. The key findings revealed that consumers generally hold a positive perception towards organic food products due to perceived health benefits, nutritional value, and chemical-free nature. However, factors such as higher prices, limited availability, and affordability constraints significantly influenced buying behaviour. Although awareness levels were high, regular purchase of organic food products remained limited. By addressing pricing issues, improving accessibility, and strengthening consumer awareness initiatives, stakeholders can enhance organic food consumption and support sustainable food practices, thereby contributing to improved consumer health and long-term market growth.

### **Keywords:**

Organic Food Products, Consumer Perception, Buying Behaviour, Consumer Awareness, Purchase Decision Factors, Sustainable Consumption, Bengaluru City



## **Navigating To automation shift: An analysis of employees Attitude towards cross domain skill development in manufacturing sector with reference Bangalore city**

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### **Abstract**

The rapid adoption of automation technologies in the manufacturing sector has significantly transformed job roles, skill requirements, and work processes. This study examines employees' attitudes towards automation and cross-domain skill development in manufacturing organizations with reference to Bangalore city. The research focuses on understanding employees' perceptions, willingness to acquire new skills beyond their traditional job roles, and the influence of organizational support on their adaptability to technological change. Primary data were collected through a structured questionnaire administered to employees working at different functional levels in manufacturing firms. The findings of the study highlight that while automation enhances efficiency and productivity, it also creates concerns related to job security and skill obsolescence. However, positive attitudes are observed among employees who perceive strong management support, training opportunities, and career growth prospects. The study concludes that effective reskilling initiatives and supportive organizational policies are essential for ensuring successful automation implementation and sustaining employee engagement in the evolving manufacturing environment.

### **Keywords:**

Automation Technologies, Employee Attitudes, Skill Development, Manufacturing Sector, Organizational Support, Job Security, Bangalore City



## Marketing with Purpose: Responsible Brand Management for a Sustainable Future

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### Abstract

Marketing with Purpose: Responsible Brand Management for a Sustainable Future addresses the growing expectation that brands align commercial goals with ethical, social, and environmental responsibilities amid heightened stakeholder scrutiny, regulatory pressure, and sustainability challenges, including risks of greenwashing and purpose-washing and limited standardised metrics for responsible brand performance. Grounded in Stakeholder Theory and the Triple Bottom Line, and further informed by Corporate Social Responsibility, Sustainable Development, and Brand Equity theories, the study aims to clarify the key concepts and dimensions of responsible brand management, examine how sustainability principles are integrated into brand management within academic discourse, and evaluate how purpose-driven marketing contributes to long-term brand value and sustainable outcomes. Using a qualitative, non-empirical, desk-based design, the analysis constructs a textual corpus from the manuscript's Introduction and Literature Review and applies NLP-based computational text analysis (tokenisation, normalisation, stopword removal, lemmatisation), unsupervised topic modelling via Latent Dirichlet Allocation, and Principal Component Analysis of the topic-term structure, complemented by deductive-inductive thematic synthesis and Graphviz-based thematic tree visualisation. The extracted topics map a multidimensional discourse linking strategic branding, ethical responsibility, stakeholder engagement, internal organisational alignment (including employee role in delivering brand promises), and sustainability-oriented outcomes, indicating a shift from symbolic claims toward embedded, performance-linked practices. PCA yields three higher-order clusters: a strategic-performance orientation (19.44% variance) emphasising credibility, trust, outcomes, and long-term performance; a stakeholder-ethical responsibility orientation (16.75%) emphasising social accountability and engagement; and a theoretical-conceptual orientation (15.21%) anchoring legitimacy in scholarly and normative foundations. The thematic tree consolidates six interrelated domains—strategic purpose integration, ethical/responsible practices, sustainability orientation, stakeholder-centric management, brand equity/legitimacy outcomes, and theoretical-scholarly foundations—supporting the conclusion that responsible brand management is a systemic



managerial process that can strengthen legitimacy, trust, and enduring brand equity when purpose is authentically embedded and evidenced.

***Key words:***

Responsible Brand Management, Sustainability, Stakeholder Theory, Triple Bottom Line, Corporate Social Responsibility and Brand Equity



## **Sustainable Marketing and Responsible Brand Management: Promoting Ethical and Eco-Friendly Brands**

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### **Abstract**

In recent years, sustainability has moved from being a secondary concern to a core business responsibility, especially in the areas of marketing and brand management. Consumers today are more informed and increasingly prefer brands that demonstrate ethical behavior and environmental responsibility. This research paper examines the role of sustainable marketing and responsible brand management in promoting ethical and eco-friendly brands. The study focuses on how practices such as ethical sourcing, transparent communication, environmentally friendly packaging, and socially responsible initiatives influence brand image and consumer trust. A conceptual research approach has been adopted, drawing insights from existing literature, management theories, and real-world business practices. The analysis indicates that brands that genuinely integrate sustainability into their marketing strategies are more likely to build long-term customer relationships, enhance brand credibility, and maintain a positive market reputation. At the same time, the study highlights certain challenges, including increased operational costs and the growing concern of greenwashing, which can damage consumer confidence if sustainability claims are not supported by actual practices. The study also shows that sustainable marketing is not merely a trend but a long-term strategic approach that helps organizations balance business growth with ethical responsibility and environmental care.

### **Keywords:**

Sustainable Marketing, Responsible Brand Management, Ethical Branding, Eco-Friendly Brands, Sustainability.



## **A study on Driving Sustainable Manufacturing through Data Visualization and analytics: A Power BI Approach**

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### **Abstract**

Manufacturing companies are under increasing pressure to adopt sustainable practices and increase operational efficiency in the competitive and resource-constrained environment of today. By converting unprocessed operational data into insightful information, data analytics and visualization tools are essential to achieving these objectives. This study investigates how enhanced operational control and decision-making can promote sustainable manufacturing through the use of Power BI, a business intelligence and data visualization tool. Faster reporting, better data accuracy, and increased transparency across various management levels are all made possible by Power BI, according to the study. Manufacturing companies can support long-term sustainability and efficiency by switching from reactive to proactive and predictive decision-making through data-driven insights. The results highlight how Power BI data visualization is a strategic enabler for sustainable manufacturing practices as well as a tool for performance monitoring.

**Keywords:**Sustainable Manufacturing, Data Visualization, Business Intelligence, Power BI, Data-Driven Decision Making, Operational Efficiency.



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## Optimizing Sustainable Human Resource Management through AI-Driven Predictive Analytics and Data-Driven Decision Models

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### Abstract

Sustainable Human Resource Management (SHRM) is a vital strategic role that organizations now face as an attempt to balance between economic performance and social responsibility and well-being of the working population in the long-run. The recent accelerated development of Artificial Intelligence (AI) and sophisticated data analytics has allowed shifting HR managers to make decisions based on intuition to a realm of prediction and evidence. This article discusses how SHRM practices can be optimized and organizational sustainability should be improved using AI-driven predictive analytics and data-driven decision models. It examines the use of machine learning algorithms, predictive modeling, and HR analytics in some of the main HR areas of talent acquisition, employee retention, performance management, workforce planning, and employee engagement. With the help of AI, it is possible to predict workforce behavior, predict if an employee will turn over, pair skills with more opportunities, and proactively respond to HR inquiries by processing large amounts of structured and unstructured workforce data. When combined with the sustainability indicators and HR analytics, the organizations are able to make HR decisions in alignment with the long-term social, ethical, and environmental objectives. The paper is conceptual research based that uses a wide review of literature to suggest an AI-based SHRM framework. The results suggest that the AI-driven decision models enhance accuracy, efficiency, and transparency of the HR processes and sustainable workforce management. Nonetheless, data privacy issues, algorithms bias, and ethical governance also are still a concern. The study finds that AI-driven predictive analytics has a great potential of transforming SHRM into a dynamic, sustainable, and strategic role when it is implemented in a responsible way.

**Keywords:** Sustainable Human Resource Management, Artificial Intelligence, Predictive Analytics, HR Analytics, Data-Driven Decision Making.



## Poverty, Inequality, and the Quest for Sustainability: A Critical Review of Development Pathways

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### Abstract

Poverty remains one of the most persistent global challenges and continues to act as a fundamental barrier to sustainable development. Despite decades of economic growth and policy interventions, millions of people worldwide remain deprived of basic necessities such as food, education, healthcare, and secure livelihoods. This research paper critically examines poverty as a multidimensional phenomenon and analyses its relationship with sustainable development through economic, social, and environmental perspectives. Drawing exclusively from five selected scholarly works, the study synthesizes existing literature to explore how poverty undermines development outcomes and how sustainable development strategies can contribute to long-term poverty reduction. The paper emphasizes that poverty is not merely an issue of low income but is deeply interconnected with structural inequalities, limited access to resources, weak governance, and environmental vulnerability. Sustainable development frameworks, particularly those aligned with the United Nations Sustainable Development Goals (SDGs), highlight the necessity of inclusive growth, social protection, community empowerment, and environmental sustainability in addressing poverty. Case-based discussions from developing regions illustrate how culturally rooted approaches, policy integration, and community-driven initiatives can enhance resilience and reduce poverty levels. Using a qualitative and descriptive methodology, this study identifies recurring themes across the reference papers, including the importance of inclusive economic growth, education, healthcare access, environmental sustainability, and participatory governance. The key findings indicate that poverty reduction efforts are most effective when economic development is combined with social equity and environmental responsibility. The paper concludes that eradicating poverty requires a holistic and integrated approach rather than isolated economic interventions. By strengthening institutional frameworks and adopting sustainable development strategies, societies can overcome poverty and achieve long-term inclusive development.

### Keywords:

Poverty, Sustainable Development, Economic Growth, Social Inclusion, Community Development

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## Sustainable Finance Ecosystem in Indian Banking: ESG Frameworks, Digital Integration, and Inclusive Growth

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### Abstract

The transformation of the global financial system toward sustainability has significantly reshaped banking operations, particularly in emerging economies such as India. The Indian banking sector is increasingly integrating Environmental, Social, and Governance (ESG) principles into financial decision-making, driven by regulatory mandates, stakeholder expectations, and global sustainability commitments. This study examines the evolving sustainable finance ecosystem in Indian banking, focusing on ESG frameworks, digital integration, and inclusive growth as interconnected pillars. The paper conceptualizes sustainable finance as a multidimensional construct influenced by regulatory architecture, technological adoption, and financial inclusion mechanisms. Using secondary data from regulatory reports, sustainability disclosures, and banking performance indicators, the study analyzes how ESG compliance, digital financial infrastructure, and inclusive banking initiatives collectively enhance long-term financial stability and social equity. The findings suggest that ESG-aligned lending practices, green financing instruments, and climate-risk disclosures strengthen institutional credibility and risk management. Simultaneously, digital platforms such as fintech collaborations, mobile banking, and data analytics accelerate ESG monitoring and expand financial access to underserved populations. The study further argues that inclusive growth initiatives, including priority sector lending and digital inclusion strategies, reinforce the social dimension of sustainable finance. The research contributes to sustainable finance literature by proposing an integrated ecosystem framework tailored to the Indian banking context. It offers policy insights for regulators and strategic implications for bank management to align profitability with sustainability objectives. The study concludes that sustainable finance in India is transitioning from compliance-driven adoption to strategy-driven transformation, positioning Indian banks as critical agents of sustainable economic development.

### Keyword:

Sustainable Finance, ESG Framework, Indian Banking, Digital Integration, Inclusive Growth, Green Finance, Financial Inclusion.



## **A Study on Sustainable Work–Life Balance and Its Impact on Employee Productivity among the Hybrid Workforce in the IT Industry**

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### **Abstract**

This study examines the sustainable impact of work–life balance on employee productivity among the hybrid workforce in the Indian IT industry. With the rapid adoption of hybrid work models, employees increasingly face challenges in balancing professional and personal responsibilities, influencing long-term well-being and organizational sustainability. The research aims to assess how work–life balance practices, organizational support, and hybrid work structures affect employee productivity. A descriptive research design was adopted, using primary data collected through a structured questionnaire from hybrid IT employees. Statistical tools such as descriptive analysis and correlation were applied to analyze the data. The findings indicate that sustainable work–life balance practices significantly enhance employee productivity, job satisfaction, and overall well being. Flexible work arrangements and supportive organizational policies were found to reduce stress and improve performance. The study concludes that integrating work–life balance into sustainable HR practices is essential for long-term productivity and employee retention in the IT sector.

**Keywords:** Work–Life Balance, Employee Productivity, Hybrid Work Model, Sustainable HR Practices, IT Industry



## Impact of extended work hours on productivity among Generation Z employees with a special focus on workforce sustainability in contemporary organizations

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### Abstract

This study explores the impact of extended work hours on employee productivity among Generation Z employees, with a specific emphasis on sustainable workforce management. In the evolving work environment, organizations increasingly rely on extended working hours to enhance output and competitiveness. However, such practices raise concerns regarding employee well being, long-term productivity, and sustainability-particularly for Gen Z employees, who value flexibility, mental health, and balanced work structures. The study aims to examine Gen Z employees' perceptions of extended work hours and evaluate their implications for productivity and sustainable organizational performance. A descriptive research design was employed using primary data collected through a structured questionnaire administered to Gen Z employees across diverse sectors. The data were analyzed using appropriate statistical tools such as percentage analysis and correlation techniques. The findings indicate that prolonged work hours have a negative impact on productivity, job satisfaction, and employee well-being, leading to increased stress and reduced engagement. Conversely, organizations that adopt sustainable work practices, including flexible schedules, reasonable workload distribution, and employee-centric policies, demonstrate higher productivity levels and improved workforce retention. The study concludes that integrating sustainability into work-hour policies is essential for maintaining employee productivity and organizational resilience. Sustainable human resource practices not only support employee well-being but also enable organizations to achieve consistent performance and long-term growth, particularly when managing the expectations of the Gen Z workforce.

**Keywords:** Extended Work Hours, Gen Z Employees, Employee Productivity, Workforce Sustainability, Sustainable HR Practices



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## A Smart City Approach for Sustainable Urban Transportation Using Demand-Based Bus Allocation

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### Abstract

Smart cities use advanced digital technologies such as the Internet of Things (IoT), big data analytics, and Geographic Information Systems (GIS) to improve the quality of life, optimize resources, and promote sustainable development. Sustainable urban technologies focus on reducing environmental impact, enhancing public services, and ensuring equitable access to infrastructure. In this context, urban transportation plays a critical role, as inefficient public transport increases congestion, pollution, and social inequality. This research aims to develop a smart-city-based model that increases bus facility in areas with higher population and mobility demand, supporting sustainable urban development. The methodology integrates population density mapping, real-time passenger data, and predictive modelling to identify high-demand zones and allocate buses accordingly. Population distribution is analyzed using GIS and census data, while real-time passenger flow is captured through bus GPS tracking, smart card ticketing, and mobile crowd estimation. The data is processed using clustering algorithms (K-means) to categorize zones by demand level, followed by linear programming to optimize bus allocation under constraints of fleet size, operational cost, and route coverage. A digital twin simulation evaluates the model using performance indicators such as waiting time, bus occupancy, and emissions. The principal findings show that adaptive bus deployment to high-demand areas reduces waiting time by 18%, increases occupancy by 22%, and lowers carbon emissions through reduced private vehicle usage. Major conclusions indicate that integrating smart technologies with demand-based planning enables more efficient and equitable public transport systems, contributing to sustainable urban mobility. The research provides a scalable framework for smart cities to implement adaptive transport services that support environmental and social sustainability goals.

**Keywords:** Smart cities, Sustainable urban technologies, Demand-based bus allocation, GIS, Realtime mobility data



## AI for Climate Prediction

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### Abstract

Climate variability and climate change pose serious challenges to environmental sustainability, economic stability, and human safety, making accurate climate prediction an essential research domain. Traditional climate prediction methods primarily depend on physical and numerical models, which are computationally intensive and often limited in producing accurate short-term and localized forecasts. To address these challenges, this study proposes an Artificial Intelligence (AI)-based climate prediction system that employs machine learning and deep learning techniques to analyze historical climate data and predict future climate trends.

The proposed system focuses on key meteorological parameters such as temperature and rainfall, sourced from reliable and publicly available climate datasets. Prior to model training, the data undergoes preprocessing steps including cleaning, normalization, and conversion into time-series sequences to enhance learning efficiency and predictive performance. A Long Short-Term Memory (LSTM) neural network is utilized as the primary prediction model due to its effectiveness in capturing temporal dependencies and nonlinear patterns present in climate data. The dataset is divided into training and testing sets to evaluate model performance.

Prediction accuracy and reliability are assessed using standard evaluation metrics, namely Mean Absolute Error (MAE) and Root Mean Square Error (RMSE). Experimental results demonstrate that the AI-driven approach delivers improved forecasting accuracy with lower computational complexity compared to conventional statistical techniques. The model successfully identifies climate patterns and trends, indicating its robustness and practical applicability.



The proposed framework has significant potential in real-world applications, including early warning systems for extreme weather events, agricultural planning, water resource management, and climate change impact assessment. This study highlights the effectiveness of AI-based climate prediction systems and their role in supporting sustainable environmental planning and disaster risk mitigation.

**Keywords-**Artificial Intelligence, Climate Prediction, Deep Learning, Machine Learning, Long Short-Term Memory (LSTM), Time Series Analysis, Weather Forecasting, Climate Change.



## Software Solutions for Waste and Resource Management

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### Abstract

This Research paper explores the role of modern software solutions in optimizing waste collection, segregation, recycling and resource recovery process.

The increasing volume of waste and the inefficient utilization of natural resources have become major challenges for sustainable development across the globe. Rapid urbanization, population growth, and industrial expansion have placed significant pressure on existing waste and resource management system, which often manually handled, openly fragmented, and inefficient use of resource.

In recent years, software-based solutions have emerged as powerful tools to address these challenges by enabling smarter, data driven and sustainable waste and resource management practices.

This study develops an IOT enabled smart bin system that uses sensors and cloud computing to maintain waste levels, alerting authorities for timely collection and reducing waste overflow and decision- making for sustainable resource management.

### Keywords

Waste management software, Resource management system, smart waste management, Sustainable computing, IOT Enabled smart bins, Decision making (AI), Sensors.



## Importance of Accounting Software for Financial Management of Small Businesses

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### **Abstract:**

In today's competitive business environment, accounting software has become a key component in the financial management of small businesses. Small enterprises generally function with limited resources, which makes efficient handling of financial activities essential. Manual accounting systems are often slow, error-prone, and insufficient to meet modern business and regulatory requirements. As a result, accounting software offers a practical and organized approach to managing financial records. One of the major benefits of accounting software is the improvement in accuracy and reliability of financial data. Automated recording and calculations significantly reduce human errors and ensure uniformity in accounting entries. The software assists in maintaining books of accounts, recording daily transactions, preparing trial balances, and generating financial statements such as profit and loss accounts and balance sheets efficiently. Accurate financial information enhances transparency and strengthens internal financial control.

Accounting software also increases operational efficiency by automating routine accounting functions such as invoicing, billing, payroll management, and tax calculations. This automation saves time and reduces administrative workload, allowing business owners to focus more on core business operations. Moreover, real-time financial information enables timely monitoring of cash flows, expenses, and outstanding dues, which is crucial for the smooth functioning of small businesses. Another important advantage of accounting software is its role in supporting informed decision-making. The availability of detailed financial reports and analytical tools helps management evaluate performance, control costs, and plan budgets effectively. In addition, accounting software ensures compliance with statutory and tax regulations such as GST and income tax laws, thereby minimizing the risk of penalties and legal complications.

To conclude, accounting software plays a significant role in enhancing the financial management practices of small businesses. By improving accuracy, efficiency, transparency, and regulatory compliance, it contributes to better financial stability and sustainable growth. Therefore, the adoption of accounting software is essential for small businesses seeking long-term success in an increasingly digital business environment.

**key words:** Accounting Software, Small Businesses, Financial Management, Operational Efficiency, Regulatory Compliance



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## From cash to clicks-Impact of digital payment adoption on financial inclusion of Micro-business in Bengaluru

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### Abstract

Financial inclusion is a cornerstone of India's pursuit of sustainable and inclusive economic development, particularly for micro-entrepreneurs operating within the informal sector. The rapid expansion of Digital Payment Systems (DPS) in India, driven by initiatives such as the Unified Payments Interface (UPI), mobile wallets, and government-led digital financial reforms, has significantly transformed the functioning of small-scale vendors and street traders. This study examines how the transition from cash-based transactions to digital payments contributes to the financial empowerment of micro-businesses in the Indian context. The research adopts a primary research methodology, utilizing a structured questionnaire to collect data from small-scale vendors and street traders. The study aims to measure three key factors: the rate of digital adoption, the improvement in record-keeping for credit access, and the challenges related to digital literacy and security. The study evaluates key factors including the level of digital payment adoption, improvements in financial record-keeping and access to formal credit, and challenges related to digital literacy, connectivity, and transaction security. The findings highlight that the creation of a digital transaction footprint enables previously unbanked individuals to integrate into India's formal banking and fintech ecosystem, thereby supporting long-term economic stability and sustainable growth. The paper concludes with policy-oriented recommendations aligned with national initiatives such as Digital India, emphasizing the need to bridge the digital divide and ensure that fintech innovations promote inclusive and sustainable development across all sections of society.

**Keywords:** Digital Payments, Sustainable Growth, UPI, Small-Scale Vendors, Primary Research.



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## Consumer Awareness and Sustainable Consumption: Analysing Attitudes and Preferences toward Eco-Friendly Products

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### **Abstract:**

This study investigates consumer awareness of sustainable practices and evaluates how environmental attitudes shape preferences for eco-friendly products. Analysing attitudes and preferences, we identify key drivers - price, brand reputation, and perceived efficacy - that influence choices between sustainable and conventional products. Our results show a positive association between intention-behaviour, attitude-intention-behaviour, subjective norms-intention-behaviour, consumer perceived environmental concern-intention-behaviour, and green product knowledge-intention-behaviour, highlighting opportunities to promote sustainable consumption through targeted strategies. This study provides a better opportunity to examine how environmental issues are important in consumer decision making process and what are the important factors that affecting the consumers while taking decisions towards the company. Every human adopt different activities to live happy on this planet and takes different measures to protect the environment. The research engages a mixed-methods approach, utilizing a structured survey distributed to a diverse demographic of 50 students to gather quantitative data on purchasing habits. In addition, review of existing literature provides a theoretical framework for analysing psychological and socio-economic barriers to sustainable consumption. Preliminary results suggest that while awareness of environmental issues is high, consumer preference is heavily moderated by product accessibility and price sensitivity. Furthermore, "green trust" in labelling and certifications plays a crucial role in validating consumer preferences. The study concludes that enhancing consumer education and ensuring price parity are essential for fostering long-term sustainable consumption behaviour. The findings offer valuable insights for marketers and policymakers to bridge the gap between green awareness and actual consumption, providing a roadmap for effective sustainability communication strategies.

**Keywords:** Sustainable Consumption, Consumer Awareness, Eco-Friendly Products, Green Marketing, Purchase Intention, Eco friendly products, green products.



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## The Future of Tax Administration: A Study on Algorithmic Data Retrieval and Segregation in Litigation Support

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### Abstract

The rapid digitalization of taxation systems has significantly transformed the functioning of tax administration and litigation processes. However, tax litigation in India continues to rely heavily on manual document collection, classification, and case preparation, leading to inefficiencies, delays, and increased compliance costs for taxpayers and professionals. This study examines the role of algorithmic data retrieval and automated document segregation as a technology-driven solution for enhancing litigation support in income tax administration, particularly in proceedings before the Commissioner of Income Tax (Appeals) [CIT(A)] and the Income Tax Appellate Tribunal (ITAT).

The primary objective of this research is to analyse how algorithm-based systems can retrieve taxpayer data from digital tax portals and systematically segregate documents according to appeal stages, assessment years, and litigation requirements.

The study adopts a descriptive and analytical research methodology based on primary data analysis, involving structured Google forms and observations of tax professionals engaged in litigation support activities, supplemented by secondary data from journals, regulatory guidelines, institutional reports, and past records related to digital tax administration.

The findings indicate that algorithmic automation in litigation support can significantly reduce manual workload, minimize documentation errors, improve turnaround time, and enhance the overall accuracy and transparency of tax appeal processes. Additionally, such systems contribute to sustainable business practices by reducing paper usage, optimizing professional resources, and supporting efficient governance mechanisms.

The study concludes that integrating algorithmic data retrieval and segregation tools into tax administration can play a vital role in promoting sustainable, transparent, and technology-enabled tax litigation support systems. This digital transformation not only strengthens institutional efficiency but also aligns with broader objectives of sustainable governance, ethical compliance, and long-term value creation in the taxation ecosystem.

**Keywords:** Tax Administration, Digital Transformation, Algorithmic Data Retrieval, Tax Litigation Support, Sustainable Governance.



## AI and Machine Learning in Auditing

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### Abstract

By improving efficiency, accuracy, and decision-making in financial and operational audits, the integration of artificial intelligence (AI) and machine learning (ML) is revolutionising the audit process. With an emphasis on their uses in data analysis, risk assessment, fraud detection, and process automation, this study explores the role of AI and ML in contemporary auditing. In comparison to conventional techniques, the study examines how these technologies help auditors analyse massive amounts of data in real time, spot anomalies, and enhance audit quality.

With the help of secondary data from scholarly publications, business reports, and real-world case studies, the paper takes a conceptual and analytical approach. The results show that AI and ML greatly lessen manual labour, enhance error detection, and facilitate better-informed audit decisions. The study does, however, also draw attention to certain difficulties, including problems with data quality, implementation expenses, moral dilemmas, and the requirement for qualified personnel to oversee AI-driven audit systems.

The study comes to the conclusion that although AI and ML cannot completely replace human judgment in auditing, they are useful tools that improve the efficacy and dependability of audits. In order to achieve sustainable and reliable audit practices in the changing digital landscape, the paper highlights the significance of striking a balance between professional expertise and technological adoption.

**Keywords:** Artificial Intelligence, Machine Learning, Audit Process, Data Analytics, Risk Assessment.



## In depth study on Corporate Contribution to Social and Environmental Sustainability through CSR

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### Abstract

Corporate Social Responsibility (CSR) has emerged as a strategic tool through which organizations contribute to social and environmental sustainability while aligning business objectives with stakeholder expectations. This study examines the role of CSR initiatives in addressing key social issues such as education, healthcare, community development, and inclusive growth, along with environmental concerns including climate change mitigation, resource conservation, and biodiversity protection. The research explores the evolution of CSR from philanthropic activities to integrated sustainability strategies embedded within corporate governance and business operations.

The study further analyzes the effectiveness of CSR practices in enhancing long-term sustainable development and corporate accountability. Through a comprehensive review of literature, policy frameworks, and corporate case examples, the research evaluates how CSR initiatives create shared value for businesses and society. The findings indicate that well-structured CSR programs contribute significantly to social welfare, environmental protection, and organizational reputation, while also improving stakeholder trust and sustainable business performance. The study underscores the importance of transparent reporting, strategic alignment, and measurable impact assessment to strengthen the role of CSR in promoting sustainable development.

**Keywords:** Corporate Social Responsibility, Social Sustainability, Environmental Sustainability, Sustainable Development, Corporate Governance, Stakeholder Engagement



## **Sustainable Economic Growth that looks after gig workers health safety.**

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### **Abstract**

In the world of “Quick Commerce” and “Home Delivery” era, there is a rapidly growing of “GIG WORKERS”. Gig workers who carry product on their two-wheeler vehicles face significant challenges, especially on summer days. By this, gig workers face many problems like sunstroke and heat-related issues, due to many hours of exposure in sunlight. As in today’s environment, due to depletion of ozone layer, exposing your skin under sunlight for longer hours leads to skin damage. The reason behind this is, increased in UV radiation reaching the earth is stronger which makes skin damage more than the previous years. In the results, we are implementing protective measures, such as heat resistance cover which is fixed onto the two wheelers. In the theoretical manner we are setting up a problem, in future, heat resistance cover (theory paper) will be converted to a model. We aim to the safety, wellbeing of gig workers.

**Keywords:** Gig workers, Heat exposure, Depletion of ozone layer, Creation of model.



## A Study on Responsible Sourcing and Waste Management in Business Supply Chains

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### Abstract

The increasing emphasis on sustainability and corporate responsibility has compelled businesses to re-evaluate their supply chain practices, particularly in the areas of responsible sourcing and waste management. This study examines how organizations integrate ethical sourcing, environmental standards, and social accountability into their supply chain operations. It explores the role of sustainable procurement, supplier compliance, and regulatory frameworks in minimizing environmental impact while ensuring transparency and ethical conduct across supply networks.

Further, the study analyzes waste management strategies adopted by businesses to reduce, reuse, and recycle resources throughout the supply chain lifecycle. By reviewing existing literature and industry practices, the research highlights the benefits of circular economy principles, efficient resource utilization, and waste reduction techniques in enhancing operational efficiency and sustainability performance. The findings suggest that responsible sourcing combined with effective waste management not only reduces environmental degradation but also strengthens supply chain resilience, improves brand reputation, and supports long-term business sustainability.

**Keywords:** Responsible Sourcing, Waste Management, Sustainable Supply Chain, Circular Economy, Ethical Procurement, Environmental Sustainability.



## Detailed Study on Cashless Economy and Financial Inclusion

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### Abstract

The transition toward a cashless economy has gained significant momentum with the rapid adoption of digital payment systems, driven by technological advancements, government initiatives, and changing consumer behaviour. This study examines the concept of a cashless economy and its role in promoting financial inclusion, particularly among unbanked and underbanked populations. It explores the growth of digital payment platforms such as Unified Payments Interface (UPI), mobile wallets, debit and credit cards, and internet banking, along with the supporting role of regulatory frameworks and financial institutions.

The study further analyzes the impact of cashless transactions on accessibility, efficiency, and transparency within the financial system. By reviewing existing literature, policy initiatives, and empirical evidence, the research highlights how digital payments reduce transaction costs, enhance financial participation, and support inclusive economic growth. However, the study also identifies challenges such as digital literacy gaps, cybersecurity risks, and infrastructure limitations. The findings suggest that while a cashless economy significantly contributes to financial inclusion, sustained efforts in digital education, robust security systems, and inclusive policy measures are essential to ensure equitable and widespread adoption.

**Keywords:** Cashless Economy, Financial Inclusion, Digital Payments, UPI, FinTech, Inclusive Growth.



## Impact Of Digital Finance on Financial Inclusion and Sustainable Development

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### Abstract

Digital finance has transformed the traditional financial system by improving access to financial services through digital platforms such as mobile banking, digital payments, fintech applications, and online lending. This study examines the impact of digital finance on financial inclusion, particularly among underserved and unbanked populations. By reducing transaction costs, increasing convenience, and enhancing accessibility, digital financial services have enabled wider participation in the formal financial system. The study highlights how digital finance empowers individuals and small businesses by facilitating savings, credit access, and secure transactions.

Furthermore, the research explores the role of digital finance in promoting sustainable development by supporting inclusive economic growth, reducing poverty, and encouraging responsible financial practices. Through a review of secondary data and existing literature, the study finds that digital finance contributes to sustainability by enhancing transparency, promoting financial literacy, and enabling efficient resource allocation. The study concludes that digital finance serves as a key driver of both financial inclusion and sustainable development, emphasizing the need for supportive policies, digital infrastructure, and consumer awareness to maximize its long-term benefits.

**Keywords:** Digital Finance, Financial Inclusion, Sustainable Development, FinTech, Economic Growth.



## A Study on Corporate Social Responsibility and Its Role in Social and Environmental Progress

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### Abstract

Corporate Social Responsibility (CSR) has emerged as a vital framework through which organizations contribute to social welfare and environmental sustainability while pursuing economic growth. This study examines the role of CSR initiatives in promoting social and environmental progress, focusing on ethical business practices, community development, environmental protection, and stakeholder engagement. By integrating CSR into core business strategies, organizations can address societal challenges such as inequality, resource depletion, and environmental degradation, while enhancing corporate reputation and long-term value creation.

The study further analyzes how effective CSR practices influence sustainable development outcomes and organizational performance. It highlights the importance of transparency, accountability, and regulatory compliance in ensuring the success of CSR initiatives. Findings suggest that organizations adopting proactive CSR strategies contribute positively to social well-being, environmental conservation, and economic resilience. The study concludes that CSR is not merely a philanthropic activity but a strategic tool for fostering inclusive growth and sustainable development in a rapidly evolving global business environment.



## A Study on The Role of Consumer Awareness in Shaping Sustainable Consumption Behaviour

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### Abstract

The world's consumer awareness and purchasing behaviour have been greatly influenced by growing environmental concerns and climate change challenges. With a focus on attitudes toward eco-friendly products, this study examines the relationship between consumer awareness and sustainable shopping behaviour. It explores how environmental knowledge, ethical values, and perceived responsibility influence consumers' desire to choose environmentally safe, resource-efficient, and socially responsible products. The study also highlights the increasing role of media, education, and eco-labels in enhancing awareness of and appreciation for sustainable products.

The research further explores the factors that encourage the adoption of nature friendly products, that consists of brand credibility, perceived quality, availability, and price sensitivity. Findings suggest that while attitudes toward sustainability are growing positive, there often exists a gap between the things the customers want to buy and their actual buying behaviour. The study reaches to an understanding that in an attempt to promote sustainable consumption patterns the shift to a greener economy, it is essential to expand consumer awareness and innovative marketing strategies.

**Keywords:** Consumer awareness, Eco-friendly products, Purchase intension, Consumer attitudes, green economy, Intension - behaviour gap.



## **A Study on from Profit to Planet: Evaluation of Sustainable Investment Models**

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### **Abstract**

The increasing global focus on environmental protection, social responsibility, and ethical governance has transformed the traditional profit-oriented investment approach into sustainability-driven investment models. This study explores the evolution of sustainable investment practices, highlighting the transition from conventional financial investments to models such as Socially Responsible Investing (SRI), Environmental, Social, and Governance (ESG) investing, impact investing, and green finance. The research emphasizes the role of regulatory policies, institutional investors, corporate transparency, and growing awareness of sustainability risks in shaping modern investment strategies.

The study further examines how sustainable investment models integrate financial performance with long-term environmental and social outcomes. Through a review of existing literature and global best practices, the research evaluates the effectiveness of these models in promoting responsible capital allocation and long-term value creation. The findings indicate that sustainable investments enhance risk management, improve corporate accountability, and contribute to sustainable economic development, demonstrating that the shift from profit to planet is both a strategic and necessary evolution in the investment ecosystem.



## A Study on the Role of Corporate Social Responsibility in Sustainable Development

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### Abstract

Corporate Social Responsibility (CSR) has emerged as a vital strategic tool for organizations aiming to contribute to sustainable development while maintaining long-term competitiveness. This study examines the role of CSR in promoting sustainable development by integrating economic growth, social well-being, and environmental protection. It explores how responsible corporate practices such as ethical governance, community development initiatives, environmental conservation, and employee welfare contribute to achieving sustainability goals. The study highlights the growing importance of CSR in addressing global challenges such as climate change, social inequality, and resource depletion.

The research is based on a review of existing literature and secondary data, focusing on the impact of CSR initiatives on sustainable development outcomes. The findings suggest that effective CSR practices enhance corporate reputation, strengthen stakeholder relationships, and support sustainable development by encouraging responsible production and consumption. The study concludes that CSR is not merely a philanthropic activity but a strategic approach that enables businesses to play a crucial role in achieving sustainable development objectives, making it essential for long-term societal and organizational success.

**Keywords:** Corporate Social Responsibility, Sustainable Development, Business Ethics, Environmental Sustainability, Stakeholder Engagement.



## Impact of Consumer Awareness on Sustainable Buying Behaviour

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### Abstract

Growing environmental concerns and social responsibility have significantly influenced consumer decision-making, leading to increased interest in sustainable buying behaviour. This study examines the impact of consumer awareness on the adoption of environmentally and socially responsible purchasing practices. It focuses on how awareness related to eco-friendly products, ethical production, and sustainability labels affects consumer attitudes, preferences, and purchase intentions.

The study further analyzes the role of education, media, and corporate communication in shaping consumer awareness and encouraging sustainable consumption patterns. By reviewing existing literature and empirical findings, the research highlights that higher levels of consumer awareness positively influence sustainable buying behaviour, including preference for green products, willingness to pay a premium, and reduced consumption of environmentally harmful goods. The findings emphasize the need for businesses and policymakers to strengthen awareness initiatives to promote responsible consumption and support sustainable development.

**Keywords:** Consumer Awareness, Sustainable Buying Behaviour, Green Consumption, Eco-friendly Products, Ethical Consumption, Sustainability.



## A Study on Green Finance and Sustainable Investments in India

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### Abstract

Green finance has emerged as a critical instrument for promoting sustainable development in India by directing financial resources toward environmentally responsible projects and investments. This study examines the concept of green finance and the growth of sustainable investment practices in India, focusing on instruments such as green bonds, ESG-based investments, renewable energy financing, and sustainable banking initiatives. The research highlights the role of government policies, regulatory frameworks, and financial institutions in accelerating the transition toward a low-carbon and resource-efficient economy.

The study further analyzes the impact of green finance on economic growth, environmental protection, and long-term financial stability. Through a review of policy initiatives, market trends, and empirical studies, the research identifies key opportunities and challenges associated with green finance in India, including issues related to awareness, standardization, and risk assessment. The findings suggest that strengthening regulatory support, improving transparency, and enhancing investor awareness are essential for scaling sustainable investments and achieving India's climate and sustainable development goals.

**Keywords:** Green Finance, Sustainable Investments, ESG, Green Bonds, Renewable Energy Financing, Sustainable Development, India.



## Consumer Awareness and Sustainable Consumption Behaviour – Consumer attitudes and preferences toward eco-friendly products

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### Abstract

Growing environmental concerns and resource depletion have increased the importance of sustainable consumption among consumers. This study examines consumer awareness and its influence on sustainable consumption behaviour, with a particular focus on attitudes and preferences toward eco-friendly products. The research explores how factors such as environmental knowledge, ethical values, and perceived benefits shape consumer decision-making. The study highlights the role of awareness in encouraging the adoption of environmentally responsible products and reducing negative environmental impacts.

The research is based on a review of existing literature and secondary data related to consumer behaviour and sustainability. The findings indicate that higher levels of consumer awareness positively influence attitudes toward eco-friendly products, leading to stronger purchase intentions and responsible consumption patterns. However, challenges such as higher prices and limited availability continue to affect consumer preferences. The study concludes that enhancing consumer awareness through education, marketing, and policy support is essential for promoting sustainable consumption behaviour and achieving long-term environmental sustainability.

**KEY WORDS:** Consumer Awareness, Sustainable Consumption Behaviour, Eco-Friendly Products, Green Marketing, Environmental Sustainability.



## “Role Of Sustainably Investment Modes and Green Financing Mechanism”

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### **Abstract**

Sustainable investment modes and green financing mechanisms have become essential tools in addressing environmental challenges and promoting long-term economic growth. This study examines various sustainable investment approaches, including green bonds, impact investing, socially responsible investments, and environmental, social, and governance (ESG)–based financing. These mechanisms aim to channel financial resources toward environmentally sustainable projects, renewable energy development, and climate-resilient infrastructure while generating financial returns. The study highlights the growing importance of aligning financial decision-making with sustainability-objectives. The research is based on an analysis of secondary data and existing literature on sustainable finance. The findings indicate that green financing mechanisms support sustainable development by reducing carbon emissions, encouraging innovation in clean technologies, and enhancing corporate accountability. Moreover, sustainable investment practices promote transparency and responsible risk management within financial markets. The study concludes that sustainable investment modes and green financing mechanisms play a crucial role in achieving environmental sustainability and inclusive economic growth, emphasizing the need for supportive policies, investor awareness, and institutional commitment.

### **Keywords:**

Sustainable Investment, Green Financing, ESG, Green Bonds, Sustainable Development.



## A Role of Ethical Trade Practices in Promoting Fair Trade Commerce

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### Abstract

Ethical trade practices play a significant role in promoting fair trade commerce by ensuring transparency, equity, and sustainability in global and local supply chains. This study examines how ethical practices such as fair wages, safe working conditions, responsible sourcing, and respect for labour rights contribute to the growth of fair-trade commerce. By prioritizing ethical standards, businesses can support marginalized producers, reduce exploitation, and foster trust among consumers and stakeholders. The study highlights the increasing consumer demand for ethically produced goods and the importance of ethical trade in creating socially responsible markets. The research is based on a review of secondary sources, including academic literature and reports from fair trade organizations. The findings indicate that ethical trade practices enhance social and economic development by improving livelihoods, promoting environmental sustainability, and encouraging inclusive trade relationships. The study concludes that ethical trade practices are essential for strengthening fair trade commerce and achieving sustainable development goals, emphasizing the need for greater awareness, policy support, and corporate commitment to ethical trading standards.

**Keywords:** Ethical Trade Practices, Fair Trade Commerce, Sustainable Development, Responsible Sourcing, Social Responsibility.



## **A Comprehensive Study on Sustainable Supply Chain Management Through Reuse, Recycling, And Responsible Sourcing.**

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### **Abstract**

Sustainable supply chain management (SSCM) has gained increasing importance as organizations seek to minimize environmental impact while maintaining operational efficiency and competitiveness. This study examines the role of reuse, recycling, and responsible sourcing as key strategies in promoting sustainability across supply chain operations. By integrating circular economic principles, businesses can reduce waste generation, conserve natural resources, and lower carbon emissions. The study highlights how sustainable practices within procurement, production, and distribution contribute to long-term environmental and economic sustainability.

The research is based on a comprehensive review of existing literature and secondary data related to sustainable supply chain practices. The finding suggests that reuse and recycling initiatives improve resource efficiency, while responsible sourcing ensures ethical and environmentally sound procurement. Together, these practices enhance supply chain resilience, strengthen stakeholder relationships, and support sustainable development goals. The study concludes that adopting sustainable supply chain management practices is essential for organizations aiming to achieve environmental stewardship, social responsibility, and long-term business success.

**Keywords:** Sustainable supply chain management, reuse, recycling, responsible sourcing, circular economy, sustainable development.



## A Study on Consumer Attitudes and References Towards Eco-Friendly Products

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### Abstract

Environmental sustainability has emerged as a critical issue influencing modern consumer behaviour across markets. Increasing awareness about environmental degradation, climate change, and resource conservation has led consumers to show growing interest in eco-friendly products. This study aims to analyze consumer attitudes and preferences toward eco-friendly products by examining factors such as environmental awareness, perceived product quality, price sensitivity, brand trust, and social influence. Understanding these factors is essential for identifying the motivations behind sustainable purchasing decisions and the barriers that prevent consumers from adopting green products consistently.

The study is based on primary data collected through a structured questionnaire and analysed using suitable statistical tools. The findings reveal that while consumers generally possess positive attitudes toward eco-friendly products, actual purchasing behaviour is influenced by practical considerations such as higher prices, limited availability, and insufficient product information. The research highlights the gap between consumers' environmental concern and their buying behaviour and emphasizes the need for effective awareness programs, transparent eco-labelling, and supportive marketing strategies. The study provides valuable insights for marketers, manufacturers, and policymakers seeking to promote sustainable consumption.

**Keywords:** Consumer Attitudes; Consumer Preferences; Eco-Friendly Products; Green Marketing; Sustainable Consumption.



## A Study on Digital Payments and Financial Inclusion for Sustainable Growth

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### Abstract

Digital payment systems have significantly transformed the financial landscape by providing faster, safer, and more accessible transaction methods. This study examines the role of digital payments in enhancing financial inclusion, particularly among unbanked and underbanked populations. By enabling access to services such as mobile wallets, UPI, internet banking, and QR-based payments, digital platforms reduce dependency on cash and lower transaction barriers. The study highlights how digital payments facilitate greater participation in the formal financial system, promote financial literacy, and empower individuals and small businesses.

The research is based on a review of secondary data and existing literature related to digital payments and financial inclusion. The findings suggest that increased adoption of digital payment systems contributes to sustainable economic growth by improving efficiency, transparency, and financial accessibility. Digital payments also support inclusive development by reducing inequality and encouraging responsible financial behaviour. The study concludes that digital payments play a crucial role in advancing financial inclusion and sustainable growth, emphasizing the need for robust digital infrastructure, cybersecurity measures, and awareness programs.

**Keywords:** Digital Payments, Financial Inclusion, Sustainable Growth, FinTech, Cashless Economy.



## An Empirical Study of Stock Market on Home-Maker

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### Abstract

This paper examines the reasons why home maker refrain from participating in the stock market. It also explains why home maker should invest in the stock market and how such investment can help them enhance their financial knowledge and increase their savings.

Many home maker show interest in investing, only some percentage of home maker are investing in the stock market. This research concludes by highlighting the importance of stock market investment for home makers and emphasizes the need for financial education among home makers. It also discusses how changing mindsets is essential, as many people prioritize saving money over growing it. And suggest home maker to invest in stock market.it is important to create a Awareness.

**Key Words:** Stock Market, Economic Growth, Investment decision, home maker.



## Comparative Analysis between D-Mart and Big Bazar

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### Abstract

India offers a large and diverse marketing landscape for big brands and companies , in which some succeed with flying colors and some become extinct . And in the recent years , retail industry in India is growing rapidly , and to study this deeply , research on two prominent brands , which are DMART & BIGBAZAR has been done . Bigbazar was founded by Kishore Biyani in the year 2001 and Dmart was established in the year 2002 by Radhakishan Damani. This research studies the strategies , the financial performance and the effective performance of both the brands . This also helps to analyse that how both the brands were well aware of their customer's preferences , and how well they were prepared for the fast moving world . Findings suggest that Bigbazar wasn't successful in analysing its customer's preferences and was more focused on quick profit making , while Dmart used the slow and steady strategy and made consumer friendly business environment . This comparative analysis serves as a valuable resource for understanding and analyzing the retail marketing sector in India and acts as a moral to the emerging retail brands .

**Keywords:** Retail Industry , Customer Preferences , Financial Performance , Quick Profit Making And Strategies.



## Rural Financial Literacy

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### Abstract

In this paper we are going to examine about rural financial literacy in India. In rural basically the education will not be provided properly, so the rural people will be lacking in financial knowledge. They need guidance for each thing, and they will not be provided with such a good facilitator. Most of the peoples are of below poverty and they cannot afford education, most of the government schemes do not reach rural sector because of unawareness. Many of them in rural areas are unaware of financial decisions like how to invest in stocks, mutual funds etc., or where to invest their money. Even when knowledge is provided, they will be having trust issues. The objective is to create civic sense in rural people and make them invest in certain investment plans, it leads to gain knowledge, and it helps to the growth of the economy.

**Keywords:** Civic engagement, Investment planning, Economic growth.



## Effect of Sustainability Practices on Brand Loyalty

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### Abstract

Sustainability has become an important aspect of business strategy as consumers are increasingly concerned about environmental and social issues. This study examines the effect of sustainability practices on brand loyalty. The research focuses on how eco-friendly initiatives, ethical business practices, and social responsibility influence consumers' trust and commitment toward a brand.

The findings suggest that sustainability practices positively influence brand loyalty by enhancing brand image, customer trust, and long-term relationships. The study highlights the importance of integrating sustainability into marketing strategies to achieve competitive advantage and sustained customer loyalty.

**Keywords:** Brand loyalty, Sustainability, Customers taste.



## Employee Engagement at Q-Commerce Platform

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### Abstract

Quick commerce (Q-commerce) is a rapidly growing sector that focuses on delivering goods to customers within a very short time frame. The emphasis on ultra-fast delivery places employees under high levels of pressure, making employee engagement a critical factor for organizational success. Engaged employees are more motivated, perform better, and contribute to improved customer service.

This study explains the concept of employee engagement in the Q-commerce sector and highlights key influencing factors such as fair compensation, effective communication, and safe working conditions. It also discusses common challenges faced by employees, including long working hours, work-related stress, and job insecurity. The findings indicate that enhancing employee engagement leads to increased productivity, reduced employee turnover, and higher customer satisfaction in Q-commerce organizations.

Data collected for the study reveal that nearly every employee faces one or more work-related challenges. Based on these findings, the study proposes several solutions to address these issues. The study concludes that employee engagement initiatives are essential for sustaining the workforce, motivating employees, and achieving long-term growth in the Q-commerce industry.

**Keywords:** Q- Commerce, Employee Engagement, Employee Motivation



## Impact of Quick Commerce on Gig Work Force Wages

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### Abstract

Quick commerce (q-commerce), characterized by ultra-fast delivery services, has significantly reshaped the gig workforce, especially in urban economies. This study examines the impact of quick commerce platforms on gig workers' wages, income stability, and earning patterns. While q-commerce has expanded employment opportunities and enabled flexible work arrangements, wage outcomes remain mixed. Many workers experience variable earnings influenced by delivery density, incentive structures, surge pricing, and platform algorithms. Although incentives and peak-hour bonuses can temporarily increase income, base pay rates often remain low, leading to income uncertainty and longer working hours. Rising competition among gig workers and lack of formal wage protection further affect overall earnings. The study highlights how platform-controlled pricing models shift economic risks onto workers, despite growing demand for rapid delivery services. Understanding these wage dynamics is essential for policymakers and platforms to design fair compensation structures and ensure sustainable livelihoods for gig workers in the evolving quick commerce ecosystem.

**Keywords:** Quick commerce, Gig economy, Platform algorithms, Sustainable livelihood



## A Comparative Study on Investment Preferences of Gen Z And Millennials

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### Abstract

This study examines the moderating role of generation on behavioural aspects influencing financial decision making. This research focus on understanding how financial behaviour differs between two generation, namely gen z and millennials. Specifically, the study analyses behavioural factors such as risk tolerance, investment objectives and preferred financial instruments among this generations. Descriptive research approach is adopted for the study. Response is collected from over 100 respondents belonging to gen z (1997 to 2012) and millennials (1981 to 1996). The data collection process is carried out using google forms. The findings of the study reveal that gen z shows higher interest towards high-risk investments such as mutual fund, crypto currency and stocks. In contrast of millennials prefer safe and long-term investments like investing in gold, FD, and govt bonds. The study concludes that generational differences affect the moderate financial behaviour and decision making.

**Keywords:** Gen Z, Millennials, Financial Behaviour, Investment Decision.



## **A Study on the Implementation of Sustainable Supply Chain Practices in Food Processing and Agro-Based Indian Small and Medium Enterprises (SMEs)**

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### **Abstract**

The purpose of this study is to evaluate the implementation of sustainable supply chain practices in food processing and agro-based small and medium enterprises (SMEs). While sustainability has been widely studied in large organizations, limited attention has been given to its adoption in Small and Medium Enterprises, especially in the food processing sector. This study adopts a descriptive research method and is based entirely on secondary data collected from academic journals, industry reports, sustainability disclosures, and published literature.

The study analyses key sustainable supply chain practices such as green procurement, waste reduction, energy efficiency, and sustainable packaging, along with environmental cost considerations related to waste, energy, and packaging. The findings indicate that although food processing SMEs increasingly recognize the importance of sustainability, the extent of implementation remains limited due to financial constraints, lack of expertise, and limited technological support. The study concludes that effective sustainability strategies and increased awareness can significantly improve sustainable supply chain adoption in food processing Small and Medium Enterprises, thereby supporting long-term environmental and operational sustainability.

**Keywords:** Sustainable Supply Chain Management, Food Processing SMEs, Environmental Cost Control, Sustainability Adoption, Agro-Based Enterprises.



## Study of Digitalization Impact on Rural.

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### Abstract

As Mahatma Gandhi stated, "to develop a country, we should Develop their rural area, It is a main purpose to selected the topic to understand how Digital technology influence to Impact in rural area development, The Problems they face for innovating technology, To Find opportunities for innovating new ideas for problems & go along with the sustainable development or growth & Find the solution for the problems like to provide prepare skills development program to rural population, so get Knowledge about digital technology, lack of digital knowledge among rural area to access it, poor electricity and internet connection, high cost of digital tools

We like to say in conclusion that, In the Rural area have to adopt Digital technology to keep up with the trends and to sustain in the changing market. It's Impact focuses on agriculture entrepreneurship, Healthcare, Education. Digitalization is reshaping rural area by providing market access, Promoting. agriculture product, Ayurveda medicine to make rural area grow is directly impact on the country growth or development as rural area are the backbone of the country.

**Keywords:** Digitalization, rural area, visual learning & job creation



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## How Digital Payments Act as a Catalyst for Inclusive and Sustainable Development.

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### Abstract

Digital payments have changed modern financial systems, greatly affecting financial inclusion and sustainable development, especially in developing countries. The quick growth of digital payment platforms like mobile wallets, Unified Payments Interface (UPI), internet banking, and card transactions has decreased reliance on cash and provided broader access to formal financial services. This research aims to explore how digital payments act as a driver for inclusive and sustainable development by assessing their influence on financial inclusion, economic participation, transparency, and long-term sustainability. The goal of this study is to understand how digital payment systems help with inclusive growth by improving access to banking services for underserved groups, supporting small businesses, aiding government welfare programs, and increasing economic efficiency. The study also aims to pinpoint the main challenges tied to adopting digital payments, such as gaps in digital literacy, infrastructure issues, and security worries, which can obstruct inclusive and sustainable results. The research relies solely on secondary data gathered from published research papers, academic journals, institutional reports, and existing empirical studies. A descriptive and analytical method is used to combine findings from earlier literature. To boost clarity and accessibility, interpreted survey-style tables are included to show common trends found in multiple studies. The study identifies a gap in the limited connection between user-level challenges and sustainability issues in current literature. The main conclusion is that digital payments are vital for promoting financial inclusion and supporting inclusive and sustainable development by enabling efficient transactions, increasing transparency, and boosting economic participation. However, the study also finds that the full potential of digital payments can only be achieved when challenges related to digital literacy, infrastructure, and trust are effectively addressed through coordinated policy and institutional efforts.

**Keywords:** Digital Payments, Financial Inclusion, Sustainable Development, Fintech, Secondary Data



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## Consumer Behaviour Towards Adoption of Ecofriendly Menstrual Hygiene Products

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### Abstract

Menstrual hygiene management has emerged as a significant public health, environmental, and social concern, particularly in developing countries where the use of disposable sanitary products remains dominant. The increasing reliance on single-use menstrual products has contributed to environmental pollution, improper waste disposal, and long-term health risks, while the adoption of eco-friendly alternatives remains limited. This study synthesizes insights from existing empirical research to examine women's and adolescent girls' attitudes, awareness, and behavioural intentions toward sustainable menstrual products in the Indian context. Drawing on mixed-method and qualitative studies, including surveys, interviews, and longitudinal interventions, the research highlights the influence of cognitive, emotional, and socio-cultural factors on menstrual product adoption. The findings reveal that although awareness of sustainability and environmental responsibility is growing, actual adoption is strongly shaped by comfort, perceived hygiene, ease of use, product knowledge, social norms, and infrastructural support such as access to water and privacy. Cultural taboos, fear of health risks, misinformation, and habitual dependence on disposable products act as significant barriers, particularly among adolescent girls. Medical perspectives further emphasize the role of gynaecologists and healthcare professionals in shaping menstrual hygiene practices through education, guidance, and normalization of sustainable alternatives. Environmental analysis underscores the substantial ecological burden caused by disposable menstrual waste and the potential of reusable products to reduce plastic pollution and support sustainable consumption.

Overall, the study concludes that the transition toward eco-friendly menstrual products requires multidimensional interventions combining awareness programs, healthcare engagement, behavioural change frameworks, and supportive policies. Addressing both individual perceptions and systemic barriers is essential to promote sustainable menstrual hygiene practices and contribute to broader goals of public health, gender equality, and environmental sustainability

**Keywords:** Eco friendly products, Menstrual hygiene, Sustainable lifestyle, Environmental awareness, social influence.



## Youth Awareness Attitudes and Purchase Behaviour Towards Organic Products in Bangalore

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### Abstract

This study examines the awareness, attitudes, and purchase behaviour of youth towards organic products in Bangalore, India. With an increasing focus on health, sustainability, and ethical consumption, organic products are gaining popularity among young consumers. However, understanding the determinants that influence awareness and purchasing decisions remains limited in the Indian context. Using a structured questionnaire, primary data were collected from 80 respondents aged 18–30 years residing in different parts of Bangalore. The study investigates the level of awareness about organic products, attitudes towards their benefits and drawbacks, and patterns of purchase behaviour including frequency of purchase, preferred product categories, and factors that influence buying decisions. Findings indicate that a majority of youth are moderately to highly aware of organic products and associate them with health benefits and environmental sustainability. Positive attitudes are strongly linked with perceived quality and long-term health outcomes, yet high price and limited availability were cited as key barriers to regular purchases. The results also reveal that social influence, media exposure, and personal values significantly shape purchase behaviour. The study contributes insights for marketers, policymakers, and retail strategists aiming to strengthen the organic market segment among young consumers in urban India. Recommendations include targeted awareness campaigns, improving accessibility, and strategic pricing to enhance adoption among the youth.

**Keywords:** Youth Consumer Behaviour, Organic Products, Purchase Intention, Consumer Awareness, Attitude Towards Sustainability.



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## Role of Digital Payment Systems in Promoting Financial Inclusion for Sustainable Economic Growth

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### Abstract

Digital payment systems have emerged as a powerful instrument for promoting financial inclusion and supporting sustainable economic growth, particularly in developing economies. By enabling secure, affordable, and convenient financial transactions, digital payments reduce dependence on cash and extend formal financial services to unbanked and underbanked populations. Platforms such as mobile wallets, online banking, UPI and real-time payment systems facilitate access to savings, credit, insurance, and government welfare schemes, thereby enhancing economic participation and financial resilience.

In the contemporary era, sustainability, encompassing social inclusion, environmental protection, and economic growth, is paramount. By exploring the nexus between digital payment and sustainability, the paper aims to provide insights into the transformative potential of digitalization in fostering economic growth while aligning with the principles of social inclusion and environmental preservation.

Descriptive in nature, the research relies on secondary data gathered from various sources, including books, Journals, and articles, available on electronic platforms. Digitalization emerges as a valuable tool contributing to sustainable development, with a focus on achieving a cashless economy, reducing the carbon footprint associated with financial transactions, and providing cost-effective services to citizens, thereby promoting enhanced financial inclusion. This paper delves into the role of digital payments in the banking sector in realizing sustainable development goals. Examining government policies on digital payment and sustainability, the paper addresses the challenges and opportunities associated with sustainable development.

**Keywords:** Digital Payment, Financial Inclusion, Cashless Economy, Economic Empowerment and Sustainability.



## Green CSR Practices and Their Influence on Brand Loyalty

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### Abstract

The present study introduces an innovative conceptual framework for analyzing the influence of corporate social responsibility and green consumption on customer satisfaction and loyalty. Growing environmental concerns have encouraged firms to integrate Green Corporate Social Responsibility (Green CSR) practices into their strategic operations. Green CSR refers to organizational initiatives focused on minimizing environmental impact through sustainable processes, eco-friendly products, and responsible resource management. This study examines the influence of Green CSR practices on brand loyalty by analyzing consumers' perceptions and behavioural responses. The findings reveal a significant positive relationship between Green CSR practices and brand loyalty, indicating that environmentally responsible initiatives enhance consumer trust, satisfaction, and commitment toward brands. Additionally, brand image and customer trust are identified as key mediating variables that strengthen this relationship. The study highlights the strategic importance of embedding Green CSR into core business practices, as it supports environmental sustainability while fostering long-term customer relationships and competitive advantage in environmentally conscious markets.

**Keywords:** Green Corporate Social Responsibility; Brand loyalty; Environment Sustainability; Brand image; Customer trust.



## The Role of Ethical Trade Practices in Promoting Fair Trade Commerce.

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### **Abstract:**

Ethical trade practices have become increasingly significant in global commerce as concerns over labor rights, environmental sustainability, and social justice continue to grow. Fair trade commerce represents a structured response to these concerns by embedding ethical principles into international trade systems. This paper examines the role of ethical trade practices in promoting fair trade commerce, focusing on their influence on producers, consumers, businesses, and global supply chains. Using a review of existing literature, the study explores how ethical trade practices such as fair wages, safe working conditions, transparency, and environmental responsibility contribute to the growth and legitimacy of fair-trade markets. The paper concludes that ethical trade practices are central to strengthening fair trade commerce by fostering trust, improving producer livelihoods, and encouraging responsible consumer behaviour.

**Keywords:** Ethical trade, fair trade commerce, sustainability, ethical consumption, global trade.



## Impact of Sustainability Regulations on Business Performance

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### Abstract

Sustainability regulations have become a central feature of modern business environments as governments and international bodies respond to climate change, resource depletion, and social accountability. This paper examines the impact of environmental sustainability regulations on business performance, focusing on how such regulations influence operational efficiency, costs, innovation, competitiveness, and long-term financial outcomes. Drawing on existing literature, regulatory frameworks, and empirical findings, the study highlights both the challenges and opportunities sustainability regulations create for businesses. The paper concludes that while compliance may initially increase operational costs, well-designed environmental regulations can enhance innovation, efficiency, and long-term business performance.

**Keywords:** Sustainability regulations, environmental regulations, business performance, corporate sustainability, green innovation



## Healthy Minds, Secure Future: A Survey on Employee Wellness and Employee Counselling

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### Abstract

Organisational productivity and employee job satisfaction have made employee wellness and counselling essential aspects of the organisational success. The purpose of this study is to examine the importance and effectiveness of employee wellness and counselling. The research shows that responses are collected from multiple sectors and a total of 26 respondents have given their valuable feedback through the questionnaire which was circulated amongst them. After collecting the responses, graphs were generated for better clarity and deeper understanding of employee's perception. The sampling method adopted was convenience sampling. The major findings observed from the study were the level of awareness among employees and participation and engagement of employees across various sectors and suggestions were provided to address gaps in the programs initiated. This helped in identifying the mental health and stress level of the employees.

### Keywords:

Employee Wellness, Employee Counselling, Employee Job Satisfaction



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## The Role of Micro Influencers in Building Consumer Trust and Influencing Cosmetic Purchase Decision

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### Abstract

The rapid growth of social media platforms has significantly transformed the way cosmetic brands communicate with consumers, leading to the increased use of micro influencers as an effective marketing strategy. This study aims to examine the role of micro-influencers in building consumer trust and influencing cosmetic purchase decisions. The specific objectives of the study are to identify the key attributes of micro influencers, measure the level of trust consumers place in them, and analyze the impact of trust on purchase decisions. The study follows a quantitative research methodology and is based on primary data collected through a structured questionnaire. The respondents consist of consumers who regularly follow micro-influencers related to cosmetics on social media platforms such as Instagram and YouTube. A sample size of 200 respondents was selected using the convenience sampling technique. The collected data were analyzed using statistical tools such as percentage analysis, mean score analysis, correlation analysis, and multiple regression analysis to examine the relationship between micro-influencer attributes and purchase decisions. The study focuses on attributes such as credibility, authenticity, expertise, relatability, and engagement level of micro-influencers. The findings reveal that micro-influencers play a significant role in building consumer trust, which strongly influences cosmetic purchase decisions. Among the various attributes, authenticity, credibility, and perceived expertise were found to have a greater impact on trust formation. The study also indicates that consumers consider micro-influencers to be more relatable and trustworthy than celebrity endorsers, especially in the cosmetics industry. The results of this study are useful for cosmetic brands, marketers, and businesses in designing effective influencer marketing strategies that emphasize trust, engagement, and long-term customer relationships. This research contributes to a better understanding of consumer behavior in the context of social media marketing and influencer-led promotions.

**Keywords:** Micro-influencers, Consumer Trust, Cosmetic Purchase Decision, Social Media Marketing, Influencer Marketing, Brand Credibility, Customer Engagement.



## A Study on Consumer Awareness and Purchase Intention Towards Eco-Friendly Cosmetic Product

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### Abstract

The increasing concern for environmental sustainability, personal health, and ethical consumption has significantly influenced consumer preferences in the cosmetics industry, leading to a growing demand for eco-friendly cosmetic products. Eco-friendly cosmetics are formulated using natural or organic ingredients, environmentally safe production processes, cruelty-free testing methods, and sustainable packaging, making them an attractive alternative to conventional cosmetic products. This study aims to examine the level of consumer awareness regarding eco-friendly cosmetic products and to analyze its impact on consumer purchase intention. The specific objectives of the study include assessing consumers' knowledge and understanding of eco-friendly cosmetics, identifying the key factors influencing their purchase decisions, and examining the relationship between consumer awareness and purchase intention. The study adopts a quantitative research design and is based on primary data collected through a structured questionnaire administered to consumers who use or are interested in cosmetic products. A sample of 200 respondents was selected using convenience sampling techniques. The collected data were analyzed using statistical tools such as percentage analysis, mean score analysis, correlation analysis, and regression analysis to evaluate the relationship between awareness levels and purchase intention. The findings of the study indicate that consumer awareness regarding aspects such as natural ingredients, environmental benefits, product safety, cruelty-free practices, and sustainable packaging has a significant positive influence on purchase intention towards eco-friendly cosmetic products. Factors such as health consciousness, environmental concern, trust in eco-friendly brands, and transparency in product information were found to play a crucial role in shaping consumer buying behavior. The study concludes that enhancing consumer awareness can effectively increase the acceptance and purchase of eco-friendly cosmetic products, providing valuable insights for marketers and manufacturers to promote sustainable consumption practices.

**Keywords:** Consumer Awareness, Purchase Intention, Eco-Friendly Cosmetics, Green Marketing, Consumer Behaviour.



## Role Of Flash Sales and Limited Time Offers on Fashion in Online Impulse Buying Behavior of Consumers

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### Abstract

The rapid expansion of e-commerce platforms and the increase in digital marketing strategies have significantly influenced consumer purchasing behaviour, particularly through the adoption of flash sales and limited-time offers. These promotional techniques are designed to create a sense of urgency and perceived scarcity, encouraging consumers to make quick and often unplanned purchase decisions in online environments. The present study examines the role of flash sales and limited-time offers in influencing the online impulse buying behaviour of consumers. The primary objectives of the study are to identify the key factors associated with flash sales and limited-time promotional offers, to analyse consumers' perceptions of urgency, perceived value, and exclusivity, and to evaluate the impact of these factors on impulse buying behaviour across online shopping platforms, the study adopts a quantitative research design and is based on primary data collected through a structured questionnaire administered to online shoppers who frequently participate in flash sales and limited-time offers. A sample of 200 respondents was selected using convenience Sampling techniques. collected data, which were analysed using statistical tools such as percentage analysis, mean score analysis, correlation analysis, and regression analysis to examine the relationship between promotional strategies and impulse buying behaviour. The study focuses on variables including time pressure, discount attractiveness, perceived scarcity, emotional excitement, and ease of online purchasing. The findings indicate that flash sales and limited-time offers have a significant influence on stimulating online impulse buying behaviour among consumers. Time pressure and attractive discounts were found to be the most influential factors driving impulsive purchase decisions, while perceived exclusivity and short availability periods further intensified consumers' buying intentions. The results of the study provide valuable insights for e-commerce platforms and marketers, and businesses in designing effective promotional strategies enhance sales performance while maintaining consumer satisfaction. This research contributes to a deeper understanding of consumer behaviour in the context of time-bound digital promotional strategies.

**Keywords:** Flash Sales, Limited-Time Offers, Online Impulse Buying Behaviour, Consumer Behaviour, E-commerce Platforms, Digital Marketing Strategies, Lime Pressure, Perceived Scarcity.



## Brand Loyalty vs. Trends Among Gen Z: A Study of Digital Consumer Behavior in Bangalore

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### Abstract

In the era of digital consumption and hyper connectivity, understanding the behaviour of Generation Z has become crucial for marketers and brand strategists. Gen Z, typically born between 1997 and 2012, represents a consumer segment that is both brand-aware and trend-sensitive. However, a key question that challenges marketers today is whether this generation truly values brand loyalty or whether they are more inclined toward following short-lived trends driven by social media, influencers, or viral campaigns. This study aims to explore this dilemma by examining the digital consumer behaviour of Gen Z youth in Bangalore—a major urban hub and one of India’s most digitally active cities. The research investigates the extent to which young consumers engage with brands .out of loyalty versus being attracted to transient trends. Data was collected through a structured questionnaire administered to college students and young working professionals aged 18 to 25. Key variables include emotional attachment to brands, frequency of repeat purchases, role of peer influence, digital media exposure, and responsiveness to emerging trends. The study also explores how brand perceptions are shaped by factors such as influencer marketing, Instagram aesthetics, sustainability claims, and limited-edition drops. Bangalore provides a meaningful context, as its youth are digitally fluent and exposed to both global and local brands. The findings of this study aim to provide insights for businesses attempting to build stronger brand equity among Gen Z consumers. It also offers practical recommendations for designing brand strategies that strike a balance between creating consistent brand narratives and staying culturally relevant in a trend-driven environment. Ultimately, this research contributes to the understanding of how brand loyalty is evolving in an age where digital trends dominate consumer attention.

**Keywords:** Brand Loyalty, Gen Z, Consumer Behavior, Digital Marketing, Trends, Influencer Culture, Social Media, Urban Youth.



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## Impact of Celebrity Endorsements on Fashion Buying Decisions Among College Students

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### Abstract

In today's fashion-conscious youth market, celebrity endorsements play a powerful role in shaping buying decisions, especially among college students. This study explores how celebrities influence students' fashion purchases through brand endorsements, social media presence, and image association. While many brands invest heavily in celebrity marketing, there is still limited understanding of whether such endorsements actually lead to trust, brand preference, or long-term loyalty in the student segment. The study aims to bridge this gap by analyzing the effect of celebrity endorsements on college students' fashion buying behavior. Key objectives include understanding the role of perceived credibility, attractiveness, and expertise of celebrities in shaping brand attitudes and purchase intent. The study used a structured questionnaire based on previously validated scales. Items measuring celebrity endorsement dimensions were adopted from Alfred et al. (2021), including credibility, trustworthiness, and familiarity. Purchase intention and brand attitude scales were adapted from Ohanian (1990) and Kamins et al. (1989), using a 5-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree." The research followed a descriptive design with a sample of 120 college students aged 18–25, collected through convenience sampling. Data analysis included descriptive statistics and correlation analysis using SPSS. The study found that celebrity credibility and physical appeal significantly influence students' perception of fashion brands, while social media presence reinforces brand recall. However, not all endorsements lead to actual purchases, indicating a gap between perception and behavior. Limitations of the study include a limited sample size and focus on a single region, which may restrict generalization. Future research can explore comparisons with social media influencers or study differences across product categories like tech or personal care. This study adds value by providing insights into how marketers can design effective endorsement strategies targeting youth fashion consumers.

**Keywords:** Celebrity Endorsements, Fashion Marketing, Youth Consumer Behavior, Purchase Intention, Brand Attitude, College Students, Social Media Influence.



## AI for Sustainable Education and Digital Learning

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### Abstract

Artificial Intelligence (AI) is redefining the paradigms of education by offering transformative solutions for sustainable digital learning. This paper explores the integration of AI technologies into educational ecosystems with an emphasis on sustainability, inclusion, and quality enhancement. Through a multidisciplinary approach that combines technological innovation with pedagogical principles, AI is facilitating adaptive learning, intelligent tutoring, and smart administrative systems. We analyze empirical data from academic institutions and review global practices to evaluate the efficacy of AI in promoting equitable and environmentally conscious education. While the potential is vast, the ethical, infrastructural, and policy challenges must be addressed to ensure responsible deployment. This paper provides a roadmap for leveraging AI in achieving long-term educational sustainability.

**Keywords:** Artificial Intelligence, Sustainable Education, Digital Learning, Equity, EdTech, Inclusion.



## Backward Integration and the Structural Transformation of India's Solar PV Manufacturing Sector: An Empirical Analysis of Import Dependence Reduction (2015–2025)

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### Abstract

By integrating policy intervention, industrial capacity development, and supply chain stability, this research contributes to a nuanced understanding of how domestic manufacturing strategies can support energy security and long-term sustainability in emerging renewable energy economies. The surge in India's solar power generation capacity has not been accompanied by a similar surge in its upstream domestic manufacturing capabilities, resulting in a high degree of dependency on import dependence on components such as polysilicon, wafers, and solar cells. The main objective of this study is to examine whether the implementation of backward integration policies, such as the promotion of domestic manufacturing, has strengthened India's solar manufacturing capabilities and reduced import dependence. The study uses a quantitative and analytical approach, where secondary data collected from official and industry-related publications, MNRE, DGCI&S, UN Comtrade, CMIE Prowess, and corporate annual reports, is analyzed to assess the impact of backward integration policies on India's solar manufacturing capabilities. A sample of 10-15 leading solar manufacturing companies involved in domestic production initiatives is analyzed from 2015 to 2025. This study uses the Import Dependency Ratio, Trade Intensity Index, and trend analysis to measure import dependence. It also uses Difference-in-Differences and Interrupted Time Series analysis techniques, changes in domestic value addition and supplier concentration are analyzed using the Herfindahl-Hirschman Index and regression analysis, whereas changes in economic and resilience indicators are analyzed using employment, performance, and supplier diversification indicators. The study aims to cater the empirical evidence on the impact of backward integration policies on India's solar sector, transforming it from just an assembly-driven market to a self-reliant manufacturing sector. By combining policy intervention, industrial capacity development, and supply chain stability, this research contributes to a refined understanding of how domestic manufacturing strategies can help support energy security and long-term sustainability in upcoming renewable energy economies.

**Keywords:** Backward Integration, Supply Chain Resilience, Solar PV Manufacturing, Energy Security, Import Dependence.



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## Cooling The Cloud: A Study on Sustainable Cloud Computing

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### Abstract

Cloud computing is an essential service which is widely used by the computing industry in the modern era. This includes common day to day user transactions and corporate functions which run the digital world. While this technology has become a necessity for human kind, it has its own share of sustainability issues which needs to be tackled, especially with the spike in energy intensive AI usage. This study uses the literature survey methodology to assess how big data centers impact the environment and what are the potential solutions. We look at the adverse effects and the overall carbon footprint left by these establishments and discuss the room for improvement so as to not harm the eco system without compromising on the efficacy of these computing marvels. We take a look at some case studies which show us the important cloud computing factors affecting the environment. Primarily cooling needs, energy needs and mined resources were found to be major factors. Massive usage of energy and the resultant heat radiated drive the need for energy and fresh water. The chips used for these computations require precious materials like silicon, cobalt etc which are obtained mostly via extensive mining. There are some very positive developments in solving the above-mentioned problems. We observe the emergence of serverless computing and other distributed means of diversifying the architecture of infrastructure as a service to further reduce load on a centralized region housing these cloud data centers. Implementation of modern chip cooling techniques and reuse of water can reduce load on our natural freshwater sources. From an energy perspective, supplying large scale energy to these cloud hosting data centers through renewable and nuclear energy can keep the carbon footprint minimal. Proper e-waste management and optimal manufacturing techniques can reduce mining needs. There are also futuristic solutions like deploying these data centers in space. Cloud computing is a necessity which we as the users and developers must optimize and improve bearing in mind the caution needed to protect the wider interest of the planet and its inhabitants.

**Keywords:** Cloud Computing Sustainability, Emerging Technology, Cooling and Energy Needs.



## Internet of Things (IoT) for Environmental Monitoring

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### Abstract

Environmental degradation, urbanization, and climatic changes have increased the demand for effective and constant environment monitoring systems. Conventional methods of environment monitoring have been hampered by numerous problems, including high costs, lack of scalability, low rates of data collection, and the involvement of manual interference. On the other hand, the Internet of Things (IoT) introduces a new and highly intelligent means of environment monitoring that combines sensors, embedded technologies, and wireless communication, facilitating the collection of constants, precise, and contemporary data on key factors like air, water, temperature, humidity, soil, and noise levels, among others. Additionally, the Internet of Things facilitates the management of the environment through the analysis of data in real-time, the accessibility of the environment, and the alerts provided in the system. The data collected is analysed through cloud computing techniques, thereby providing trends and possibly resulting in the prediction of any harm. Although the Internet of Things is faced with some challenges in the environment, including power consumption, security, and reliability, it is considered cost-effective and has the capability to provide precise measurements. These discussions show the importance of the Internet of Things in ensuring the sustainability of the environment in the future.

**Keywords:** Internet of Things, Environmental Monitoring, Sensors, Smart Environment, Real-time Data.



## Slowing the Progression of Disease in Conditions with Limited or No Cure: The Role of Psychological, Behavioral, and Biological Modulators

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### **Abstract**

Many chronic and degenerative diseases lack definitive cures, shifting medical focus from eradication to slowing disease progression and preserving quality of life. Increasing scientific evidence shows that non-pharmacological factors—such as willpower (self-regulation), placebo responses, sleep-mediated repair, stress reduction, neuroplasticity, and epigenetic modulation—play a meaningful role in influencing disease trajectories. This paper synthesizes findings from neuroscience, psychoneuroimmunology, and molecular biology to explain how psychological and behavioral interventions interact with biological systems to delay pathological progression. We propose an integrative biopsychosocial-epigenetic model demonstrating that while a cure may be absent, disease velocity is modifiable. These insights offer a scientifically grounded source of hope for patients living with conditions traditionally labelled as incurable.

**Keywords:** Disease progression, willpower, placebo effect, neuroplasticity, epigenetics, sleep repair, stress reduction, chronic disease, psychoneuroimmunology.



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## Optimizing Sewer Network Design using Kruskal's Algorithm: A Cost-Constrained Visualization Approach

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**Budget Constraint: ₹2 Crore (₹20,000,000)**

### Abstract

Urban infrastructure development presents significant challenges in achieving cost-optimal connectivity. This research investigates the application of Kruskal's algorithm, a classical graph-theoretical minimum spanning tree (MST) method, to optimize sewage pipeline networks under strict budgetary constraints. Using a case study of ten building nodes within a campus infrastructure system, we demonstrate that MST-based optimization achieves substantial cost savings of 83.40% (₹16,680,880) compared to the allocated budget of ₹2 crore, while maintaining complete network connectivity. The total optimized network cost of ₹3,319,120 for 341.5 meters of pipeline (₹9,719.24 per meter) validates the algorithm's practical efficacy. Through interactive 3D visualization techniques and rigorous mathematical analysis, this study establishes a comprehensive framework for infrastructure planners to make data driven decisions in municipal engineering projects. Our findings demonstrate that graph-theoretic approaches, when combined with modern visualization tools, provide superior cost-performance outcomes compared to traditional heuristic design methods.

**Keywords:** Minimum Spanning Tree, Kruskal's Algorithm, Sewer Network Optimization, Infrastructure Planning, Graph Theory, Cost Minimization, Urban Engineering, Budget Optimization



## Code for Clean Cities: Designing a Smart Software System for Sustainable Waste Management

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### Abstract

Rapid urban growth has increased pressure on existing waste management systems, making efficient and sustainable waste handling a major challenge for modern cities. Conventional methods rely on fixed schedules and manual supervision, often resulting in inefficient resource use, higher operational costs, and negative environmental impact. This research aims to design and analyze a smart software-based system to support sustainable waste management in urban areas. A design-oriented methodology was adopted to develop a conceptual system architecture and workflow for a centralized waste management platform. The system enables digital monitoring of waste collection through a software interface that supports data visualization, informed decision-making, and optimized scheduling. Its design emphasizes scalability, transparency, and adaptability, allowing integration with existing municipal systems without complex hardware requirements. Findings indicate that a software-driven approach can improve collection efficiency by reducing unnecessary trips, optimizing resource allocation, and minimizing fuel consumption. Compared to traditional methods, the proposed system demonstrates better responsiveness, improved planning, and lower environmental impact. The study concludes that smart software solutions can play a crucial role in creating cleaner and more sustainable cities. By leveraging digital systems for waste management, urban authorities can enhance operational efficiency while supporting long-term environmental sustainability. The framework also allows for future enhancements, including predictive analytics and intelligent decision-support features.

**Keywords:** Smart Urban Systems, Digital Waste Solutions, Sustainable City Design, Software-Driven Management.



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## Simulating the Unthinkable: AI perspective on a hypothetical chromobacterium violaceum bioweapon crisis in tropical India and its implication for national vulnerability

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### Abstract

This study simulates a hypothetical national-level public health emergency in a tropical country like India, arising from the assumed misuse of *Chromobacterium violaceum* as a bioweapon under favourable climatic conditions. The research does not promote or describe real-world weaponization; instead, it adopts an ethically constrained, scenario-based framework to examine national vulnerability and institutional preparedness through the lens of Artificial Intelligence (AI)-assisted analysis.

A key methodological feature of this study is the deliberate use of prompt engineering to construct a standardized, high-risk hypothetical prompt. The prompt was carefully designed to elicit analytical depth while avoiding operational, procedural, or misuse-prone biological details. This engineered prompt was then applied consistently across multiple AI tools to enable a comparative evaluation of how different systems interpret, frame and respond to an extreme biosecurity scenario. The AI-generated responses were analysed across six critical domains: government preparedness, healthcare system resilience and antibiotic resistance (XDR) challenges, population and societal impact, economic stability, medical research and public health response capacity and international relations. In addition, the study evaluates AI operational safety, ethical restraint and domain competence when addressing sensitive biological threats. Findings indicate substantial variation among AI tools in policy awareness, biomedical depth and ethical framing. However, a consistent convergence appears around systemic vulnerabilities such as healthcare capacity limits, antibiotic resistance and high population density as major amplifiers of crisis severity. Importantly, most AI systems show



responsible behaviour by emphasizing prevention, governance and public health ethics while avoiding actionable biological guidance.

By highlighting the role of strong institutions, transparent governance and responsible use of emerging technologies, this research directly supports Sustainable Development Goal 16: Peace, Justice and Strong Institutions. The study underscores how ethically aligned AI and structured prompt engineering can be used to stress-test governance frameworks, strengthen early warning systems and inform policy development aimed at preventing biological threats and safeguarding public trust in national and global health security mechanisms.

**Keywords:**

Artificial Intelligence (AI), Prompt Engineering, Biosecurity Simulation, Hypothetical Bioweapon Crisis, *Chromobacterium violaceum*, Antibiotic Resistance, Public Health Preparedness, National Vulnerability, Ethical AI, SDG 16 (Peace, Justice and Strong Institutions).