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EMERGING TRENDS IN HUMANITIES, SOCIAL SCIENCES, COMMERCE AND MANAGEMENT



Editors

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Preface

The edited volume Emerging Trends in Humanities, Social Sciences, Commerce and Management has been conceptualized to address the dynamic and rapidly evolving nature of human society, economic systems, and organizational behavior in the 21st century. In an increasingly interconnected and interdisciplinary world, the boundaries between these domains are becoming more porous, demanding a comprehensive and integrated approach to academic research and discourse.

This book brings together a diverse collection of scholarly contributions that reflect current innovations, challenges, and future directions across the fields of Humanities, Social Sciences, Commerce, and Management. The chapters herein delve into a wide range of themes—ranging from cultural transformations, digital humanities, behavioral economics, gender and identity studies, to global business strategies, sustainable development practices, and technological integration in commerce and management.

Each contribution is intended to provide readers—academicians, researchers, policy-makers, and students—with fresh perspectives and analytical frameworks relevant to both theory and practice. The interdisciplinary nature of this volume encourages readers to explore intersections among various disciplines, fostering a holistic understanding of the complex issues shaping today's academic and professional landscapes.

The idea behind this book is not only to document current trends but also to stimulate critical thinking and encourage further research that addresses pressing global and local concerns. Whether analyzing the impact of digital transformation on traditional business models or interpreting evolving cultural narratives through a humanities lens, this book offers valuable insights for navigating contemporary challenges.

We sincerely thank all the contributing authors and reviewers for their rigorous scholarship and dedication. We hope this compilation will serve as a

meaningful resource for those invested in the advancement of knowledge across these vital academic fields.

Editors

Emerging Trends in Humanities, Social Sciences, Commerce and Management

Table of Content

| Sl. No. | Title and Authors | Page No. |
|---------|---|----------|
| 1 | Empowering Minds, Enriching Data: Harnessing the Role of HR Analytics and Quantitative Self-Efficacy as Engines for Future-Driven Organizations <i>Prof. Debabrata Sahoo.</i> | 01 - 12 |
| 2 | Thinking Machines and Questioning Minds in The Reframing of Human Identity and Ethics in The AI Era. <i>Suchandana Dutta.</i> | 13 - 21 |
| 3 | Specific Needs and Challenges of Women Prisoners and Offenders- A Critical Evaluation in The Light of Legal Aspect <i>Dr. Purba Ganguly.</i> | 22 - 32 |
| 4 | Trends in E-Commerce and Digital Marketplaces <i>Mrs. Priyanka Abhishek Patil.</i> | 33 - 42 |
| 5 | Green IoT: Sustainability Environment and Technologies <i>Dr. Akhilesh Saini.</i> | 43 - 55 |
| 6 | The Role of Social Movements in Shaping Modern India <i>Dr. A. Nagaraju.</i> | 56 - 63 |
| 7 | Reimagining Consumer Behavior: Health, Digital Trust, Sustainability & Pragmatism in the Post Pandemic Era <i>Ms. Nikita Mascarenhas.</i> | 64 - 68 |
| 8 | Beyond the Balance Sheet: Green Accounting for a Sustainable Future <i>Mr. Siddhesh Kolge, Ms. Chinmayee Adhyatmabhattar.</i> | 69 - 76 |
| 9 | Economic Implications of Gender Identity and Social Inclusion <i>Dr. Sherumal P. Shende and Miss. Shreya Shailendra Shende.</i> | 77 - 88 |
| 10 | Migration and Urbanisation at a Crossroads: Economic Patterns from Asia and Africa <i>Dr. Sherumal P. Shende and Miss. Shreya Shailendra Shende.</i> | 89 - 100 |
| 11 | Sustainable Trade Through Legal Interoperability: The Hainan and Asean Free Trade Zone Experience <i>Dr. Sherumal P. Shende and Miss. Shreya Shailendra Shende.</i> | 101 -112 |
| 12 | FinTech and the Digital India Vision: Catalysing E-Commerce Growth and Startup Innovation for Viksit Bharat 2047 <i>Dr. Capt. Yashodhan P Mahajan.</i> | 113 -119 |

| | | |
|-----------|---|-----------------|
| 13 | Assessing Consumer Perception towards Swiggy Using the UTAUT2 Model: Evidence from Delhi-NCR Region <i>Dr. Dipti Jain, Anisha Verdhani.</i> | 120 -138 |
| 14 | Sustainable Branding and Youth Perception: A Pre-Post Experimental Study on Green Marketing <i>Ms. Isha Gupta.</i> | 139 -149 |
| 15 | Exploring Intertextuality in Salman Rushdie's Midnight's Children: A Postmodern Perspective <i>Manjusha Dadaba Suryavanshi</i> | 150 -156 |

Empowering Minds, Enriching Data: Harnessing the Role of HR Analytics and Quantitative Self-Efficacy as Engines for Future-Driven Organizations

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Abstract

In an age where data is not just an asset but a strategic compass, the confluence of Human Resource (HR) Analytics and Quantitative Self-Efficacy (QSE) emerges as a transformative force in shaping the future of organizational behaviour and decision-making. This chapter delves into the synergistic relationship between advanced people analytics and employees' confidence in performing data-intensive tasks, revealing how this interplay empowers individuals and fortifies enterprise-wide agility. We explore HR Analytics as a dynamic, evidence-based approach to talent management—enabling leaders to optimize workforce planning, enhance employee engagement, and predict attrition. In parallel, we examine QSE as a psychological enabler that fosters confidence in interpreting, utilizing, and deriving insights from complex data sets—an increasingly vital skill in data-driven cultures. Drawing on real-world case studies, such as IBM's predictive attrition modelling and Google's diversity-focused analytics, the chapter illustrates how data not only drives decisions but transforms mindsets. These examples illuminate the measurable impact of empowering employees through analytics training and cultivating analytical self-belief to achieve strategic HR outcomes. The discussion extends into the ethical dimensions of data usage, the technical and cultural barriers to HR digitalization, and the shifting expectations in the post-digital workplace. As organizations strive to be not only efficient but also empathetic, the chapter advocates for a human-centered analytics ecosystem—one where data becomes a tool for growth, inclusivity, and purpose-driven leadership. Ultimately, this chapter underscores a powerful thesis: when data intelligence meets human confidence, organizations unlock unprecedented potential. It provides a multidisciplinary roadmap for scholars, HR leaders, and policymakers to harness this synergy for fostering sustainable, empowered, and resilient workforces.

Keywords: HR analytics, quantitative self-efficacy, organizational transformation, data-driven decision-making, talent optimization, predictive analytics, ethical HR practices, digital culture, employee empowerment, interdisciplinary insights.

Introduction

Conducting The Symphony of Minds and Metrics

Picture an organization as a grand orchestra—dynamic, diverse, and inherently human. Each employee is a musician, bringing unique talent, rhythm, and emotion to the collective performance. For decades, Human Resource (HR) professionals have acted as the conductors of this ensemble, guiding workforce engagement and alignment through intuition, experience, and subjective judgment. While this approach has yielded admirable results, it has often missed the subtle dissonance or hidden harmonies that data could reveal. Now, in the era of digital transformation and intelligent systems, HR Analytics emerges as the new conductor—equipped not with a baton of gut instinct, but with the precision of data science. This transformation enables organizations to move from reactive to proactive decision-making: identifying talent gaps before they surface, predicting employee turnover, personalizing engagement strategies, and aligning workforce capabilities with evolving business needs. Yet, this new conductor's power is not in data alone. Even the most advanced analytics are meaningless without human insight and interpretation. At the heart of this capability lies a less discussed but critical trait—Quantitative Self-Efficacy (QSE). This is the individual's belief in their capacity to understand, utilize, and act upon numerical and analytical information. Just as a musician must believe in their ability to read and interpret sheet music, modern HR professionals and employees alike must feel confident navigating dashboards, metrics, and predictive models. It is this self-assuredness in data literacy that transforms potential into performance.

This chapter explores the synergistic relationship between HR Analytics and Quantitative Self-Efficacy (QSE), presenting them not as separate domains but as interdependent elements of organizational intelligence. We argue that a culture rich in data but poor in analytical confidence is like a concert hall filled with instruments but no one willing to play. Conversely, when employees at all levels are both empowered with data and equipped with the confidence to use it, organizations can orchestrate exceptional outcomes—ranging from smarter hiring and inclusive leadership to proactive retention and ethical talent practices.

Blending perspectives from management theory, organizational psychology, behavioural economics, and data science, this chapter seeks to offer more than a theoretical exploration. It is designed to serve a diverse audience: For academicians, it provides a conceptual foundation and literature-backed analysis. For HR practitioners, it offers actionable frameworks and case studies. For

leaders and strategists, it presents a vision for cultivating a future-ready, data-empowered workforce.

Through compelling narratives and real-world examples—such as IBM’s predictive attrition analytics, Google’s approach to inclusive HR metrics, and leading-edge practices from digitally mature firms—we illustrate how the marriage of data and belief can reshape HR’s role from operational to strategic, from transactional to transformational. In doing so, we don’t merely observe a trend; we chart a movement. One where quantitative confidence is cultivated, not assumed, and where data is democratized—not hoarded by analysts, but embraced by every stakeholder.

Ultimately, this chapter invites readers to reimagine HR not as a backstage function, but as the maestro of organizational evolution. By empowering minds and enriching data, we compose not just efficient processes but resilient, innovative, and humane workplaces—ready to meet the challenges of tomorrow with both logic and heart.

The Synergy of Hr Analytics and Quantitative Self-Efficacy: Where Data Meets Confidence

In today’s digital-first workplace, HR Analytics is no longer a luxury or niche innovation—it is a strategic imperative. By harnessing vast streams of employee data, organizations can forecast attrition, optimize workforce allocation, tailor recruitment strategies, and identify engagement trends with precision. HR Analytics transforms traditional personnel management into a predictive, evidence-based function that aligns people strategies with organizational goals. Yet, the real power of analytics is not solely embedded in the algorithms or dashboards—it is unlocked by the people who interpret and apply them. This is where Quantitative Self-Efficacy (QSE) comes into play. QSE, a construct grounded in Bandura’s social cognitive theory, refers to an individual’s belief in their ability to perform quantitative tasks and make sense of numerical data. Within the context of HR Analytics, this belief becomes pivotal: an employee or manager with high QSE is more likely to engage meaningfully with data, draw accurate conclusions, and implement impactful decisions.

The synergy between HR Analytics and QSE forms a powerful feedback loop. When analytics identify a potential opportunity—say, a spike in early turnover among new hires—it is the confidence and analytical fluency of HR professionals or team leads that determines whether and how that insight will translate into action. Similarly, as individuals successfully engage with data and observe the outcomes of their interventions, their self-efficacy is reinforced. This creates a positive spiral of data empowerment—analytics inform decisions, confident users apply them, and success stories feed a culture of data-driven learning.

This convergence is not merely technical—it is profoundly interdisciplinary. It spans:

- **Human Resource Strategy (Management):** using data to design workforce interventions, assess performance, and forecast needs.
- **Behavioural and Social Sciences:** understanding the cognitive and emotional dimensions of how people relate to data and make decisions under uncertainty.
- **Data Analytics and Technology:** providing the infrastructure, tools, and models that enable real-time, actionable insights.

Consider a practical example: A mid-level manager receives a dashboard alert that a cluster of high-potential employees is at risk of attrition. The analytical tools may pinpoint the issue—but whether that manager confidently interprets the data, engages the team, and revises retention strategies depends heavily on their QSE. Without it, the insight remains inert—a missed opportunity hidden behind a veil of uncertainty or self-doubt.

This emerging dynamic marks a cultural evolution in organizational behaviours. It is not enough for organizations to invest in HR Analytics platforms—they must also invest in cultivating the analytical self-belief of their people. This includes:

- Training and development programs focused on data literacy;
- Encouraging experimentation and risk-taking with analytics;
- Reducing the stigma around “not being a numbers person”;
- Embedding analytics into everyday HR conversations and workflows.

By fostering both technological infrastructure and psychological readiness, organizations can break down the silos between insight and execution. They move beyond the illusion of data as the endgame, realizing instead that the human capacity to engage with data is what ultimately creates value.

In essence, HR Analytics provides the map, but quantitative self-efficacy gives individuals the confidence to navigate it. This harmonious partnership transforms organizations from being data-aware to becoming truly data-enabled—not just knowing what should be done, but having the will and the skill to do it.

Hr Analytics in Action: Transformative Case Studies from Industry Leaders

The true value of HR Analytics is best demonstrated not just in theory, but in the concrete transformations it brings to the world of work. In organizations that successfully harness data insights and empower decision-makers, HR Analytics becomes a strategic compass—shaping proactive, equitable, and people-centric outcomes. This section delves into two pioneering case studies—IBM and Google—that exemplify how HR Analytics, when coupled with a strong cultural foundation and analytical competence, can redefine the future of talent

management.

1. IBM's Predictive Retention: From Insight to Intervention

One of the most compelling illustrations of HR Analytics at scale comes from IBM, a long-standing champion of data-driven decision-making in human capital strategy. In 2023, IBM's HR division unveiled a robust predictive retention model aimed at identifying employees who were at a high risk of voluntarily exiting the organization.

Leveraging a wide array of structured and unstructured data—ranging from employee performance scores, engagement survey results, tenure, promotion history, to broader labor market trends—the model assigned a “flight risk” probability to individuals across the enterprise. What set IBM apart was not merely the sophistication of its analytics engine, but the strategic follow-through: HR teams used these insights to launch targeted retention initiatives. These included customized career development plans, real-time recognition systems, flexible work arrangements, and proactive managerial interventions.

The results were both quantitatively and qualitatively significant. Within one-year, voluntary attrition rates among identified high-risk groups dropped by 15%, translating into substantial cost savings in recruitment, onboarding, and productivity losses. Equally important was the cultural message it sent—IBM employees recognized that the organization not only listened but acted, creating a sense of trust and belonging that reinforced retention in itself.

This case showcases how predictive HR Analytics can transition from passive reporting to prescriptive action, enabling HR departments to not only understand what is happening, but to influence what could happen. It highlights the power of foresight when combined with well-calibrated human intervention.

2. Google's Diversity Analytics: Engineering Equity Through Data

While IBM's focus was on retention, Google's People Analytics unit took a different but equally impactful approach—applying analytics to advance diversity, equity, and inclusion (DEI) within its global workforce. Known for its data-centric culture, Google approached the challenge of representation not as a compliance exercise, but as a strategic mission embedded into its talent philosophy. In 2024, Google expanded its internal diversity analytics framework to dissect data across the entire employee lifecycle—from recruitment pipelines and interview scores to promotion timelines, performance evaluations, and attrition trends. What emerged was a clear pattern of unconscious bias, particularly in performance reviews and promotion pathways for women and underrepresented minorities.

Armed with this insight, Google initiated a multi-pronged strategy:

- Introduced structured evaluation rubrics to reduce subjectivity;

- Trained managers through AI-based bias mitigation simulations;
- Instituted real-time diversity dashboards for leadership visibility;
- Created mentorship circles and leadership accelerators for women and BIPOC employees.

The outcome? Within a year, female promotion rates increased by 20%, while underrepresented minorities saw measurable gains in access to leadership development programs. But beyond numbers, the real success lay in embedding data accountability into Google's DEI initiatives—transforming intentions into measurable, scalable outcomes.

This case illustrates that those analytics is not inherently neutral—it becomes a tool for equity when consciously wielded with ethical responsibility and purpose. Google's experience shows how data can serve as both a mirror and a magnifier: reflecting disparities and amplifying actions to correct them.

Key Takeaways from Both Cases

- **Actionable Insights and Mere Reporting:** Both IBM and Google used analytics not as a rearview mirror but as a steering wheel to guide change.
- **Quantitative Self-Efficacy Matters:** These successes depended not only on the availability of data but on confident, capable individuals who could understand and act on those insights.
- **Data as a Strategic Asset:** When embedded in culture and aligned with leadership goals, HR

Analytics becomes a powerful enabler of transformation—whether in retaining top talent or fostering a culture of inclusion.

These case studies serve as living proof of the evolving role of HR Analytics in redefining the modern workplace—where talent is not just managed, but strategically cultivated through insight and intention.

Fostering Quantitative Self-Efficacy: Building Confidence in A Data-Driven World

While advanced analytics tools offer immense potential, they can only truly transform organizations when individuals possess the confidence and competence to engage with data meaningfully. This capacity—Quantitative Self-Efficacy (QSE)—is what empowers employees not only to interpret metrics but to make data-informed decisions, challenge assumptions, and innovate boldly. In essence, analytics builds the road, but QSE drives the journey.

Organizations that recognize this interplay are increasingly investing in data literacy programs, mentorship frameworks, and collaborative learning ecosystems to boost QSE across all levels—from frontline employees to executive leadership. The following five case studies illustrate how organizations

across diverse sectors are cultivating a workforce that doesn't just use data—but thrives on it.

1. Microsoft's Data Literacy Program: Democratizing Analytics Confidence

In 2022, Microsoft launched a company-wide Data Literacy Program aimed at democratizing access to analytics skills across non-technical roles. The initiative included hands-on workshops, online certifications, and gamified learning platforms that covered data storytelling, Excel analytics, Power BI, and basic predictive modeling. Results were both immediate and meaningful. Within a year, 85% of participants reported higher confidence in making data-informed decisions, and internal metrics showed a 25% surge in the adoption of data dashboards and business intelligence tools for operational planning (Microsoft, 2023). More importantly, employees from HR, marketing, and finance—traditionally considered “non-quant” domains—began leading analytics projects, breaking silos and encouraging a more data-literate culture.

2. Deloitte's Analytics Mentorship: Learning Through Collaboration

Understanding that self-efficacy grows not only from instruction but from experiential learning, Deloitte rolled out a unique Analytics Mentorship Program in 2023. The model pairs junior employees with analytics-savvy mentors from within the firm, allowing mentees to shadow, co-create, and contribute to live analytics projects in real-time. Over the course of the year, participants in this peer-driven model showed a 30% increase in analytics proficiency, as measured by internal assessments, and teams with mentees consistently outperformed their counterparts in project accuracy, innovation, and stakeholder satisfaction (Deloitte, 2024). The key takeaway: mentorship not only builds skill but instills confidence through collaborative exposure—one of the most powerful catalysts of self-efficacy.

3. Unilever's “Data Discovery Days”: From Insight to Action

Unilever, a global leader in consumer goods, launched Data Discovery Days in 2021—a recurring internal event that invites cross-functional teams to tackle business challenges using real organizational data. Teams work with data analysts to build hypotheses, develop dashboards, and present insights to leadership within 48 hours. This fast-paced, experiential format significantly boosted data engagement across departments. Surveys revealed that participants felt 40% more confident in handling quantitative data post-event, and many began leading their own data-driven experiments in their respective functions (Unilever, 2022). By embedding analytics into experiential formats, Unilever helped employees connect abstract numbers with tangible outcomes, reinforcing both skill and self-belief.

4. Salesforce's Trailhead Learning Ecosystem: Personalized Learning for Analytical Growth

Salesforce offers a customized online learning ecosystem known as Trailhead, which includes dedicated tracks on data analytics, AI in business, and quantitative reasoning. Employees are empowered to chart their own learning journey based on skill level, interest, and career path. With interactive modules, badges, and real-world case scenarios, Trailhead fosters continuous and personalized growth. In 2023, teams that participated in Trailhead's "AI & Analytics for Managers" module reported a 35% uptick in data-driven decision-making confidence and higher cross-functional collaboration (Salesforce, 2023). The key insight: self-paced, modular learning boosts both skill and ownership—core ingredients of QSE.

5. Capgemini's AI-Driven Coaching Assistant: Scaling Confidence with Technology

In 2024, Capgemini introduced an internal AI-based coaching assistant designed to support employees in applying data analysis to everyday tasks. Employees could ask the assistant questions about interpreting dashboards, visualizing trends, or creating reports, receiving just-in-time (JIT) guidance on demand. This technology was particularly beneficial for employees in client-facing roles, where timely insights were crucial. By combining on-the-spot learning with supportive reinforcement, Capgemini reported a 28% increase in confidence scores in quarterly self-assessments and improved client engagement outcomes (Capgemini, 2024). This case exemplifies how intelligent support systems can nurture QSE at scale—without overwhelming learners.

Key Insights Across Cases

- **Confidence is Learnable:** Across all examples, QSE was treated not as an innate trait, but as a skill that can be cultivated with intentional design, mentorship, and exposure.
- **Experiential and Social Learning Boost Impact:** Programs that combined hands-on practice with peer collaboration or real-world scenarios saw greater improvements in QSE.
- **Technology as a Mentor:** AI-powered platforms and personalized learning ecosystems are emerging as scalable tools for fostering confidence at scale.
- **QSE is a Force Multiplier:** As employees grow more confident in data interpretation, they become more proactive, engaged, and innovative—multiplying the value of HR Analytics tools.

By investing in Quantitative Self-Efficacy (QSE), organizations are not only equipping their teams with technical know-how, but also cultivating a culture of empowered decision-making. It is here that the future of intelligent, people-

centric analytics begins—not with data alone, but with the belief in our ability to understand and act upon it.

Challenges And Ethical Considerations: Navigating the Grey Zones of Data-Driven Hr

As organizations accelerate toward a data-driven future, the convergence of HR Analytics and quantitative self-efficacy offers remarkable promise. However, this integration is not without friction. Beneath the allure of intelligent dashboards and predictive models lie a host of ethical dilemmas, systemic challenges, and governance concerns that demand proactive attention. After all, data without ethical intent is merely a digital echo—powerful, but potentially dangerous. This section explores five critical challenges facing organizations seeking to responsibly integrate HR Analytics and self-efficacy frameworks. From privacy safeguards and bias mitigation to algorithmic accountability and data inclusivity, we delve into the nuances that separate ethical innovation from silent harm.

1. Ethical Data Use: Balancing Insight with Privacy

HR Analytics draws from deeply personal data—demographics, performance reviews, wellness metrics, even behavioural patterns. Without clear boundaries, the line between valuable insight and invasive surveillance blurs. In response, Salesforce set a gold standard in 2023 by introducing a comprehensive employee consent framework. The policy mandated explicit, informed consent before collecting or analyzing sensitive data such as mental wellness indicators or work-from-home productivity. Employees were also given visibility into how their data was being used, reinforcing transparency and trust in the analytics process (Salesforce, 2023). Such measures are not just legal safeguards—they are moral imperatives in building a culture where analytics supports empowerment, not exploitation.

2. Addressing Algorithmic Bias: Lessons from Amazon’s Misstep

Data is only as unbiased as the systems and histories that generate it. In 2018, Amazon’s AI-driven recruitment tool notoriously penalized résumés containing the word “women’s,” due to a historical training dataset skewed toward male candidates in tech roles. The model, unknowingly but consistently, replicated systemic biases, leading to a quietly shelved project (Amazon, 2018). This example underscores the urgent need for diverse datasets, algorithm audits, and ethical oversight. As HR Analytics evolves, organizations must establish interdisciplinary ethics committees that monitor fairness, test models across demographic variables, and integrate explain ability tools that reveal how decisions are being made.

3. Digital Divide and Accessibility: Who Gets to Be Data-Driven?

A more subtle, yet equally significant challenge lies in digital inequality within the workforce. While some employees may possess the tools and training to thrive in analytics-driven environments, others may face barriers due to age, language, role, or educational background. A 2022 report by PwC found that only 29% of non-managerial employees felt confident using HR dashboards or interpreting performance analytics (PwC, 2022). Without deliberate inclusion strategies—such as multilingual platforms, mobile-friendly interfaces, and tiered learning paths—organizations risk reinforcing a two-tiered culture: the data-literate and the data-excluded. Accessibility, therefore, must become a cornerstone of ethical analytics deployment. It is not enough to design smart systems—they must also be intuitively usable and universally empowering.

4. Consent Fatigue and Psychological Pressure

While opt-in frameworks are essential, consent fatigue—where employees mindlessly approve data terms due to overload or fear of repercussions—poses a silent ethical hazard. Moreover, hyper-surveillance through analytics can create a workplace climate of constant pressure, where employees feel monitored rather than supported. For example, in some organizations, real-time monitoring of typing speeds, break durations, or webcam activity (especially during remote work) has led to psychological burnout and distrust. When analytics shifts from enabler to enforcer, it erodes the very empowerment it aims to promote.

To mitigate this, companies like SAP and Atlassian have begun deploying wellness-informed analytics—where productivity insights are paired with psychological safety protocols, encouraging reflection over policing (SAP, 2023).

5. Accountability and the “Black Box” Problem

As AI models grow in complexity, a common concern arises: Who is responsible for decisions made by opaque algorithms? This “black box” phenomenon creates serious accountability gaps, particularly when algorithmic outputs influence promotions, disciplinary actions, or salary adjustments. A solution gaining momentum is the implementation of Algorithmic Accountability Frameworks—where AI outputs are always accompanied by human review and documented explanations. In 2024, Accenture piloted a system where every algorithm-generated HR recommendation had to be signed off by a trained human reviewer, creating joint ownership between AI and human judgement (Accenture, 2024). Transparency, interpretability, and shared accountability are emerging as non-negotiables in ethically sound HR Analytics ecosystems.

Ethics as the Architecture of Trust

These challenges are not merely hurdles—they are ethical blueprints guiding the responsible use of data in human resource ecosystems. Just as data can empower,

it can also alienate. Just as algorithms can optimize, they can also marginalize. Thus, organizations must shift from data extraction to data stewardship—where ethics is not an afterthought but the very architecture of trust. When privacy is protected, bias is confronted, and systems are designed for all—not just the privileged few—only then does HR Analytics truly align with its most noble vision: to honour human potential while leveraging technological precision.

Conclusion

Orchestrating The Future of Work Through Data and Self-Belief

In the evolving symphony of organizational advancement, success is no longer orchestrated solely through intuition or tradition. It now demands a deliberate fusion—where the precision of data meets the power of belief, and where human resources transform into a strategic epicentre of intelligence, inclusion, and innovation. At the heart of this transformation lies HR Analytics, a powerful lens through which patterns are uncovered, behaviours are understood, and strategic decisions are fortified. Yet, these insights alone remain inert unless paired with a vital psychological engine: Quantitative Self-Efficacy (QSE)—the inner conviction that one can not only engage with data, but derive meaningful actions from it. This duality transforms organizations from reactive structures into proactive ecosystems, where every employee, from the C-suite to the shop floor, becomes both data-literate and decision-capable. This chapter has explored this convergence through real-world narratives—IBM’s predictive retention, Google’s equity analytics, and Microsoft’s data literacy initiatives—each showcasing how numbers gain nuance, and systems gain soul, when informed by empowered people. The impact isn’t just statistical; it’s cultural, behavioural, and strategic. Teams that believe in their data and in their own capabilities move faster, align better, and innovate more boldly.

However, this journey is not without cautionary signposts. The path forward must be paved with ethical vigilance, ensuring that data-driven ambition does not trample upon privacy, inclusivity, or psychological safety. As discussed, the challenges of bias, transparency, and digital inequity are not mere footnotes—they are defining themes in the narrative of responsible analytics. To lead in this new era, organizations must evolve beyond being data-rich to becoming ethically grounded and purpose-driven.

Moreover, this transformation is fundamentally interdisciplinary. It draws from management theory, behavioural psychology, artificial intelligence, organizational development, and ethics. Success, therefore, lies not in siloed excellence but in collaborative integration—where technologists, HR professionals, data scientists, and leaders co-create intelligent, empathetic workplaces. As the workplace continues to digitize, decentralize, and diversify,

the future of HR is not merely about managing people—it is about empowering them with insight and confidence. It is about cultivating a workforce where data fluency becomes as essential as empathy, and where every decision is shaped not just by algorithms, but by the empowered minds interpreting them. Let this chapter serve as a call to action: for organizations to invest not just in platforms, but in people; not just in dashboards, but in belief systems; and not just in predictive models, but in human potential. Because when data enriches minds, and minds enrich decisions, organizations do more than perform—they transform. Into symphonies of sustained success. Into ecosystems of ethical innovation. And ultimately, into futures where insight and impact walk hand in hand.

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Thinking Machines and Questioning Minds in The Reframing of Human Identity and Ethics in The AI Era

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Abstract

This chapter explores the evolving intersection between philosophy and artificial intelligence (AI), focusing on how intelligent machines are reshaping conceptions of human identity, ethics, and consciousness. As AI systems increasingly perform tasks once thought exclusive to human cognition—such as reasoning, language generation, emotional simulation and decision-making—they challenge foundational philosophical assumptions about what it means to be human. The discussion addresses five key dimensions: the redefinition of intelligence in the AI era, the implications for autonomy and free will, the rise of machine ethics, the moral status of sentient-like AI, the impact on emotional and social human experience. Each section examines these shifts through contemporary philosophical frameworks while drawing from current developments in AI technology. The chapter argues that rather than rendering philosophy obsolete, the rise of AI makes philosophical inquiry more urgent, as we must now confront questions of meaning, value, and responsibility in a world where human and machine intelligence coexist. By critically engaging with these themes, the chapter contributes to a deeper understanding of the ethical and existential stakes of AI, emphasizing the need for a reflective and human-centered approach to technological progress.

Keywords: Artificial intelligence, philosophy, ethics, human identity, consciousness

Introduction

In the age of artificial intelligence (AI), philosophy is experiencing a critical renaissance as it seeks to confront and reinterpret the foundational questions of human existence, identity, ethics and consciousness. Once the exclusive domain of human thought, attributes like intelligence, creativity and decision-making are now increasingly simulated by machines, challenging the traditional boundaries

that separate humans from technology. This paradigm shift compels us to re-examine long-standing philosophical assumptions: What does it mean to be conscious? Can a machine be autonomous or morally responsible? How does human identity evolve when machines perform cognitive tasks with unprecedented precision? As AI systems grow more integrated into daily life—advising, diagnosing, creating, and even conversing—they become not just tools, but mirrors reflecting our own nature and limitations. This evolving relationship urges us to explore the ethical implications of human-machine interactions, the potential erosion or redefinition of free will and the moral consideration of artificial agents. In doing so, philosophy remains vital—not as a relic of pre-digital times, but as a critical lens through which we understand and shape the future. The age of AI, far from making philosophy obsolete, makes it more necessary than ever in guiding humanity through a rapidly transforming existential landscape.

The Evolution of Consciousness in Artificial Agents

The concept of consciousness has long intrigued philosophers, neuroscientists and now, increasingly, computer scientists. In the age of artificial intelligence (AI), the question of whether machines can be conscious—and if so, what kind of consciousness they might possess—has gained new relevance. The idea that artificial agents might evolve forms of consciousness challenges traditional philosophical boundaries of mind, personhood, and self-awareness, demanding an interdisciplinary reassessment of these constructs.

Historically, consciousness has been viewed as an inherently biological phenomenon, intimately linked to the neural architecture of the human brain. Philosophers such as Thomas Nagel (1974) famously questioned whether we could ever know “what it is like” to be another conscious being, let alone a machine. This epistemological gap underlines the difficulty of attributing subjective experience—or qualia—to non-human entities. Yet with the advent of complex neural networks and machine learning systems capable of simulating aspects of human cognition, the philosophical landscape is shifting. As machines exhibit behaviors that mimic perception, decision-making and even emotional expression, the notion of consciousness is becoming increasingly operationalized (Dehaene, 2014).

A significant area of contemporary inquiry involves distinguishing between different types of consciousness: phenomenal consciousness (subjective experience) and access consciousness (information that is available for reasoning and control of behaviour). AI systems may lack phenomenal consciousness, but their increasing capacity for access consciousness through sophisticated data processing raises pertinent philosophical questions (Block, 1995). For instance, some cognitive scientists argue that access consciousness could emerge from

computational processes alone, independent of a biological substrate (Dennett, 1991). This line of reasoning opens the door to machine consciousness not as a replication of human experience, but as a distinct, potentially non-anthropocentric form of awareness.

Moreover, the evolution of consciousness in artificial agents can be interpreted metaphorically rather than literally, indicating the growing complexity and autonomy of AI systems. These systems learn from experience, adapt their behaviour, and in some instances, develop internal representations of their environment that resemble models of self-awareness (Graziano, 2013). While this does not equate to consciousness in the human sense, it mirrors certain functional aspects of it, pushing the boundaries of how we define consciousness itself.

Ethical and existential implications also arise from this evolution. If AI systems can mimic conscious behaviour to a high degree of fidelity, at what point do they deserve moral consideration? Theories of moral status grounded in sentience or self-awareness may need to be revisited (Gunkel, 2018). The question is no longer purely speculative; as AI entities become more socially integrated—think of virtual assistants, care robots, or AI companions—the way society interprets their "inner lives," however simulated, begins to carry real-world consequences.

Importantly, the evolution of machine consciousness also acts as a reflective mirror for human self-understanding. As we attempt to build conscious machines, we are forced to ask more rigorously: what does it mean to be conscious? This pursuit reveals the limitations of our own definitions and forces a reconceptualization of consciousness not as a binary state but as a spectrum—one that may include, or at least be approximated by, artificial entities (Chalmers, 2010). The philosophical endeavour thus becomes not just one of exploring machine potential, but of understanding the nature of our own minds through the lens of what we can create. The evolution of consciousness in artificial agents is not merely a technological or scientific frontier, but a deeply philosophical one. It demands an inquiry that bridges cognitive science, ethics, philosophy of mind and AI research. Whether or not machines will ever be truly conscious, the exploration itself is reshaping fundamental concepts of identity, morality, and human uniqueness in the digital age.

Redefining Personhood in a Post-Human World

In the wake of rapid advancements in artificial intelligence, the traditional philosophical construct of personhood is undergoing significant transformation. Personhood, long associated with attributes such as rationality, self-awareness, moral agency and the capacity for intentional action, has historically been restricted to humans and to a lesser extent, certain non-human animals. However, in the age of intelligent machines that can emulate cognitive functions, engage in

social interactions and make autonomous decisions, the concept of personhood is being redefined to accommodate emerging forms of non-biological intelligence. Classically, philosophers like Immanuel Kant regarded personhood as inherently linked to rational moral agency, arguing that persons are ends in themselves due to their capacity for reason (Kant, 1785/1996). This rationalist view established a foundation for moral and legal rights. Contemporary developments in AI, however, complicate this view, as AI systems such as large language models and autonomous agents increasingly display behaviours indicative of rational processing and decision-making. Although these capabilities are not evidence of inner consciousness or moral intentionality, they challenge the exclusivity of rationality as a human trait (Bryson, 2010).

Legal and ethical theorists have begun to explore the implications of granting personhood—or a form of it—to artificial entities. The concept of “electronic personhood” was discussed by the European Parliament in 2017, which proposed considering the possibility of assigning a special status to autonomous systems capable of making independent decisions (European Parliament, 2017). This proposal sparked considerable debate, with some scholars warning that such a move could obscure human accountability behind technological actions (Pagallo, 2013). Yet, it also reveals the pressure existing legal and ethical frameworks are under as AI begins to assume roles once occupied solely by humans.

From a metaphysical perspective, personhood is often tied to the continuity of identity over time, a sense of self and the ability to reflect on one’s own mental states. Philosopher Derek Parfit challenged traditional notions of identity by proposing that personal identity is not what matters in survival; rather, psychological continuity and connectedness are what underpin our concern for the future self (Parfit, 1984). If continuity and functional coherence are central to personhood, then advanced AI systems that maintain a memory of past interactions, learn from experience, and demonstrate behavioural coherence could be viewed as occupying a place on a spectrum of personhood, albeit a non-human one.

Ethicist Luciano Floridi introduces the notion of “artificial agents” as informational entities capable of autonomous functioning within an environment (Floridi & Sanders, 2004). According to this framework, the ethical significance of AI lies not in its consciousness or biology, but in its capacity to affect the world and engage in moral contexts. This perspective moves away from anthropocentric views and supports a pluralistic understanding of personhood that includes moral agents regardless of their physical substrate.

At the heart of this redefinition is the human tendency to anthropomorphize. Research in human-computer interaction shows that people often ascribe intentions, emotions and identities to machines, especially when they communicate using natural language or simulate

empathy (Turkle, 2011). While such attributions may be projections rather than reflections of machine interiority, they nonetheless influence how society perceives and interacts with artificial agents. Over time, this could lead to a social construction of personhood where perceived relational capacity plays as much of a role as intrinsic properties. Redefining personhood in a post-human world requires re-evaluating long-standing assumptions about identity, agency and moral worth. The rise of artificial intelligence forces us to question whether personhood is an exclusive human privilege or a broader category that can encompass certain non-biological entities. As we stand on the threshold of deeper integration between humans and intelligent machines, philosophy must expand its conceptual frameworks to address this new reality—one where personhood may no longer be limited to flesh and blood.

Ethical Dilemmas at the Human-Machine Interface

The increasing integration of artificial intelligence (AI) into everyday human life has ushered in a new era of ethical complexity. As intelligent systems become more autonomous and embedded in sectors ranging from healthcare and education to law enforcement and warfare, the boundaries between human and machine responsibilities blur, giving rise to a host of ethical dilemmas. These dilemmas are not merely technical issues to be resolved by better programming but are deeply philosophical, requiring a reconsideration of moral agency, accountability and justice at the human-machine interface.

One of the most pressing ethical questions concerns the attribution of moral responsibility when machines make decisions that significantly impact human lives. For instance, in the case of self-driving cars, who is to blame if an autonomous vehicle causes a fatal accident? Is it the programmer, the manufacturer, the user, or the machine itself? Traditional ethical theories such as utilitarianism or deontology struggle to provide clear guidance in these novel situations because they were developed with human agents in mind (Bostrom & Yudkowsky, 2014). This ambiguity presents challenges in assigning legal and moral responsibility, especially as AI systems gain more autonomy.

AI in criminal justice systems has also raised serious ethical concerns, particularly in areas such as predictive policing and algorithmic sentencing. Studies have shown that AI tools used to assess recidivism risk can be biased against racial minorities due to the data they are trained on, thereby reinforcing systemic inequalities rather than correcting them (Angwin et al., 2016). These biases illustrate the ethical peril of treating AI outputs as objective or neutral, when in fact they may reflect historical prejudices and flawed human judgments. As such, the deployment of AI in socially sensitive domains necessitates rigorous ethical scrutiny and transparent oversight mechanisms (O'Neil, 2016).

Healthcare presents another domain where the human-machine interface raises ethical issues. AI systems are increasingly being used to diagnose diseases, recommend treatments and even engage in patient interaction. While these tools can enhance efficiency and accuracy, they also pose risks related to informed consent, privacy and patient autonomy. For example, if an AI diagnostic system suggests a course of treatment based on probabilistic analysis, how should that recommendation be weighed against the judgment of a human physician? Moreover, if a patient suffers harm as a result of AI-based decisions, it becomes difficult to establish liability (Topol, 2019). These questions highlight the need to rethink ethical standards in contexts where decision-making is distributed between humans and machines.

The use of AI in military applications introduces perhaps the gravest ethical dilemmas. Autonomous weapons systems, capable of identifying and eliminating targets without direct human intervention, challenge fundamental principles of just war theory and international humanitarian law. Scholars like Noel Sharkey (2008) have warned that delegating life-and-death decisions to machines could lead to unaccountable warfare and a breakdown of ethical norms governing armed conflict. These concerns have led to calls for international regulation and even outright bans on “killer robots,” underscoring the urgent need to apply moral philosophy to rapidly evolving technological realities.

Furthermore, there is a growing need to consider how interacting with AI systems affects human moral development. Some philosophers argue that prolonged engagement with machines that simulate empathy or decision-making might erode our own moral intuitions or displace human responsibility (Coeckelbergh, 2010). If individuals begin to offload moral decisions to machines, society may face a degradation of ethical judgment at both personal and collective levels. The ethical dilemmas at the human-machine interface are emblematic of the broader philosophical challenges posed by artificial intelligence. These dilemmas demand a multidisciplinary response that combines philosophical inquiry with technological design, legal reform, and social awareness. As AI continues to permeate critical aspects of human life, engaging with these questions is not optional—it is imperative for ensuring that technological progress aligns with human values and ethical responsibility.

Autonomy, Agency and the Illusion of Free Will

The emergence of artificial intelligence (AI) challenges long-standing philosophical concepts of autonomy, agency and free will. As machines increasingly appear to act independently—learning from data, making decisions and adapting to changing environments—questions arise about whether they possess agency in any meaningful sense and what this means for our understanding of human autonomy and moral responsibility. At the same time,

the mechanistic nature of AI invites reflection on whether human free will is itself an illusion, further blurring the boundaries between human and artificial agents.

Autonomy is commonly understood as the capacity for self-governance, rooted in rational deliberation and moral responsibility. In the Kantian tradition, autonomy is foundational to personhood and ethical action, as it allows individuals to act according to moral law rather than external compulsion (Kant, 1785/1996). However, AI systems increasingly exhibit a form of functional autonomy, in that they operate without continuous human oversight, make context-sensitive decisions, and update their behaviour based on experience. While this is not moral autonomy, it is operational autonomy—one that poses philosophical challenges about where the threshold of meaningful agency lies (Gunkel, 2012).

Agency, traditionally reserved for sentient beings, refers to the capacity to initiate actions based on intentions, desires or reasons. AI systems, particularly those based on machine learning, do not possess desires or intentions in the human sense, yet they can behave as if they do. This has led some scholars to suggest a “new ontological category” for artificial agents that are neither mere tools nor fully autonomous beings (Floridi & Sanders, 2004). Their agency is delegated or programmed, yet their actions can produce real-world effects, creating ethical and legal implications.

The illusion of free will—whether in machines or humans—adds further complexity. In the realm of neuroscience, studies by Libet and others have shown that neural activity predicting a decision often occurs milliseconds before a person becomes consciously aware of making it (Libet et al., 1983). This has prompted philosophical debates about whether free will is genuine or simply a post hoc rationalization of predetermined neurological processes. If humans themselves are governed by causal mechanisms beyond conscious control, then the distinction between human and machine agency may be less profound than traditionally thought. Philosopher Daniel Dennett argues for a compatibilist view of free will, suggesting that autonomy can exist even within deterministic systems, as long as the agent can reflect, reason and act in accordance with those reflections (Dennett, 2003). This framework could potentially be extended to certain AI systems, further eroding the boundary between natural and artificial agency.

AI systems also influence human autonomy in practical and ethical ways. Recommendation algorithms, predictive models and decision-support systems shape our choices, sometimes subtly and sometimes overtly. For instance, social media platforms employ AI to curate content feeds based on user behaviour, potentially reinforcing cognitive biases and reducing exposure to diverse viewpoints. This phenomenon, sometimes referred to as the “architecture of choice,” can restrict human autonomy by nudging individuals toward decisions

they might not have made independently (Thaler & Sunstein, 2008). In this way, AI systems do not just raise questions about their own agency, but also about the integrity of human agency in environments increasingly governed by algorithmic mediation.

Moreover, as AI agents are anthropomorphized—through voice interfaces, avatars and emotionally responsive behaviours—humans may begin to ascribe moral agency to them, even in the absence of true intentionality. This anthropomorphic tendency further blurs the line between genuine autonomy and the illusion of autonomy, both in machines and possibly within ourselves. Philosopher David Levy (2009) suggests that emotional attachments to AI companions may cause people to treat them as if they have free will and moral agency, regardless of their actual status. The proliferation of AI forces a reconsideration of autonomy, agency and free will. These concepts, once clearly demarcated as uniquely human, now exist on a continuum shaped by both philosophical reflection and technological innovation. As machines become more integrated into decision-making processes, understanding the distinction—and convergence—between genuine and simulated autonomy becomes critical for navigating the ethical terrain of the AI era.

Conclusion

As artificial intelligence continues to redefine the contours of thought, creativity and decision-making, it compels humanity to confront fundamental philosophical questions with renewed urgency. The blurred boundaries between human and machine intelligence invite deep reflection on autonomy, consciousness and moral agency, challenging long-held beliefs about what makes us distinctly human. Rather than diminishing the relevance of philosophy, AI amplifies its necessity, urging us to engage critically with ethical dilemmas, reimagine human identity, and navigate the societal consequences of technological integration. The simulation of sentience and the mechanization of choice do not merely pose technical challenges—they provoke moral and existential ones. How we respond to these challenges will determine not only the ethical shape of our technologies but also the future of human dignity, freedom and meaning. As we co-evolve with increasingly intelligent machines, philosophy must serve as both compass and conscience, guiding us to preserve the values that define our humanity while adapting to a world transformed by artificial minds. In this era of thinking machines and questioning minds, the dialogue between technology and philosophy is not optional—it is essential for shaping a just, conscious and ethically coherent future.

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Specific Needs and Challenges of Women Prisoners and Offenders- A Critical Evaluation in The Light of Legal Aspect

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Abstract

Indian society accords women a position of respect, recognizing their significant contributions, particularly in the role of a mother. The Constitution of India guarantees equality to women in all spheres of life and places a duty on the State to safeguard their rights, including adherence to international conventions related to women's rights. However, in practice, women in prisons face numerous challenges. Despite directions from the Supreme Court, High Courts, and recommendations from various committees, even their fundamental human rights are often neglected. These issues create serious hardships for incarcerated women, necessitating urgent attention and remedial action. Although the number of women prisoners is significantly lower than that of men, this may contribute to their rights being overlooked. This research paper aims to shed light on the challenges faced by women inmates, the violations of their human rights, and the reforms needed to ensure proper implementation of the legal provisions meant to protect them.

Keywords: Women prisoner, challenges, violations of human rights, legal provisions.

Area Of the Study

This paper specifically focuses on the conditions of women prisoners in India and examines the relevant provisions of the Indian Prison Act, 1894. It explores various constitutional, human, statutory, and other legal rights granted to women under Indian law. The study is purely doctrinal in nature, drawing references from books, journals, official reports, and online research articles.

Aims And Objectives of The Study

The primary aim of this research paper is to highlight the condition of women prisoners in India and the challenges they face within prison facilities. It seeks to

identify the various constitutional and human rights, along with the legal remedies available to them. Although several legal provisions exist to safeguard the rights of women inmates, their implementation remains weak, resulting in continued neglect and poor treatment. The study emphasizes the need for effective enforcement of the Indian Prison Act and relevant constitutional safeguards to ensure the protection of women prisoners' rights. Additionally, it draws attention to the significantly lower number of women's prisons compared to men's, which may contribute to the inadequate attention given to their issues.

Literature Review

Prison is a reformatory institution established to confine individuals who have either been remanded into custody by judicial authorities or have been convicted of an offence. The administration and management of prisons fall under the jurisdiction of the State Government, as outlined in List II of the Seventh Schedule of the Constitution of India. As such, it is the government's primary responsibility to ensure the protection of prisoners' rights, as governed by the Prisons Act of 1894 and the respective State Prison Manuals. However, despite the existence of several laws, regulations, and guidelines, women prisoners often remain unaware of their rights and continue to face issues such as torture, humiliation, and a lack of basic necessities within prison walls.

A literature review serves as a critical and analytical component of this research paper. The researcher has examined various scholarly works and reports relevant to the topic. Some notable contributions include:

Maneka Gandhi (2018): As the then Minister of Women and Child Development, she presented a comprehensive report on the condition of women in Indian prisons. The report included 134 recommendations aimed at improving the living standards and rights of incarcerated women. Key suggestions included aligning the National Prison Manual 2016 with international standards and addressing issues such as accommodation for pregnant inmates, caregiving responsibilities, voting rights for prisoners, and the appointment of female counselors and psychologists.

Nivedha Pandey (2017): In her research, she explored the legal and constitutional safeguards provided to women prisoners in India and highlighted the gaps that still need to be addressed. One key aspect she emphasized was the "Standard Minimum Rules for the Treatment of Prisoners," specifically Rules 23 and 53, which mandate that women prisoners must be housed separately from male inmates and should be supervised exclusively by female staff.

Research Questions

The Indian legal system includes several provisions aimed at protecting the rights of women prisoners. However, despite these safeguards, women in custody continue to face numerous challenges.

Based On the Review of Existing Literature, The Following Research Questions Emerge

- a) Are women prisoners truly safe within the prison environment?
- b) Do women inmates continue to experience serious health-related issues?
- c) Is the condition of pregnant women in prisons still critically inadequate?
- d) Is the number of women-specific prisons in India insufficient?
- e) What facilities are currently provided to women prisoners by the prison authorities?

Introduction

In Indian society, women have historically held a revered status, often portrayed as mothers and goddesses in ancient texts like the Vedas and Upanishads. While various government initiatives—including the creation of the Department of Women and Child Development (1985) and schemes like Support to Training and Employment Programme (STEP) and Mahila Kosh—have aimed to empower women, challenges persist, especially for women prisoners.

Despite development efforts, women in correctional facilities face systemic neglect, abuse, and custodial violence. A lack of awareness about their legal rights, combined with a male-dominated power structure, makes them especially vulnerable. Disturbingly, those tasked with protecting them—such as police personnel—are sometimes the perpetrators of exploitation. This underscores the urgent need for targeted reforms and strict enforcement of legal safeguards to uphold the dignity and rights of incarcerated women.

Research Methodology

This research paper focuses on the rights of women prisoners in India and sheds light on the various challenges they face within the prison system. The study adopts a doctrinal research methodology, relying on secondary sources such as legal texts, reports, and academic literature.

Constitutional Status of Women Prisoners in India

The Constitution of India does not specifically outline rights exclusive to women prisoners. However, it firmly upholds the principle of equality for all citizens, including women. The framers of the Constitution gave considerable attention to the protection and promotion of women's and children's rights, a commitment

clearly reflected in the Preamble, which articulates the nation's core values and aspirations. Among these is the fundamental ideal of “equality of status and opportunity.”

Article 14 guarantees equal protection of the law to all individuals, including women, while Article 15 explicitly prohibits discrimination based on sex. Despite these constitutional safeguards, women prisoners in India continue to face numerous challenges.

Article 21 of the Constitution, which ensures the right to life and personal liberty, has been interpreted by the judiciary to include several protections for women inmates. These include:

- The right to reside in protective homes
- The right to free legal aid
- The right to a speedy trial, as reaffirmed by the Supreme Court in various judgments
- The right to a fair trial
- Protection against cruel and unusual punishment
- The right to live with dignity
- The right to be free from custodial violence and deaths in police custody
- Protection from solitary confinement, handcuffing, bar fetters, and torture

To further support and enforce these rights, the Government of India enacted the Protection of Human Rights Act, 1993, leading to the establishment of the National Human Rights Commission (NHRC), tasked with the promotion and safeguarding of human rights across the country.

Additionally, Part IV of the Constitution, which contains the Directive Principles of State Policy, guides the State in ensuring social and economic justice for all citizens, including women. India has also ratified various international conventions and human rights instruments that obligate the country to uphold and promote gender equality, reinforcing its commitment to the rights and dignity of women, including those in custody.

Women Prisoner’s Right Under the Prisoner’s Act, 1894

The Prisons Act of 1894 is the first comprehensive legislation enacted in India to regulate prison administration. The Act primarily emphasizes the reformation and rehabilitation of prisoners, including the protection of their basic rights. Several provisions under this Act specifically address the rights and welfare of women prisoners. Key sections relevant to their rights include:

a. Separation from Male Prisoners (Section 27(1))

This section mandates that female prisoners must be housed separately from male prisoners. In any facility where both genders are incarcerated, women must be

kept in separate buildings or designated areas of the same building. These arrangements must ensure that female inmates are not able to see, speak with, or interact in any manner with male prisoners.

b. Right to Receive Essentials from Private Sources (Section 31)

Under this section, civil prisoners and unconvicted criminal prisoners have the right to sustain themselves. They are permitted to purchase or receive food, clothing, bedding, and other necessary items from private sources, subject to examination and rules approved by the Inspector General of Prisons.

c. Provision of Clothing and Bedding (Section 33(1))

If a civil or unconvicted criminal prisoner is unable to provide adequate clothing or bedding, the prison authorities are obligated to supply these essentials. The Superintendent is responsible for ensuring that such prisoners receive what is necessary for their well-being.

d. Adequate Accommodation and Sanitation (Section 4)

This section emphasizes the need for proper housing facilities and sanitary conditions within prisons, ensuring a basic standard of hygiene and living conditions for all inmates, including women.

e. Management of Overcrowding (Section 7)

In cases where the number of prisoners exceeds the capacity of a prison, this provision allows for arrangements to be made for the safe custody and shelter of excess inmates, ensuring that overcrowding does not compromise their safety or well-being.

f. Medical Examination of Prisoners (Section 24(2))

This provision mandates that prisoners be examined by a qualified medical officer. Such medical oversight is essential for maintaining the health and well-being of inmates and is particularly important for addressing the specific health needs of women prisoners.

These provisions reflect an early recognition of the need to uphold the dignity and rights of prisoners, particularly women, and serve as the foundation for prison reform in India.

National And International Legal Standards for Women in Custody

There are numerous rights granted to women prisoners through the recommendations of various prison reform committees and international bodies such as the United Nations. Since prison administration falls under the State List (Entry 4 of the Seventh Schedule) of the Indian Constitution, it is primarily the responsibility of state governments. As such, while drafting or updating their prison manuals, states must incorporate and adhere to these guidelines to ensure

the protection of women inmates.

Below is a detailed overview of the human and statutory rights of women prisoners:

➤ **Search and Examination**

Searches and medical examinations of female prisoners must be conducted by a female officer, usually a Matron, and under the general or specific instructions of a qualified Medical Officer.

➤ **Custodial Rape Provisions**

Section 64(2) under Bharatiya Nagarik Suraksha Sanhita, 2023 (BNSS) imposes enhanced penalties for rape committed by individuals in positions of state authority or trust. This includes: Police officers (within police stations or while in custody), Public servants (against women in their custody), Staff or management of jails, remand homes, or other custodial facilities (including women's/children's institutions), Hospital staff, and Others in positions of control or authority over women, reinforcing legal protections against abuse in custody.

1. Separation from Male Prisoners

Rule 8(a) of the UN Standard Minimum Rules for the Treatment of Prisoners mandates that female inmates must be held separately from male prisoners to ensure their privacy and safety.

2. Basic Human Rights in Custody

All prisoners, including women, are entitled to basic rights such as hygienic food, clean shelter, access to medical care, and facilities for reading and writing. They must be treated with dignity and not subjected to solitary confinement, except for medical reasons or proven threats to other inmates. Pregnant women, in particular, must receive proper prenatal and delivery care. In special circumstances, they may be granted bail for childbirth.

3. Supervision by Female Officers (Rule 53)

- **Rule 53(1):** In mixed-gender institutions, the women's section must be under the control of a responsible female officer, who must retain the keys to the area.
- **Rule 53(2):** Male staff may not enter the women's section unless accompanied by a female officer.
- **Rule 53(3):** Female inmates must be supervised exclusively by female staff, although male professionals such as doctors or teachers may carry out duties when necessary.

4. Maternity Care (Rule 23)

- **Rule 23(1):** Prisons housing women must provide special accommodations for prenatal and postnatal care. Wherever possible, deliveries should take place in external hospitals, and if a child is born in prison, the birth certificate must not mention this.
- **Rule 23(2):** If infants are allowed to stay with their mothers in prison, proper nursery facilities staffed by qualified professionals must be provided.

5. Initial and Ongoing Medical Examinations (Rule 24)

Upon admission and as needed thereafter, each prisoner must be examined by a Medical Officer to detect physical or mental health issues, identify infectious diseases, determine physical fitness for prison labor, and evaluate conditions affecting rehabilitation.

6. Daily Medical Care (Rule 25)

- **Rule 25(1):** The medical officer must oversee the health of all prisoners and see all sick inmates daily.
- **Rule 25(2):** If continued imprisonment is likely to harm a prisoner's health, the medical officer must report this to the director.

7. Health, Hygiene, and Facility Inspections (Rule 26)

The medical officer is responsible for regularly inspecting and advising on:

- Food quality and service
- Sanitation and hygiene of the prison and inmates
- Heating, lighting, and ventilation
- Clothing and bedding conditions
- Physical education and sports provisions (in absence of trained staff)

8. NCPCR Recommendations

The National Commission for Protection of Child Rights (NCPCR) recommends early release on personal bond for women inmates who are pregnant, seriously ill, or have dependent children. While the seriousness of the crime must be considered, the personal and family circumstances of the inmate should also be taken into account.

9. Legal Aid and Representation (Bharatiya Nagarik Suraksha Sanhita, 2023, BNSS)

- Section 38 of the Bharatiya Nagarik Suraksha Sanhita, 2023 allows prisoners to be defended by an advocate of their choice.
- Section 341 provides for free legal aid in certain cases at the expense of the State.

- Section 346 mandates that trials and inquiries should proceed as swiftly as possible.
- Prisoners also retain their right to freedom of religion, which is not extinguished by incarceration.

10. Medical Examination after Arrest (Section 53, Bhartiya Nagarik Suraksha Sanhita, 2023)

Immediate Examination: Every arrested person must be examined by a government or registered medical practitioner. Female arrestees must be examined by a female medical officer or under her supervision. The doctor must record any injuries and their estimated time. A copy of the medical report must be given to the arrested person or a person of their choice.

11. Pregnant Women in Custody

Before admitting a pregnant woman into jail, authorities must verify that the facility has essential arrangements for childbirth and pre/postnatal care. Medical examinations must be conducted in government hospitals, particularly gynaecological check-ups.

12. International Commitments – CEDAW

India is a signatory to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). Article 12(2) of this Convention obligates states to provide women with adequate services related to pregnancy, childbirth, and postnatal care—ensuring access to free services when needed and proper nutrition during pregnancy and lactation.

Together, these provisions form a robust framework of rights and safeguards for women prisoners. However, effective implementation at the state level remains crucial to ensure these protections are not merely theoretical but are actively upheld within correctional institutions.

Challenges Faced by Women Prisoners

The condition of many prisons in India remains deeply concerning—marked by inhumanity, degradation, and violations of the fundamental rights of inmates. Prisons have increasingly become isolated spaces where cruel and unacceptable conditions persist unchecked. These closed environments create opportunities for abuse and injustice, often hidden from public view. State oversight of daily prison operations has largely become symbolic, while societal scrutiny is notably absent. Although numerous recommendations have been made by expert committees and even the Supreme Court to address these issues, the majority of these reforms remain unimplemented and ignored.

Some of the Challenges Encountered by Women Prisoners are

a) Inadequate Number of Women-Specific Prisons

There is a significant shortage of prisons exclusively for women in India. As a result, female inmates are often housed in separate enclosures within male prisons, which compromises their safety, privacy, and overall well-being.

b) Insufficient Access to Basic Necessities

Many women prisoners face difficulties in accessing essential items such as hygienic food, clean clothing, personal hygiene products, and appropriate bedding. The lack of gender-sensitive facilities, especially for menstruating or pregnant women, adds to their physical and emotional distress.

c) Custodial Abuse and Harassment

Instances of physical, mental, and sometimes sexual abuse in custody remain a grave concern. The closed nature of prison environments often shields such violations from public scrutiny, leaving victims without proper recourse or support.

d) Limited Access to Legal Aid and Representation

Women prisoners frequently lack awareness of their legal rights and struggle to access competent legal counsel. The absence of regular legal aid services or support mechanisms leaves many unable to defend themselves effectively or seek justice for the wrongs committed against them.

Key Findings and Suggestions

➤ **Poor Socio-Economic Background**

The majority of women prisoners come from marginalized and economically disadvantaged communities, which contributes significantly to their vulnerability within the criminal justice system.

➤ **Prevalence of Custodial Violence**

Incidents of custodial abuse—both physical and psychological—remain a serious issue. The lack of accountability and oversight exacerbates the trauma experienced by women inmates.

➤ **Inadequate Support for Mothers**

Women prisoners who are also mothers often struggle to care for their children within prison due to insufficient infrastructure, lack of childcare services, and poor overall facilities.

➤ **Severe Sanitation Issues**

One of the most pressing concerns is the lack of proper sanitation, particularly affecting menstruating women. The unavailability of sanitary products and clean facilities leads to health complications and infections.

➤ **Neglect of Pregnant Prisoners**

Pregnant women inmates often do not receive the necessary nutrition and medical attention. There is an urgent need to provide a safe, hygienic, and supportive environment for both the mother and unborn child, including a balanced diet and prenatal care.

➤ **Ineffective Rehabilitation Programs**

The initiatives aimed at reintegration and rehabilitation of women prisoners are either absent or poorly implemented, limiting their chances of successful reintegration into society post-release.

➤ **Need for More Dedicated Women Prisons**

The shortage of gender-specific correctional facilities compromises the safety and dignity of female inmates. Establishing more separate prisons for women is essential for their protection and well-being.

➤ **Lack of Access to Education and Legal Awareness**

Educational opportunities and legal literacy programs must be expanded within prisons. This will empower women inmates with knowledge of their rights and improve their prospects after release.

Conclusion

Despite the constitutional guarantees of equality and protection for women in India, the reality for many women prisoners—especially those from poor and marginalized backgrounds—remains bleak. These women often endure neglect, mistreatment, and abuse while in custody. The Supreme Court of India has emphasized in several landmark judgments that incarceration does not mean the loss of all fundamental rights. Except for the necessary restrictions that imprisonment entails, such as the loss of personal liberty, inmates retain their constitutional rights and must be treated with dignity.

However, the practical implementation of these legal protections falls short. Although various policies and safeguards have been introduced by the government to protect women prisoners, their enforcement remains weak and inconsistent. Custodial abuse—including physical and sexual violence—continues to be a harsh reality in many prisons. Women, particularly those who are poor and uneducated, often enter the criminal justice system unaware of their basic rights, leaving them vulnerable at every stage—from arrest to incarceration. This persistent issue of custodial violence and systemic neglect reflects a deep-rooted flaw in our legal and correctional framework. It is a grave violation of human dignity and a serious threat to justice. Unless urgent and concrete reforms are undertaken to eliminate such practices and ensure the humane treatment of all

prisoners, especially women, this injustice will continue to stain the fabric of our society.

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Trends in E-Commerce and Digital Marketplaces

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Abstract

Dynamic trends in e-commerce and digital marketplaces have emerged as a result of the internet's widespread adoption and the quick development of technology. This chapter examines how online business is changing, emphasizing significant advancements like social commerce, omnichannel tactics, mobile commerce, personalization via AI, and the combination of blockchain technology and digital payment methods. It also explores the expanding impact of digital platforms and aggregators, which have changed supply chain management, logistics, and consumer behaviour. The chapter critically examines the opportunities and difficulties brought about by these trends, with a focus on data privacy, international trade, and small businesses. This study offers a thorough overview of the future trajectory by analysing new technologies and market strategies.

Keywords: Digital Marketplaces, Mobile Commerce, Social Commerce, Artificial Intelligence, Blockchain, Omnichannel Strategy

Introduction

E-commerce and digital marketplaces have grown exponentially as a result of the digital revolution, which has completely changed how companies and customers interact. The e-commerce ecosystem, which was formerly restricted to straightforward online transactions, has developed into a sophisticated, data-driven, and highly customized setting that cuts across national and cultural borders. Because they provide unparalleled convenience, variety, and competitive pricing, digital marketplaces—platforms that link buyers and sellers across various industries—have become important forces behind this shift. Customers can now shop whenever and wherever they want thanks to the growth of mobile commerce (m-commerce), which has been fueled by the development of smartphones, high-speed internet, and digital payment systems. Innovations like blockchain technology, big data analytics, machine learning, and artificial

intelligence (AI) are also changing backend operations and customer experiences. These days, companies are using these tools to streamline supply chains, automate customer support, guarantee secure transactions, and provide tailored recommendations.

Furthermore, the rise of social commerce—where user engagement directly affects sales—is a result of social media platforms' growing influence over purchasing decisions. In the meantime, omnichannel retailing techniques are enabling customers to move fluidly between touchpoints by bridging the gap between digital and physical experiences. This chapter seeks to examine current e-commerce and digital marketplace trends, assess their effects on consumers and businesses, and draw attention to new opportunities and challenges in this quickly changing digital environment.

Emerging Trends in E-Commerce and Digital Marketplaces

1. Mobile Commerce (M-Commerce)

Definition: Shopping through mobile devices, like smartphones and tablets, is known as mobile commerce, or M-commerce.

Trend Analysis: increase in e-commerce platforms' mobile-first strategies. Applications that provide one-click ordering, tailored recommendations, and smooth payment gateways. The checkout experience is being improved by the rise of digital wallets (such as Google Pay, Apple Pay, and Paytm).

Consequences: User experience design (UX/UI) and mobile optimization must be given top priority by brands.

2. Social Commerce

Definition: Using social media platforms to directly purchase and sell goods.

Trend Analysis: Shopping features are being integrated into platforms such as Facebook, Instagram, TikTok, and Pinterest. Engagement is increased through live-streamed shopping and influencer marketing. Product tagging and "Shop the Look" features make content shoppable.

Consequences: Companies need to combine direct sales tactics with content production.

3. Omnichannel Retailing

Definition: Combining offline and online interactions to create a cohesive consumer experience.

Trend Analysis: online orders with click-and-collect, curb side pickup, and in-store returns. Personalized promotions on all platforms and real-time inventory

updates.

Implications: In order to facilitate cross-channel experiences, retailers require strong supply chains and CRM systems.

4. Artificial Intelligence & Personalization

Definition: Using AI to provide users with individualized experiences.

Trend Analysis: Chatbots driven by AI that provide round-the-clock customer service. engines that make recommendations based on past purchases and browsing activity. dynamic pricing and demand forecasting using predictive analytics.

Consequences: Making decisions based on data is essential for retaining and converting customers.

5. Voice Commerce

Definition: Making purchases using voice-activated gadgets, such as Google Assistant or Amazon Alexa.

Trend Analysis: Globally, smart speakers are becoming more and more popular. Voice search integration in websites and mobile applications.

Consequences: Voice search engine optimization (VSEO) is required for e-commerce platforms.

6. Sustainability and Ethical shopping

Definition: Conscientious consumption with an emphasis on moral and environmental issues.

Trend Analysis: demand for transparent supply chains and environmentally friendly products. growth of rental and re-commerce models (reselling used goods). Purchase decisions are influenced by certifications (Fair Trade, Organic, Cruelty-Free).

Consequences: Companies need to convey sustainability efforts in a genuine and straightforward manner.

7. Augmented Reality (AR) & Virtual Try-Ons

Definition: Visualizing products using augmented reality technology before making a purchase.

Trend Analysis: Try-before-you-buy opportunities for cosmetics, furnishings, and clothing. 3D modelling improves the visualization of products.

Implications: Increases customer confidence and lowers return rates.

8. Subscription-Based Models

Definition: Clients who regularly subscribe to goods or services.

Trend Analysis: well-liked in markets for digital content, fashion boxes, and food delivery. Convenience for customers and a predictable revenue model for businesses.

Consequences: To prevent attrition, a strong emphasis is placed on retention tactics and value addition.

9. Global Cross-Border E-Commerce

Definition: Cross-border purchase and sale of goods and services.

Trend Analysis: Multi-currency payment methods and easier international shipping. regional marketplaces that cater to local tastes, such as Mercado Libre and Alibaba.

Implications: Businesses need to be aware of logistics issues, tax laws, and localization.

10. Blockchain and Cryptocurrencies

Definition: Transactions using digital currencies and a decentralized ledger.

Trend Analysis: Supply chain monitoring and safe, open payment processing. some retailers' acceptance of cryptocurrencies.

Implications: Has the potential to increase transactional efficiency and lower fraud.

11. Data Privacy and Cybersecurity

Definition: Preventing online threats and safeguarding user data in e-commerce.

Trend Analysis: expanding the application of data protection laws such as the CCPA and GDPR. utilizing encryption and two-factor authentication.

Consequences: Security and trust are now key differentiators for platforms.

12. Buy Now, Pay Later (BNPL) Services

Definition: Enabling clients to make purchases and make payments over time.

Trend Analysis: popular for budgeting among millennials and Gen Z. Credit options are being reshaped by companies like Zip, After pay, and Klarna.

Implications: Increased cart values and conversion rates are advantageous to retailers.

13. Hyper-Personalization Using Big Data

Definition: Extensive personalization derived from thorough user profiles.

Trends to Watch: Real-time behavioural data is used to customize experiences. Email campaigns, dynamic website content, and location-based offers.

Consequences: include decreased bounce rates and increased loyalty.

Digital Marketplaces: Structure, Function, and Impact

Definition and concept of digital marketplaces: An online platform that links buyers and sellers and enables them to exchange goods and services without actually owning the inventory is known as a digital marketplace.

Amazon, Flipkart, Etsy, Alibaba, and Airbnb are a few examples.

It Promotes accessibility, worldwide reach, and effective transaction systems.

➤ Types of Digital Marketplaces

Business-to-Consumer (B2C): Websites that sell directly to customers, such as Amazon and Flipkart.

Business-to-Business (B2B): Websites that link wholesalers and manufacturers, such as Alibaba.

Consumer-to-Consumer (C2C): Websites that allow people to sell to one another, such as eBay or OLX.

Peer-to-Peer (P2P)/Service-Based: Websites where people exchange or provide services, such as Ola, Airbnb, and Uber.

➤ Revenue Models

Commission-Based: The platform (like Etsy or Uber) keeps a portion of every transaction.

Subscription-Based: Users of the platform, such as Amazon Prime, pay a set monthly or yearly fee.

Freemium models, like LinkedIn's, charge for premium features while basic services are provided for free.

Advertising-Based: Earnings from display advertisements (like Facebook Marketplace).

➤ Key Components of a Digital Marketplace

For easy navigation and great customer satisfaction, user interface (UI) and user experience (UX) are crucial.

Integration of Payment Gateways: Facilitates safe and easy transactions.

Rating and Review System: It Promotes openness and trust.

Tools for inventory management: Assists vendors with real-time stock tracking.

Advantages of Digital Marketplaces

1. Global Reach

Traditional brick and mortar businesses are no longer constrained by geographic boundaries thanks to digital marketplaces. Companies can list their goods and services on digital platforms and expose them to a global audience. Digital marketplaces give products worldwide visibility, whether they are a specialized tech device from a startup or a handcrafted item from a rural artisan.

Examples: Using websites like Etsy or Amazon, an Indian vendor can export clothing to buyers in Europe. Likewise, service providers can use Fiverr or Upwork to offer their skills all over the world.

Significance: This reach aids in expanding operations, broadening clientele, and boosting revenue.

2. Cost-Effectiveness

Using a digital marketplace significantly lowers capital and operating costs.

Sellers are not required to make significant investments in infrastructure, physical stores, or sizable workforces. Numerous backend tasks, including website upkeep, payment processing, customer service tools, and occasionally logistics, are managed by the platform.

Examples: Without requiring their own e-commerce website, small businesses can begin selling online with little initial outlay of funds by utilizing Shopify, Meesho, or Amazon.

Significance: By lowering the entry barrier, this low-cost model enables entrepreneurs—particularly startups and SMEs—to compete with larger companies.

3. Data-Based Perspectives

Large volumes of customer data are gathered and analysed by digital marketplaces, yielding useful business intelligence. Data is generated by every interaction, including product clicks, page time, and purchase behaviour. This is used to produce information about popular products, demographic trends, peak buying periods, and customer preferences.

For instance, Amazon makes product recommendations based on past purchases and searches. The platform offers dashboards and analytics tools for sellers to monitor sales patterns and improve listings.

Significance: By providing individualized experiences, these insights assist companies in planning marketing campaigns, effectively managing inventory,

and customizing their offerings to increase customer satisfaction.

4. Practicality

Digital marketplaces provide buyers and sellers with unparalleled convenience. From the convenience of their home or while on the go, customers can peruse thousands of products, evaluate costs, read reviews, and make purchases around-the-clock. Sellers can concentrate on product development and expansion as automated systems take care of order processing, payment collection, and customer communications.

For instance, a customer can use Big Basket to order groceries at midnight or Airbnb to make a last-minute travel reservation. Without being physically present, sellers can schedule promotions, track deliveries, and manage their stores using mobile apps.

Significance: This ease of use encourages repeat business, seller productivity, and customer loyalty—all of which are essential components of success in contemporary business.

Challenges and Risks in Digital Marketplaces

1. Tough Competition: Open platforms known as digital marketplaces draw thousands, even millions, of sellers. This democratizes trade, but it also makes the market extremely competitive. Price wars and lower profit margins result from sellers frequently offering identical or comparable products. Businesses may be compelled to increase their advertising expenditures, provide steep discounts, or constantly innovate in order to stand out.

For instance, hundreds of sellers may sell a single product on Amazon, such as a mobile charger, making it challenging for new or small businesses to become visible or develop a clientele.

Significance: Many sellers find it difficult to maintain their businesses in the absence of strong differentiation, and price-driven competition and persistent undercutting can seriously hurt profitability.

2. Transportation and Delivery: Crucial components of e-commerce include inventory management, order processing, guaranteeing on-time delivery, and handling returns. However, when serving several areas or nations, these tasks can become complicated. Seller ratings and customer satisfaction can be impacted by things like delayed shipments, inventory mismatches, and unreliable third-party delivery services.

For instance, a Flipkart seller who experiences delivery delays due to courier problems may be subject to penalties or bad reviews, even if the issue was not their fault. Moreover, handling product exchanges and returns adds expenses and logistical strain.

Significance: Ineffective logistics can lead to a decline in repeat business, raise operating expenses, and harm a brand's reputation.

3. **Threats to Cybersecurity:** A Comprehensive Overview Large volume of sensitive data, such as user information, payment information, and business transactions, are stored in digital marketplaces. Because of this, they are particularly vulnerable to cyberattacks like fraud, phishing, identity theft, and data breaches. A single hack has the potential to jeopardize thousands of users, erode consumer confidence, and result in legal consequences.

Example: In the past, data breaches have exposed user personal information on platforms such as eBay and Shopify. In order to fool users into making fraudulent transactions, hackers may also pose as buyers or sellers.

Importance: Maintaining platform security is a moral and technical requirement. It is crucial to make ongoing investments in user education and cybersecurity measures.

4. **Dependency on Platforms:** For traffic, visibility, and sales, sellers frequently grow overly reliant on a single platform. This puts the seller at risk because any modifications to the platform's algorithm, rules, or fee schedule could have a significant effect on their business. For example, modifications to commission rates, product visibility regulations, or compliance standards may limit selling rights or lower margins.

For instance, a seller may experience an abrupt loss of revenue if they are delisted or banned from Amazon as a result of a few unfavourable reviews or minor policy infractions. Similar to this, modifications to the way products are ranked in search results may cause their listings to be buried.

Significance: Strategic control and flexibility are restricted by an excessive dependence on a single platform. To reduce this risk, sellers need to create a separate brand presence and diversify their channels.

Role of Technology in Digital Marketplaces

1. AI, or Artificial Intelligence

In digital marketplaces, artificial intelligence significantly improves user experiences and operational effectiveness. Through the analysis of browsing history, purchase behaviour, and preferences, it makes personalized recommendations possible. Chatbots, which can track orders, respond to questions, and even upsell products around-the-clock without the need for human intervention, are another example of AI-powered automated customer service.

For Instance: AI is used by Netflix and Amazon to suggest shows or products based on user behaviour. Common customer problems are

immediately resolved by chatbots on websites like Shopify or Myntra.

Impact: Through automation, AI lowers operating costs, boosts conversion rates, and enhances customer satisfaction.

2. **Blockchain:** Blockchain technology helps improve trust and transparency in online marketplaces by offering a safe, decentralized, and impenetrable ledger for transactions. It lowers the possibility of fraud, permits product traceability, and streamlines payment processing, particularly for cross-border transactions. Blockchain-based smart contracts can automate buyer-seller agreements.

For Instance: Blockchain technology is used by platforms such as Open Bazaar to enable peer-to-peer trade without the need for middlemen. In e-commerce, blockchain can also confirm the legitimacy of organic certifications or luxury goods. **Impact:** By eliminating middlemen, blockchain enhances data integrity, increases consumer trust, and may reduce transaction costs.

3. **Big Data Analytics:** Clicks, searches, reviews, and purchase trends are just a few of the enormous amounts of data generated by digital marketplaces. This data is processed by big data analytics to provide actionable insights about marketing performance, sales trends, inventory requirements, and customer behaviour. It allows platforms to dynamically adjust to market demands and facilitates real-time decision making.

For Instance: Flipkart forecasts demand during holidays like Diwali by using data analytics. Retailers use data from abandoned carts to send targeted discounts or emails with reminders. **Impact:** It makes it possible for more intelligent pricing, focused advertising, effective inventory control, and enhanced consumer interaction.

4. **Cloud Computing:** Instead of depending on local servers, cloud computing enables digital marketplaces to store, process, and access data online. Because of its on-demand scalability, companies can manage increases in user traffic or sales without experiencing system outages. By providing quick access to data and services across borders, cloud platforms also facilitate international operations.

For Instance: Many e-commerce platforms are powered by Google Cloud, Microsoft Azure, and Amazon Web Services (AWS). Cloud infrastructure is used by Shopify merchants to host their online stores.

Impact: Cloud computing facilitates quick innovation and business continuity by improving dependability, flexibility, and cost-efficiency.

Conclusion

Digital marketplaces are scalable, secure, personalized, and data-driven due to the technology that supports them. Adopting cutting-edge technologies like artificial intelligence (AI), blockchain, big data, and cloud computing improves user experience, which is crucial for success in the current digital commerce environment, in addition to streamlining operations. By providing countless opportunities and changing international trade, digital marketplaces have revolutionized the conventional buying and selling process. Markets must change to stay relevant and competitive as consumer expectations and technology progress.

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Green IoT: Sustainability Environment and Technologies

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Abstract

The Internet of Things (IoT) has revolutionized modern life, connecting individuals and systems in an increasingly smart world. However, the widespread deployment of IoT technologies has also raised concerns regarding energy consumption, electronic waste, and toxic pollution. To mitigate these environmental impacts while enhancing the benefits of IoT, the concept of Green IoT (G-IoT) has emerged. G-IoT represents a sustainable and environmentally conscious evolution of traditional IoT, aiming to minimize energy usage and ecological footprints throughout the lifecycle of ICT devices and systems.

This paper provides a comprehensive overview of G-IoT technologies, strategies, and their role in shaping a greener, smarter future. It highlights the significance of greening ICT processes to enable more efficient production and distribution, and to foster healthier living environments. Key enabling technologies of G-IoT include Green RFID, Green Wireless Sensor Networks (GWSN), Green Cloud Computing (GCC), Green Machine-to-Machine (G-M2M) communications, and Green Data Centers (GDC).

Additionally, the paper examines the role of G-IoT in promoting sustainable development, emphasizing its contributions to energy conservation, pollution reduction, economic growth, and improved quality of life. By integrating environmental considerations into the design and deployment of IoT systems, G-IoT lays the foundation for a resilient and environmentally sustainable digital ecosystem.

Keywords: Green Internet of Things (G-IoT), Sustainable Technologies, Energy Efficiency, Eco-Friendly ICT, Environmental Sustainability

Introduction

Technology can play a pivotal role in achieving a sustainable world—but only if sound decisions are made at the early stages of technological innovation. When guided by sustainability principles, emerging technologies become powerful tools for addressing critical global challenges such as access to clean water, affordable energy, environmental pollution, and efficient resource management.

In recent years, the global community has increasingly embraced the idea of “living green.” This shift includes the adoption of smart e-services and m-services, teleconferencing, environmentally friendly IT tools, and green construction practices such as green roofs and renewable energy systems. Among these, the Green Internet of Things (G-IoT) has emerged as a key enabler of sustainable living—minimizing energy consumption and reducing the ecological footprint of digital technologies.

Environmental technologies and the transition to G-IoT offer a pathway to harnessing the full potential of modern innovations while curbing their environmental impact. Numerous scholars have emphasized that green ICT and green IoT systems rely heavily on green communication networks and smart grids. Core technologies that constitute G-IoT include:

- Green RFID (Radio Frequency Identification)
- Green Wireless Sensor Networks (GWSN)
- Green Cloud Computing (GCC)
- Green Machine-to-Machine (G-M2M) Communication
- Green Data Centers (GDC)

As information and communication technologies (ICTs) become deeply embedded in modern life, their responsible and sustainable deployment becomes essential. Key issues such as standardization, cybersecurity, and governance must be addressed to ensure that IoT benefits society while remaining energy-efficient and environmentally responsible.

Green IoT presents itself as a transformative solution to improve the quality of life in smart cities, facilitating the transition toward smarter, healthier, greener, and more economically viable urban environments. Today’s research and development efforts increasingly focus on areas such as:

- Green communication and networking
- Sustainable design and implementation
- Energy-efficient IoT services and applications
- RFID-sensor network integration
- Mobility and intelligent network management
- Collaboration between heterogeneous and homogeneous smart grids
- Green localization strategies

To develop efficient and optimal solutions for greening IoT, it is essential to investigate the principles, significance, and real-world impacts of G-IoT innovations. The vision of G-IoT emphasizes the creation of products and services with minimal environmental harm and health risks. Through reduced energy consumption, pollution mitigation, and natural resource conservation, G-IoT contributes meaningfully to the realization of a smarter, greener, and more

sustainable future.

Definations of Green IoT (G-IoT)

Green IoT (G-IoT) refers to the integration of environmentally conscious practices into the design, development, usage, and disposal of IoT systems. The primary goal is to conserve environmental resources, reduce carbon footprints, and promote energy-efficient technologies.

According to [3], Green IoT emphasizes minimizing energy consumption across IoT infrastructure as a critical step toward building a sustainable and intelligent global ecosystem. This also includes reducing CO₂ emissions associated with IoT device deployment and operation.

As outlined in [4], Green IoT is defined as:

“The study and practice of designing, using, manufacturing, and disposing of servers, computers, and associated subsystems such as monitors, storage devices, printers, and communication network systems efficiently and effectively with minimal or no impact on the environment.”

The core design elements of Green IoT involve advancements in:

- Energy-efficient computing devices
- Low-power communication protocols
- Sustainable network architectures
- Eco-friendly system design and disposal

With the evolution of green ICT (Information and Communication Technologies), Green IoT now enables significant reductions in hazardous emissions, resource depletion, and pollution levels. The benefits are multifaceted—ranging from natural resource conservation to health protection, and cost-efficiency. Green IoT efforts generally span four interconnected dimensions:

- Green Production
- Green Use
- Green Design
- Green Disposal [1]

Enabling G-IoT Technologies

Technological advancements in the Internet of Things (IoT) have transformed modern life by providing intelligent solutions across sectors. However, this progress also brings growing concerns over energy consumption, electronic waste, and toxic emissions.

Green IoT technologies aim to address these concerns by developing energy-efficient and environmentally sustainable computing and communication

systems. These technologies reduce overall energy usage by leveraging green infrastructure and optimizing resource utilization.

As discussed by multiple researchers, the enabling technologies that form the backbone of Green IoT—particularly those associated with green communication systems and smart grid integration—include:

- Green RFID (Radio Frequency Identification)
- Green Wireless Sensor Networks (GWSNs)
- Green Cloud Computing (GCC)
- Green Machine-to-Machine (G-M2M) Communication
- Green Data Centers (GDC)
- Green Smart Grids

[Figure 1] illustrates the key components and interrelationships of these Green ICT technologies.

These enabling technologies are instrumental in reducing the environmental burden of traditional IoT systems while enabling a transition toward low-carbon, energy-aware, and sustainable digital ecosystems.

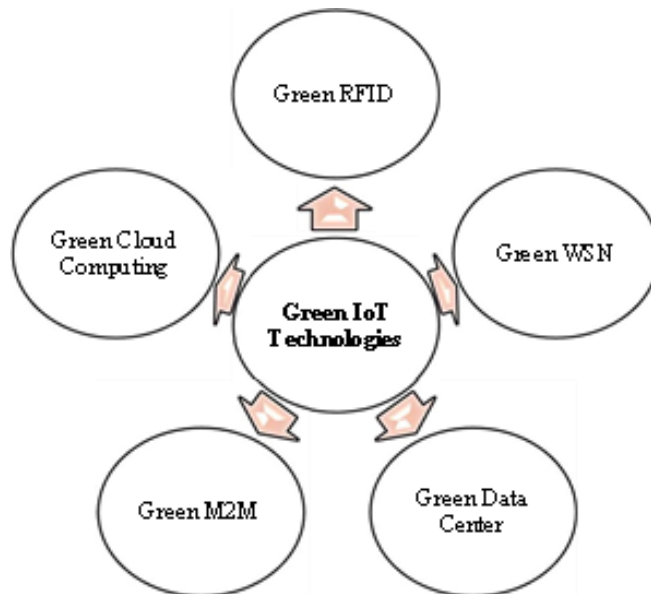


Figure 1. Green IoT Technologies

In the continuation of the chapter, the technologies that enable green IoT will be briefly explained with an overview of green strategies and mechanisms for G-IoT.

1. Definitions of Green IoT (G-IoT)

Green Internet of Things (G-IoT) emphasizes the need to conserve environmental resources, reduce carbon footprints, and adopt energy-efficient practices in IoT

deployment. According to [3], G-IoT seeks to minimize energy consumption in IoT systems to support the vision of a smart, sustainable world while reducing CO₂ emissions.

The core design elements of G-IoT encompass environmentally responsible practices in computing device development, communication protocols, network architecture, and energy utilization. As noted in [4], G-IoT is defined as “the study and practice of designing, using, manufacturing, and disposing of servers, computers, and associated subsystems such as monitors, storage devices, printers, and communication systems efficiently and effectively with minimal or no environmental impact.”

The ongoing development of green ICT technologies has enabled IoT to become more efficient by lowering hazardous emissions, reducing resource consumption, and minimizing pollution. This transformation contributes to resource conservation, decreased environmental degradation, enhanced human health, and cost savings. Hence, G-IoT addresses the full lifecycle: green production, green use, green design, and green disposal [1].

2. Enabling G-IoT Technologies

Despite its numerous benefits, traditional IoT systems are energy-intensive, contribute to toxic waste, and generate electronic waste. Green technologies aim to mitigate these effects by promoting energy-efficient computing and communication systems.

Technologies that enable G-IoT are part of a broader green ICT ecosystem. These include innovations in hardware, software, and communication networks that reduce environmental impact. Figure 1 illustrates the key enabling technologies of G-IoT.

a. Green RFID

Radio Frequency Identification (RFID) is widely used in logistics, retail, public transportation, and security. RFID tags store and transmit information when queried by a reader [5].

Green RFID solutions focus on replacing plastic-based tags with biodegradable, paper-based cartridges, reducing reliance on PET products. The antennas are manufactured using laser etching, allowing complete recycling of excess aluminum. The use of recyclable paper integrates well into existing pulp-based processes, thus ensuring sustainability. Green RFID offers standardization, scalability, reliability, and cost-effectiveness while reducing environmental impact.

b. Green Wireless Sensor Networks (GWSN)

Green Wireless Sensor Networks aim to extend the life of sensor nodes while minimizing their carbon footprint. These networks often operate in remote areas with limited human access, and their functionality is constrained by battery life.

Key green strategies include:

- Sleep mode optimization to conserve energy
- Hierarchical network designs for energy-efficient data transmission
- Cooperative communication protocols for longer network lifespans [6]–[8]

These approaches help GWSNs operate sustainably by collecting energy from the environment and using it efficiently.

c. Green Cloud Computing (GCC)

Cloud computing provides scalable computing and storage services. Green Cloud Computing (GCC) integrates environmental considerations into the design and operation of cloud services.

The primary objectives of GCC are:

- Adoption of recyclable and energy-efficient hardware
- Promotion of virtualization to reduce hardware requirements
- Implementation of energy-saving algorithms in data centers [9]

GCC represents a convergence of sustainability and efficiency, reducing both operating costs and ecological impact.

d. Green Machine-to-Machine Communication (G-M2M)

Machine-to-Machine (M2M) communication involves data exchange between devices without human intervention. Green M2M focuses on reducing energy consumption through:

- Mobile Edge Computing (MEC)
- Local computing architectures
- Energy modeling and optimization frameworks [10], [11]

These techniques optimize data transmission and processing, enabling efficient device communication with minimal environmental cost.

e. Green Data Centers (GDC)

Data centers consume substantial amounts of energy due to cooling and server operations. Green Data Centers (GDC) use advanced technologies to minimize energy use and carbon emissions.

Strategies include:

- Airflow optimization and thermal management

- Server consolidation
- Energy-aware resource and workload management [12], [13]

A proposed energy model aims to achieve reliability and high performance while significantly improving energy efficiency. GDCs thus play a central role in aligning IT operations with environmental sustainability goals.

Summary Table: Enabling Green IoT Technologies

| Technology | Strategy | Energy-Saving Mechanism |
|------------|----------------------------------|--|
| Green RFID | Eco-friendly tags | Paper-based labels, aluminum recycling |
| GWSN | Hierarchical & sleep-mode design | Sensor energy harvesting |
| GCC | Virtualization, green hardware | Server consolidation, cooling efficiency |
| G-M2M | Local/Mobile edge computing | Reduced transmission energy |
| GDC | Efficient infrastructure | Optimal airflow, resource scheduling |

3. Synergizing Green IoT for a Sustainable Future

The success of G-IoT relies on integrating various green technologies such as RFID, sensors, networking, and data processing. These technologies contribute to energy savings, reduced CO₂ emissions, and economic growth by enabling cost-effective, environmentally conscious systems.

Furthermore, green communication and networking technologies are essential components. They reduce electromagnetic radiation and enhance energy efficiency, contributing to greener Internet infrastructure and smarter, more sustainable networks.

The synergy of these technologies forms the backbone of next-generation smart ecosystems, driving green modernization and improving overall quality of life, environmental health, and economic resilience.

| Enabling G-IoT technologies | | |
|---|---|--|
| Green technologies | Energy-saving mechanisms | Energy-saving strategies |
| <i>Green RFID</i> [10], [14] | Existence of active tags and passive sensors | <ul style="list-style-type: none"> - Energy-efficient algorithms and protocols - Reducing the size of rfid tags due to recycling - Production of labels on recycled paper substrate |
| <i>Green WSN</i> [6]-[8] | <ul style="list-style-type: none"> - Reducing communication between nodes - Sleep mode | <ul style="list-style-type: none"> - Smart modes of operation through dynamic energy management strategies - New energy-efficient routing algorithms |
| <i>Green Cloud Computing</i> [9], [10], [15], [16] | <ul style="list-style-type: none"> - Creating hardware solutions aimed at producing devices that consume less energy. - Design of software solutions that consume less energy with minimal use of resources | <ul style="list-style-type: none"> - Usage of resources that are eco-friendly and maintain computing performance without degradation. |
| <i>Green Machine-to-Machine (M2M)</i> [11], [17] | <ul style="list-style-type: none"> - Common energy-saving mechanisms - Use of efficient communication protocols | <ul style="list-style-type: none"> - Group-based strategies - Low-mobility-based optimizations |
| <i>Green Data Center</i> [13], [15], [18] | <ul style="list-style-type: none"> - Energy efficiency - Use of renewable energy sources | <ul style="list-style-type: none"> - E-waste recycling - Low-emission building materials - Exclude unnecessary content - Minimizing data |

Table 1. Green strategies and mechanisms for G-IoT

Principles and Roles of Green Internet of Things (G-IoT)

This section analyzes the pivotal role of environmentally driven technological processes in fostering sustainable development. It explores the principles and functions of the Green Internet of Things (G-IoT), underscoring its potential to enhance quality of life, preserve the environment, and promote global green modernization.

Based on a comprehensive evaluation of various technologies, strategies, and methodologies for implementing G-IoT, a set of foundational principles can be

identified that guide the development of environmentally responsible IoT systems ([10], [19]):

- **Use of Bioproducts:** Employing biodegradable and environmentally friendly materials in the design and manufacture of G-IoT components to reduce ecological impact.
- **Renewable Energy Integration:** Utilizing green energy sources such as solar, wind, hydro, geothermal, and oxygen-based energy systems to power IoT infrastructure.
- **Data Security and Privacy:** Embedding robust security and privacy mechanisms into every component of the G-IoT architecture to ensure safe and ethical data practices.
- **Energy-Efficient Policy Implementation:** Formulating and enforcing effective policies aimed at reducing energy consumption, particularly in smart building applications.
- **Optimized Network Architecture:** Designing networks with minimal node deployment and efficient routing protocols to enhance energy savings and reduce operational complexity.

G-IoT holds transformative potential across multiple sectors. In transportation, for example, it can lead to systems that are seamless, inclusive, affordable, secure, reliable, and energy-efficient. By fostering the development of products and services that prioritize low or zero environmental impact—minimizing energy usage, pollution, and emissions—G-IoT plays a crucial role in conserving natural resources. Its vision contributes to the creation of a more environmentally conscious and sustainable global society ([20]).

G-IoT and the Sustainable Environment

Achieving sustainable development requires strategic planning and collaborative action at both national and international levels. These plans must address environmental, social, and economic dimensions in an integrated manner. In this context, the Green Internet of Things (G-IoT) emerges as a key enabler of the next wave of sustainable technological innovation.

G-IoT is designed to significantly enhance environmental protection and improve human well-being through intelligent, resource-conscious solutions. As a natural evolution of conventional IoT systems, G-IoT focuses on:

- Reducing carbon footprints,
- Minimizing electronic and industrial waste,
- Promoting energy-efficient data communication and processing,
- Integrating eco-friendly manufacturing and deployment practices.

Through the use of sustainable technological advancements embedded in IoT-enabling platforms, G-IoT strengthens both environmental resilience and economic viability. It supports the development of smart cities, sustainable agriculture, intelligent transportation systems, and energy-efficient buildings. These implementations not only help reduce emissions and preserve ecosystems but also contribute to long-term global sustainability goals ([21]).

As illustrated in Figure 2, the path of G-IoT towards sustainable development centers around the creation and integration of energy-efficient systems and environmentally aligned innovations. The convergence of G-IoT technologies ensures that progress in digital transformation does not come at the cost of environmental degradation but rather serves as a catalyst for sustainability.

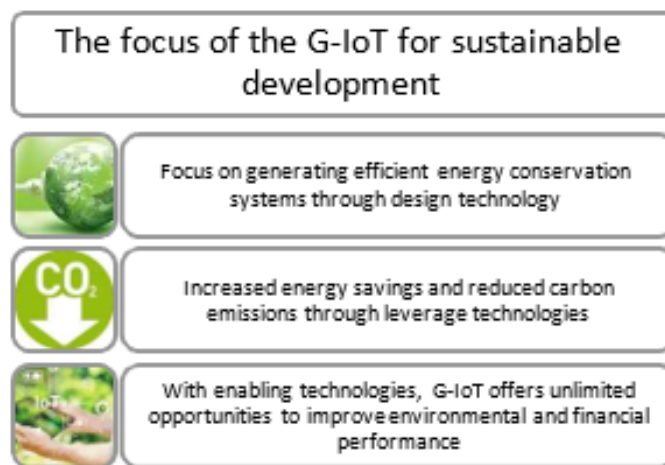


Figure 2. G-IoT focus on sustainable development

Green IoT for Smart and Sustainable Development

The overarching objective of sustainable development is to achieve and maintain a balance between the social, economic, and environmental dimensions of human progress. This balance is essential for ensuring the well-being and prosperity of both current and future generations. In this context, the Green Internet of Things (G-IoT) emerges as a transformative paradigm aimed at significantly enhancing environmental quality and human health through the responsible deployment of advanced, sustainable technologies.

Green IoT facilitates the realization of a smarter world by embedding sustainability into technological advancement. It enables the development of intelligent systems that reduce environmental impact, optimize resource use, and promote energy efficiency. However, as with any rapidly evolving technological domain, G-IoT presents certain inherent challenges and limitations that must be addressed through rigorous analysis and proactive planning ([21]).

Given the exponential growth in the number of IoT devices—projected to reach

tens of billions globally—it is imperative to confront the associated environmental challenges. These include high energy consumption, inefficient recycling practices, and growing volumes of electronic waste. To ensure the sustainable and balanced development of IoT systems, the following goals must be prioritized:

- Minimization of energy consumption across device lifecycles;
- Enhancement of recycling and reuse processes for IoT hardware;
- Implementation of effective e-waste management systems to mitigate environmental and health risks.

A particularly critical area where G-IoT can drive meaningful impact is the creation of smart and green environments. These environments integrate green technologies into urban infrastructure, agriculture, industrial systems, and homes to support ecological preservation and sustainable living. As societies transition toward G-IoT, it becomes essential to:

- Seek renewable and sustainable energy sources,
- Innovate in low-power design and energy harvesting techniques,
- Reduce the environmental and health risks associated with IoT infrastructure.

Only by addressing these imperatives can Green IoT fully realize its potential as a cornerstone of smart sustainability. When responsibly implemented, G-IoT not only reduces the ecological footprint of digital transformation but also becomes a catalyst for creating greener, more liveable, and future-ready societies.

Conclusion

Sustainability remains a key concern in the rapid advancement of IoT technologies. As these technologies proliferate, careful consideration must be given to their environmental and resource-related impacts to ensure their balanced and sustainable development.

Green IoT (G-IoT) presents a promising path forward, with its greatest contributions evident in reducing energy consumption and minimizing carbon dioxide emissions. These advancements have a direct impact on mitigating climate change and global environmental degradation. From an economic standpoint, green technologies lower operational costs and open avenues for enhanced quality of life, environmental preservation, and sustainable economic growth.

Transforming traditional technological development into a sustainable model requires proactive integration of G-IoT principles—starting at the early design stages. By promoting energy-efficient, recyclable, and environmentally friendly IoT systems, stakeholders can facilitate global modernization with a green outlook.

Realizing the full potential of Green IoT in achieving sustainable development will require coordinated efforts at global, national, regional, and local levels. Collaboration, innovation, and commitment to environmentally conscious design and deployment of IoT devices are essential to shaping a smarter and more sustainable future.

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The Role of Social Movements in Shaping Modern India

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Abstract

This chapter explores the pivotal role of social movements in shaping modern India's socio-political landscape. From the Indian freedom struggle to contemporary campaigns for environmental protection, gender justice, caste equality, and digital rights, social movements have acted as powerful instruments for social change and democratic engagement. The chapter traces their historical roots, examines key movements across various time periods, and analyses their influence on policy reforms and public consciousness. It also delves into the challenges these movements face in a rapidly evolving political and technological environment. Through this comprehensive examination, the chapter highlights how social movements continue to be vital drivers of inclusion, justice, and participatory democracy in India.

Keywords: Social Movements- India-Democracy-Civil Society-Caste Equality-Women's Rights-Environmental Activism-RTI Act-LGBTQ+ Rights-Grassroots Movements-Political Reform-Dalit Movement-Non-Violent Protest-Digital Activism-Social Justice.

Introduction

Social movements have been instrumental in shaping modern India, reflecting the diverse and complex societal challenges and aspirations of its people. From the struggle for independence to contemporary movements for social justice and environmental protection, these collective actions have significantly influenced the socio-political landscape of the nation. This chapter explores the historical and contemporary role of social movements in India, their impact on policy and societal change, and the challenges they face in the evolving democratic framework. By examining key movements across different periods, we can understand how grassroots mobilization has addressed issues such as colonialism, caste discrimination, gender inequality, and environmental degradation, thereby contributing to the ongoing quest for a more inclusive and equitable society.

Historical Context of Social Movements in India

Pre-Independence Era

The pre-independence era in India was marked by numerous social movements that aimed to address various forms of social inequalities and injustices. One of the most significant movements was the Indian independence movement, led by figures like Mahatma Gandhi, Jawaharlal Nehru, and Subhas Chandra Bose. This movement was characterized by mass mobilizations, non-violent protests, and civil disobedience, which played a crucial role in ending British colonial rule.

Gandhi's approach, emphasizing non-violent resistance and civil disobedience, drew widespread participation from diverse sections of society, including peasants, workers, students, and women. The Salt March of 1930 and the Quit India Movement of 1942 are notable examples of how these movements galvanized public support and put pressure on colonial authorities. The Salt March, also known as the Dandi March, was a direct-action campaign of tax resistance and nonviolent protest against the British salt monopoly, and it became a symbol of the Indian struggle for independence.

The Quit India Movement, initiated in August 1942, called for an end to British rule in India, leading to widespread acts of defiance and the imprisonment of thousands of activists.

Another important pre-independence social movement was the reform movements led by social and religious reformers like Raja Ram Mohan Roy, Swami Vivekananda, and Dr. B.R. Ambedkar. These movements addressed issues such as the abolition of sati, child marriage, and untouchability, and promoted education and women's rights. Raja Ram Mohan Roy's efforts led to the banning of the practice of sati in 1829, while Dr. Ambedkar's relentless fight for the rights of the Dalits (formerly known as "untouchables") laid the groundwork for the anti-caste movements that followed.

Post-Independence Era

Post-independence, India witnessed a surge in social movements addressing a wide array of issues, from land reforms and labour rights to caste discrimination and women's rights. The Bhoodan Movement, initiated by Vinoba Bhave, aimed at land redistribution to the landless, reflecting the Gandhian principles of social justice and non-violence. Vinoba Bhave travelled across India on foot, convincing landowners to donate a portion of their land to the poor, resulting in millions of acres being redistributed.

The 1960s and 1970s saw the rise of the Naxalite movement, which highlighted the plight of the rural poor and sought to address issues of land ownership and social justice through armed struggle. Although controversial and often violent, this movement brought attention to the systemic neglect and exploitation of

marginalized communities. Originating in the village of Naxalbari in West Bengal, the movement rapidly spread to other parts of India, advocating for radical land reforms and the overthrow of oppressive feudal structures.

The Dalit Panthers, a social organization founded in Maharashtra in 1972, also emerged during this period to combat caste-based oppression and discrimination. Inspired by the Black Panther Party in the United States, the Dalit Panthers used literature, public demonstrations, and political activism to demand social justice and equality for Dalits and other oppressed communities. Their efforts contributed to a broader Dalit movement that sought to dismantle the deep-seated caste hierarchy that persisted in Indian society.

Contemporary Social Movements

Environmental Movements

In recent decades, environmental movements have gained prominence in India, driven by growing awareness of ecological degradation and its impact on local communities. The Chipko Movement of the 1970s, where villagers in Uttarakhand hugged trees to prevent deforestation, became a global symbol of environmental activism and grassroots empowerment. Women played a central role in this movement, highlighting the intersection of gender and environmental issues as they fought to protect their livelihoods and preserve natural resources.

More recently, the Narmada Bachao Andolan (Save Narmada Movement), led by activists like Medha Patkar, has campaigned against large dam projects on the Narmada River. This movement highlights the adverse impacts of such projects on local communities, particularly the displacement of indigenous peoples and the loss of livelihoods. Despite facing significant opposition and governmental pushback, the movement has succeeded in bringing international attention to the human and environmental costs of large-scale infrastructure projects.

The movement against the Sterlite copper plant in Tamil Nadu, which was shut down in 2018 following prolonged protests over environmental pollution and health hazards, is another example of contemporary environmental activism in India. These movements underscore the growing public consciousness about environmental issues and the need for sustainable development practices that prioritize the well-being of local communities and ecosystems.

Women's Rights Movements

The women's rights movement in India has evolved significantly, addressing issues such as gender discrimination, violence against women, and equal rights. The Mathura rape case of 1972 and the subsequent nationwide protests led to significant legal reforms, including amendments to the criminal law to better address sexual violence. This case, involving the custodial rape of a young tribal girl by two policemen, sparked widespread outrage and catalysed the formation

of women's groups across the country, demanding stricter laws and better protection for women.

In recent years, movements like the #Me Too campaign have gained momentum in India, challenging patriarchal norms and demanding accountability for sexual harassment and assault. These movements have not only brought individual cases to light but have also spurred broader societal discussions on gender equality and women's rights. The #MeToo movement in India has seen numerous high-profile figures being accused of sexual misconduct, leading to resignations, legal actions, and a re-examination of workplace policies regarding harassment.

The protests following the brutal gang rape and murder of a young woman in Delhi in 2012, often referred to as the Nirbhaya case, also marked a turning point for women's rights activism in India. The nationwide outcry led to the enactment of the Criminal Law (Amendment) Act, 2013, which introduced stricter penalties for sexual violence and established fast-track courts for handling rape cases. These movements reflect the ongoing struggle for gender justice and the increasing assertiveness of women in demanding their rights and safety.

LGBTQ+ Rights Movements

The LGBTQ+ rights movement in India has seen significant progress over the past few decades, culminating in the historic 2018 Supreme Court decision that decriminalized homosexuality by striking down Section 377 of the Indian Penal Code. This movement, led by organizations such as the Naz Foundation and the Humsafar Trust, alongside numerous individual activists, has fought tirelessly for the rights and recognition of LGBTQ+ individuals in Indian society. This victory was not just a legal triumph but also a significant cultural milestone, signaling a shift towards greater acceptance and inclusion.

Impact on Policy and Societal Change

Social movements in India have played a critical role in shaping public policy and societal norms. The Right to Information (RTI) Act of 2005, for instance, owes much to the efforts of grassroots movements advocating for transparency and accountability in governance. The Mazdoor Kisan Shakti Sangathan (MKSS), led by Aruna Roy, was instrumental in mobilizing support for this legislation, which has empowered citizens to access information and hold public officials accountable. The RTI Act has become a powerful tool for citizens to expose corruption, inefficiency, and malpractice in various public institutions.

Similarly, the anti-corruption movement of 2011, led by Anna Hazare, brought issues of corruption and governance to the forefront of national discourse. This movement's pressure led to the establishment of the Lokpal, an anti-corruption ombudsman, although the effectiveness and implementation of this body remain subjects of ongoing debate. The movement highlighted the widespread frustration

with systemic corruption and the demand for more accountable and transparent governance structures.

The impact of social movements on policy is also evident in the enactment of laws addressing social injustices. For example, the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989, was a direct response to the persistent violence and discrimination faced by these communities. Activist groups and Dalit leaders played a crucial role in advocating for this legislation, which aims to prevent atrocities against marginalized communities and ensure their protection and dignity.

Moreover, social movements have influenced societal attitudes and cultural norms. The LGBTQ+ rights movement in India, which culminated in the decriminalization of homosexuality in 2018 (Section 377 of the Indian Penal Code), is a testament to how sustained activism can lead to significant cultural and legal shifts. Organizations like the Naz Foundation and the Humsafar Trust, along with individual activists, have tirelessly campaigned for equal rights and acceptance for the LGBTQ+ community, challenging deep-rooted prejudices and advocating for a more inclusive society.

The women's rights movement has also had a profound impact on legal reforms and societal attitudes towards gender equality. Laws such as the Protection of Women from Domestic Violence Act, 2005, and the Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013, are results of persistent advocacy by women's rights groups. These laws have provided women with legal recourse and protection against various forms of abuse and harassment, marking significant steps towards gender equality.

Challenges Faced by Social Movements

Despite their successes, social movements in India face numerous challenges. Repressive state measures, including arrests, censorship, and violence against activists, often hinder their efforts. The use of sedition laws, the Unlawful Activities (Prevention) Act (UAPA), and other stringent regulations to suppress dissent and curb activism has been a significant obstacle. Activists and leaders of various movements have faced harassment, imprisonment, and even assassination, creating an environment of fear and intimidation.

Additionally, internal divisions, lack of cohesive strategy, and the co-optation of movements by political interests can undermine their effectiveness. Movements often struggle to maintain unity and focus amidst differing ideologies and approaches within their ranks. The influence of political parties seeking to harness movements for their own agendas can also dilute the original goals and reduce the credibility of these movements.

Moreover, the rise of digital activism presents both opportunities and challenges. While social media platforms have facilitated the rapid mobilization of support

and the dissemination of information, they also expose movements to misinformation, surveillance, and cyber-attacks. The digital divide, with limited internet access in rural and marginalized communities, also poses a challenge in ensuring broad-based participation and representation.

The Role of Media in Social Movements

The media, both traditional and digital, plays a crucial role in shaping the narrative and outreach of social movements. Television, newspapers, and radio have historically been powerful tools for disseminating information and rallying public support. The coverage of social movements by mainstream media can significantly influence public opinion and policy decisions. For instance, the extensive media coverage of the Nirbhaya case in 2012 played a pivotal role in bringing the issue of sexual violence to the forefront of national consciousness and precipitating legal reforms.

In recent years, social media platforms like Facebook, Twitter, and Instagram have become vital arenas for activism. They offer a space for real-time communication, organization, and mobilization of support, often transcending geographical boundaries. Hashtags like #MeToo and #Justice for Nirbhaya have helped create global movements, amplifying local struggles and garnering international solidarity. However, the unregulated nature of social media also allows for the spread of misinformation and propaganda, which can undermine the credibility of genuine movements and lead to polarization.

Global Influence and Solidarity

Indian social movements have often drawn inspiration from and contributed to global movements. The Gandhian philosophy of non-violence influenced civil rights movements worldwide, including the American Civil Rights Movement led by Martin Luther King Jr. Similarly, the principles and strategies of the Black Panther Party inspired the formation of the Dalit Panthers in India.

International solidarity has also played a significant role in supporting Indian social movements. Global human rights organizations, environmental groups, and international media have often highlighted the struggles of Indian activists, putting pressure on the Indian government to address these issues. For example, the global attention on the Narmada Bachao Andolan helped bring international scrutiny to the displacement and environmental destruction caused by dam projects in India.

Conversely, Indian social movements have contributed to the global discourse on issues such as environmental sustainability, gender equality, and social justice. The Chipko Movement, for instance, has been cited as an exemplary model of environmental activism and has inspired similar movements around the world.

Future Directions and Emerging Movements

As India continues to evolve, new social movements are emerging to address contemporary issues. Climate change, digital privacy, and the rights of gig economy workers are some of the areas where activism is gaining momentum. The youth, armed with digital tools and a global perspective, are at the forefront of these emerging movements.

The Fridays for Future movement, initiated by Greta Thunberg, has found resonance among Indian students and environmental activists, leading to coordinated climate strikes and advocacy for stronger climate policies. Similarly, the fight for digital rights, including issues of data privacy, net neutrality, and surveillance, has seen growing activism with organizations like the Internet Freedom Foundation leading the charge.

The gig economy, characterized by short-term contracts and freelance work, has also seen the rise of movements advocating for better labour rights and protections. Delivery workers, ride-hailing drivers, and other gig economy workers have begun organizing to demand fair wages, job security, and social security benefits.

Conclusion

Social movements have been a driving force in the ongoing process of social transformation in India. They have brought marginalized voices to the forefront, challenged entrenched power structures, and influenced policy and public opinion. As India continues to navigate its complex social and political landscape, the role of social movements remains crucial in advocating for justice, equality, and sustainable development.

Understanding the historical and contemporary dynamics of these movements provides valuable insights into the challenges and opportunities they face. By fostering a more inclusive and participatory democratic process, social movements can continue to play a vital role in shaping a more equitable and just society in India. The resilience and perseverance of these movements, despite the numerous challenges, highlight the enduring spirit of collective action and the power of ordinary citizens to effect meaningful change.

The future of social movements in India will depend on their ability to adapt to changing circumstances, build broad-based coalitions, and leverage new tools and technologies. As they continue to address both longstanding and emerging issues, these movements will remain essential to the democratic fabric of India, ensuring that the voices of the marginalized and oppressed are heard and that the pursuit of social justice continues unabated.

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Reimagining Consumer Behaviour: Health, Digital Trust, Sustainability & Pragmatism in the Post Pandemic Era

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Abstract

In the wake of COVID-19, consumer behaviour has undergone drastic change with a heightened importance on health, digitalization, being more conscious about what we eat and where we eat. The new normal is looking is for more convenience and faster delivery. Consumer are looking forward more of digitalization along with growing transparency and trust- digital floods of information have fostered reliance on authentic reviews and owners of digital owners to be true to their offering and information they provide. Consumers are still looking forward for contactless payments and social platforms has permanently altered the way consumers discover, evaluate and do their transaction through various omnichannel. Consumers have not just evolved with digitalization but are also prioritizing sustainability and ethical values while purchasing, they are ready to pay premium but yet intent action gaps. Pandemic has kindled a concern for personal and communal well- being, encouraging a sustained commitment to hygiene, self-care and preventive health measures for physical and mental health, all of these have reshaped purchasing priorities and lifestyle routines. More of local communities and small entrepreneur have brought change in the market by providing good quality and quantity products in the market and our consumers are making maximum use of it. With economic uncertainties have driven a measured, value - centric mindset: Consumers are cautious, discovering new brands, valuing durability and purpose- driven offerings and valuing loyalty programs to maximize return on investment. Together these trends prove a post - pandemic consumers who is more mindful, digitally discerning, ethical in his motives and economically aware and careful of the future. Consumers demand that brands adapt holistically across health, digital, sustainability and value driven products.

Keywords: Digitalization, sustainability, Health, new normal, hybrid shopping.

Introduction To Consumer Behaviour in Post Pandemic Era

COVID-19 was a complete turnaround the entire human race, since then the world has gone through a drastic change. People adopted to "new normal" where consumer expectations went through a drastic change. It's no longer a world that we recognize as physical, but a lot of segments has taken over as digital too, we can see changes in consumers expectation, purchasing patterns and decision-making processes which has undergone profound transformation. Whether we talk about health, teaching, payments, interaction with brands, products we use etc, everything is done with utmost socially responsibly keep many factors in mind. At the same time emotional and many psychological factors - like trust, safety and mental wellbeing - are reflected while doing any kind of purchase. The world has silently undergone change during it COVID-19 era, marketers have to be very careful while planning their product to their supply chain. These are modern consumers with new normal.

Digital markets and stay-at home economy

a. E-commerce Boost

There has been a significant rise in e-commerce since the post pandemic. People become so habituated to ordering things online and having contactless service, that they still stuck to it. The fear of "I can't touch and feel the product, so I won't buy it" has significantly reduced.

b. Home-centric Investment

Home become place not just for staying and cooking but a full-time work place, play space as well as a place for workout - due to this factor there was an increase in office set ups, workout machines, more of cooking appliances to ease work as well place for entertainment system.

c. Contactless Service

A lot of segments are still doing work from home and finds contactless service, click and collect service or online shopping more convenient. Due to this Blinkit, Zepto, Dmart ready has got more popularized and still in demand.

Value-Seeking and Thrift Behaviour

a. Budget-conscious Choices

There is still a lot uncertainties not just of COVID-19 but because of high inflation as well as economic uncertainties and there is still fear among the people, in such situations shoppers tend to go for value driven purchases - prioritizing essentials, local sourcing and private label brands

b. Thrifty Paired with Key Indulgences

Consumers in their new normal are prioritizing towards cheaper stable food, it not like the pre pandemic period where people enjoy and treated themselves to premium food as well as treated themselves to one. They are more conscious of the choice they make.

c. Polarized Spending Power

The quote " rich getting richer" has proved to be true. We see the rich going for buoyed by asset gains, whereas lower income group consumers continue to cut back. because of this the marketers need to keep their target audience and market segmentation while creating their product.

Revenge And Emotion-Driven Buying

a. Revenge Buying

People all over the world could never imagine that they would be shut inside their house for months altogether. They were not allowed to buy things except for the essentials. When the economy opened up, and lockdown ended, many consumers indulged into purchases that they had postponed, like luxury goods, travel, clothing and treating themselves to the best of it - it is known as compensating psychology.

b. Retail Therapy Via Digital

Online shopping definitely glues their customers for a long time with variety of options available. With the raise in credit card facility and different payment options available, it helps consumers to chase their emotional reward but also risking compulsion.

Health, Wellness & Sustainability

a. Heightened health consciousness

Pandemic was able to create a fear factor for health in terms of: physical and mental wellbeing. Post pandemic we do see a rise in consumers doing more of health-conscious choices for food, taking control of their body as well as having their mental peace on top of everything. With mental peace given priority, we see more meditation and mindfulness apps coming in.

b. Self-Care And Mental Well-Being

During pandemic as well as post pandemic, the world witnessed a sharp rise in anxiety and depression. It effected the young and old alike. But consumers have taken a bold step towards taking care of their mental health with therapy, online therapeutic services and mental health apps.

c. Sustainability Matters- With A Gap

Consumers do want to go for more sustainable products, packing, eco - labels and

recycled products or organic products. We do see a rise in organic detergent, shampoo, dish detergent and many more products. No doubt these products are a boon for the society but people are conscious while paying for the product as the price elasticity retains in the market.

Flexible Lifestyle and On-Demand Models

a. Remote /Hybrid Work Ongoing

With lockdown every job went into work from home. Many of the employees returned back to their respective hometown while being at work from home. During this period many of the organization benefitted with the rent and electricity. When lockdown opened up, many organizations adopted to work from home or hybrid style of work. Some of the job in IT sectors are full time remote. And employees have very well adapted to it.

b. On-Demand Consumption Thrives

Post pandemic consumers behaviour moved to quick and convenience model. Quick commerce has an upper hand in the economy. Services like Blinkit, Zomato, Swiggy, uber rides and home services. These apps come with quick deliveries, which helps consumers to fulfil their desire for modern convivence

At- Home Lifestyle & Value Seeking

a. More Home Cooking

A pattern or habit got formed to cook at home during lockdown, people had no choice as everything was shut. But it was a blessing in disguise, as people started to eat clean and home cooked meals. It has indeed become a lifestyle change for consumers but for the better.

b. Private Label Preference

There is a rise in private label preference with the consumers. In private label, a person creates a product under his or her name and outsources it to the third party, for the entire supply chain. Consumers tend to prefer private labels because of price, perceived quality and the value they receive from it.

c. Buying Local

Pandemic consumers to reexamine themselves and pritotize their neighbouring locals and retail stores. Many in this people even turned out to be small entrepreneurs in a form of home chefs, organic vegetables seller (many started with terrace farming / balcony farming), Bakery products and many more. It a deal great that consumers are consuming and aiming to help the local communities.

Shared Experience & The "Experience Economy"

a. Social Consumption Trend

Consumers are looking forward for shared experience with their group norms or with the people they cherish to go out with. Consumers are looking forward for a shared meal, trips, gathering etc. It looks like they want to enjoy to their fullest as they had never expected a pandemic and if anything happens, they want to want to know they lived to the fullest.

b. Experience Over Material

Millennials and Gen Z are looking forward to create memories for life and emotional connect. Staycation, village life vacation and many more are all an experience to cherish. A there is a growing shift towards these spendings.

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Beyond the Balance Sheet: Green Accounting for a Sustainable Future

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Abstract

Green accounting, also known as environmental accounting, has emerged as a vital tool in bridging the gap between economic development and environmental sustainability. Traditional accounting practices focus solely on financial transactions, often neglecting the ecological costs incurred during business operations. With increasing awareness about climate change, resource depletion, and environmental degradation, there is a growing need for organizations and nations to adopt green accounting frameworks.

This chapter explores the concept of green accounting, its key components, and its relevance in today's corporate and national reporting systems. It discusses the importance of sustainable business practices through the Triple Bottom Line approach—People, Planet, and Profit—and highlights the regulatory push in India through initiatives like the Companies Act, 2013, SEBI's BRSR norms, and RBI's climate risk recommendations. The study further examines the benefits of green accounting such as improved transparency, better decision-making, and enhanced profitability, alongside the challenges like lack of data, high implementation costs, and regulatory gaps.

Through case studies of Indian corporates like Infosys and ITC, which have adopted carbon neutrality and water-positive practices respectively, this chapter demonstrates the tangible advantages of integrating environmental metrics into accounting systems. Ultimately, the chapter underscores the strategic importance of green accounting as a pathway to sustainable development, ecological accountability, and long-term economic resilience.

Keywords: Green Accounting, Environmental Management Accounting (EMA), Sustainability.

Introduction

Traditional accounting methods include recording the business transactions related to money. However, the problem with this type of accounting is that it does not record for the permanent damage to the environment caused by the business. Thus, the need for a system or type of accounting that accounts for protecting the environment emerged. Green Accounting was first used by Prof. Peter Wood in 1980s. Green Accounting or Environmental Accounting is becoming increasingly popular in recent years as people are realising the adverse effects of assuming that the natural resources of the environment cannot be used forever as assumed by the traditional accounting methods. As growth cannot happen without while protecting the environment, it is important to record for environmental costs.

Green accounting is a framework with which besides economic activity, environmental costs like pollution, resource depletion, etc are accounted for better financial stability and long-term sustainability. As more policy makers and economists are stressing on the importance of Environmental Management Accounting (EMA) at stages like COP 21 Agreement, the Kyoto Protocol, the Brundtland Commission, leading to environmental awareness, compelling companies to disclose the efforts made regarding the EMA. United Nations Division for Sustainable Development stresses the importance of EMA in reporting. However, even with all the literary assets present now, there is still a huge gap (Maheshkumar & Sodha, 2021).

There are 3 main key areas of green accounting namely, Environmental Management Accounting (EMA), Environmental Financial Accounting (EFA), Environmental National Accounting (ENA). In India, Jayaram Ramesh, former environment minister of India, talked about making India's accounts green by 2015. Companies Act, 2013 mandates accounting for the environment as a part of CSR initiatives (Kodai, 2023).

Nandini et al. (2022) highlighted that companies that are listed in Bombay stock Exchange (BSE) implemented environmental accounting experienced improved financial outcomes. 10-year study on 18 companies resulted in the following conclusion: There is a positive correlation between environmental protection and profitability. Profitability metrics in the study included Return on capital employed, Return on assets and Net profit margin. This challenges a popular myth that protection of environment is a financial burden. Instead, the companies are facing positive changes like long term value creation, efficiency, stakeholder's trust. As companies face compliance mandates from regulators, green accounting becomes crucial.

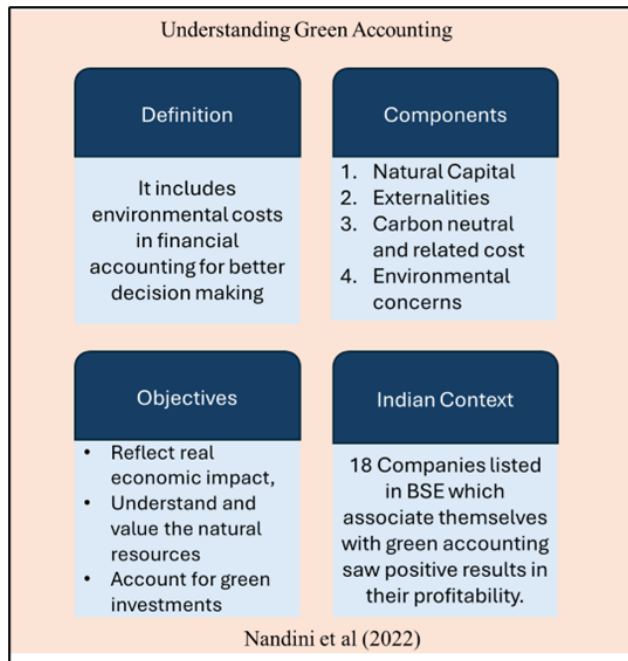
In conclusion, green accounting bridges the gap between environmental concerns and economic activities. This accountability helps the companies to meet their financial goals along with handling their ecological responsibilities.

Understanding Green Accounting

Green Accounting is an emerging branch of accounting that includes environmental costs associated with business operations. Unlike traditional accounting, green accounting considers the ecological and social costs to operate businesses (Kodai,2023).

Key concepts include natural capital which further includes water, air, forests, minerals, etc. Although these are not priced like other commodities, natural capital holds a significant value in day-to-day business operations. Another key concept that is not included in the traditional accounting is the external elements like biodiversity loss, pollution (Maheshkumar and Sodha, 2021). Carbon dating or measuring the value of greenhouse gasses emitted is a crucial step in green accounting specially for businesses using huge amount of natural capital. Primary objectives of Green Accounting include - Enhancing transparency, Promoting accountability, long term planning. It helps the businesses to comply with environmental laws, establishes better decision making as the companies not only record economic activity but also consider environmental concerns (Khan, Gupta, 2024).

As more and more awareness grows, businesses are encouraged to comply with environmental issues for better strategy planning and operations.



Importance Of Sustainable Business Practices

Triple bottom line (TBL)

- People: Social and community concerns.
- Planet: Environmental resource conservation.
- Profit: Viable economic growth and long-term decisions. (Khan and Gupta, 2024)

Role Of Green Accounting

- It quantifies environmental costs resulting in mindful resource usage.
- Supports transparent reporting and strategic decision making. (Kodai, 2023)

Regulatory Push

- SEBI mandates Business Responsibility and Sustainable Reporting (BRSR) for top 1000 companies.
- The legal and regulatory framework aligns with global visions and reporting standards resulting in accountability.

Business Benefits

- Investors trust resulting in access to ethical capital.
- Consumer loyalty and brand reputation are maintained.
- Promotes cost savings. (Maheshkumar & Sodha)

Risks

- Reduces environmental, reputational risks.
- Drives innovation for risk reduction. (Khan and Gupta, 2024)

Green Accounting plays a very crucial role in balancing environmental responsibility and profitability. According to Nandini et al (2022), including green costs not only made the company more transparent but also enhanced their overall profitability. Their study resulted in positive relationship between green expenditure and profitability indicators. This concludes the importance of practicing green accounting as it not only improves businesses' financial health but also creates long term economic benefits through pollution control, eco-friendly technologies. It's not mere regulatory obligation but a tool that will help businesses improve their efficiency, boost investor confidence, regulatory compliance resulting in sustainable market practises.

Green Accounting in India

In accounting green accounting (also known as environmental and resource accounting, environmental and ecological accounting, [environmental] and economic accounting or national accounts) is a type of accounting that attempts to factor environmental costs into the financial results of operations. This

approach allows a better interpretation of country wealth and its sustainable development by taking into consideration environmental costs of economic activities (Dasgupta, 2021). In India, the concept of green accounting has been increasingly gaining importance, due to escalating environmental problems, rapid industrialization and growing pressure on natural resources. These have been followed by the system of the environmental-Economic accounting as recommended by the United Nations for integrating environmental considerations in the national accounting base of the country (MoSPI, 2023).

In their recent reports, the Reserve Bank of India (RBI) has also highlighted the need to curtail the ecological risks faced by the financial sector and recommended the usage of green accounting practices in all sectors to measure the long-term effect of business operations on the ecology (RBI, 2024). Moreover, companies in India as per the Companies Act, 2013 are increasingly being urged to report on the ESG grounds in their annual reports, promoting a transformation towards sustainable reporting and accountability (SEBI, 2024).

Benefits & Challenges

Green accounting goes beyond conventional financial metrics by incorporating environmental costs and benefits into the decision-making process. It aligns economic development with ecological sustainability, offering both opportunities and challenges for policymakers, businesses, and civil society.

Benefits of Green Accounting

1. **Holistic Decision-Making:** Green accounting enables policymakers and businesses to make more informed decisions by quantifying the environmental costs and benefits of projects and policies (Dasgupta, 2021). This supports sustainable resource allocation and avoids overexploitation.
2. **Sustainable Business Practices:** Integrating environmental indicators into accounting systems encourages companies to adopt eco-friendly practices, enhance efficiency, and reduce waste, ultimately improving long-term profitability (SEBI, 2024).
3. **Improved Reporting and Transparency:** It enhances corporate transparency by including non-financial disclosures related to environmental performance, thereby attracting socially responsible investors and building public trust (Sharma & Bhattacharya, 2022).
4. **Alignment with SDGs and ESG Goals:** Green accounting facilitates alignment with the UN Sustainable Development Goals and Environmental, Social, and Governance (ESG) benchmarks, which are becoming central to global investment and regulatory frameworks (MoSPI, 2023).

5. **Early Warning for Ecological Risks:** By tracking the depletion of natural resources and emissions, it serves as an early warning system for ecological degradation and helps in formulating mitigation strategies (RBI, 2024).

Challenges of Green Accounting

1. **Data Limitations and Measurement Complexity:** A major challenge is the lack of reliable and standardized data on environmental indicators. Valuing natural assets and ecosystem services is inherently complex and subject to methodological variations (Sharma & Bhattacharya, 2022).
2. **Lack of Regulatory Enforcement:** While frameworks exist, implementation is inconsistent due to weak enforcement mechanisms, fragmented institutional roles, and limited political will (MoSPI, 2023).
3. **Low Awareness and Expertise:** Many businesses and accounting professionals are unaware or untrained in green accounting principles, hindering their adoption (Gupta & Singh, 2023).
4. **High Initial Costs:** Implementing green accounting systems may involve high setup costs, including hiring experts, investing in tools, and redesigning reporting processes (SEBI, 2024).
5. **Resistance to Change:** Traditional accounting models are deeply entrenched, and there is institutional inertia against adopting new, non-financial metrics, especially when immediate financial returns are unclear (RBI, 2024).

Case Studies

1. Infosys- Carbon Neutral

Infosys is an Indian Tech MNC. Infosys has become carbon neutral by the year 2020. Carbon neutral means balancing carbon emissions and carbon absorption using carbon sinks. It became carbon neutral ahead of their schedule and uses GRI standards and CDP for recording environmental performance. The company tracks energy, water consumption, emissions across its campuses. It gets over 44% of its electricity through renewable energy resources. (Infosys Sustainability report, 2023).

2. ITC- Water Positive and Solid Waste Recycling

ITC is a diversified Indian Conglomerate that has been water positive for over 2 decades now. ITC recycles 99% of their solid waste making them very close in being carbon neutral. ITC also reports monetary value of afforestation, waste management. This has led to better brand reputation and rural employment while complying with environmental concerns. (ITC sustainability report, 2023).

Conclusion

Green accounting is revolution in the conventional financial documentations by considering environmental aspects in economy generation and utilization. If we

are to go by emerging Indian and global corporate practices, with its mere eye on profits, business can no longer shy away from its ecological impact. Based on the use of resources, emissions to the environment, and effects on the environment, the green accounting allows an organization to adopt the mechanisms and sustainable and responsible growth strategies.

In the Indian milieu, increasing regulatory pressures, international environmental compliances, and investor demand, are forcing the shift towards environmental accounting practices. Companies such as ITC and Infosys are leading examples of responsible business that also happens to be good for the business. Their efforts on carbon neutrality, water positivity and recycling of waste to productive resources are a testament to how sustainability measures can benefit such companies in terms of operational efficiency and reputation, and also long-term value creation.

In conclusion, green accounting is not merely a compliance tool but a strategic instrument for shaping a sustainable future. It bridges the gap between ecological accountability and economic performance, fostering responsible business practices that safeguard the environment for future generations. As we move toward a greener economy, embedding environmental values into financial systems will be essential for building resilient, transparent, and forward-looking institutions.

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Economic Implications of Gender Identity and Social Inclusion

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Abstract

This research study examines the economic dimensions of gender, identity, and social inclusion, emphasizing the impact of marginalization, particularly of transgender individuals and women from low-income backgrounds, on sustainable development. The research employs secondary data from international reports, scholarly articles, and policy documents to examine the economic implications of social exclusion, the expenses associated with marginalization, and the advantages of adopting inclusive practices. It illustrates the economic impact of discrimination and exclusion in the labour market, educational institutions, and healthcare systems on nations. The report explores case studies in Malta, Argentina and South Asia, and indicates that being inclusive in the legal and social context to include the transgender people has had positive social and economic returns. The study indicates that it is ethically important yet vital to economic efficiency, development, and equalities to allow people of all genders and identities. It ends that the inclusion, equity, rights-based, and community-based approaches are required to meet the Sustainable Development Goals, especially SDG number 3, 10, and 16.

Keywords: Sustainable Development Goals (SDGs), Gross Domestic Product (GDP), Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ), United Nations Development Programme (UNDP)

The Case Scenario

The marginalized groups, especially the transgender folks and the women with low-income backgrounds, are always left out of the important sectors including education, formal employment and healthcare across the globe. This marginalization has a negative influence on people and their rights, and economy. According to the World Bank and UNDP, discrimination based on sexual orientation issues and LGBTQ + individuals negatively affect the national

productivity of the country and GDP due to the waste of human resources and a decrease in the working population. Low-income or minority women encounter the same difficulties and that is why they are often involved in informal or unpaid work. On the other hand, countries, which have open policies, including legal recognition of gender and anti-discrimination policies, universal access to education display a better social picture and a more successful economy. This article examines how inclusive policies might transform social equality into economic opportunity through the analysis of foreign case studies and secondary economic data. It also addresses the genuine expense of exclusion and the potential for inclusive progress.

Introduction

The correlation of gender, identity and social inclusion to the economy is the primary consideration which influences economic growth. Traditional models of economics focus more on productivity and market efficiency, yet they often fail to capture the underlying structural differences that prohibit marginalized individuals accessing and playing into the market systems. Caused by gender stereotyping and discrimination, based on identity and class, social exclusion hinders national progress in terms of decreasing human capital resources, denying educational and employment options, and leading to generational poverty. This research paper will discuss the economic effects of social exclusion with special emphasis on transgendered persons and economically poor women. It examines the economic advantages of inclusion via legal reform, enhanced educational access, and community-led empowerment. The research employs global evidence to demonstrate that inclusive policies are not only ethically imperative but also the most effective means to attain long-term national growth and sustainable development objectives.

Need and Significance of the Study

Social exclusion based on gender identity and socio-economic status is not only a moral or ethical issue but also significantly impacts the economy. Transgender individuals and marginalized women are routinely deprived of education, employment, and healthcare. This renders individuals less inclined to engage in employment, diminishes their productivity, and increases their need on public assistance programs. The World Bank also states that LGBTQ + discrimination leads to a decrease in the GDP of a country at 0.1 to 1.7 percent. Global Gender Gap Report (2023) also demonstrates that the reduction of the gender gap may bring trillions of money to a global economy. The study is significant as it examines the economic costs associated with exclusion and the advantages of inclusion. It employs secondary data to demonstrate that inclusive policies are not just ethically sound but also beneficial for business. Policymakers can use the

knowledge to shape tailored approaches that would achieve equity and economic prosperity.

Review of Literature

Over the past twenty years, gender identity as it applies equally to the economic inclusion has accrued an increased amount of academic and political focus, especially as countries attempt to meet international efforts of development goals. The study by Divan et al. (2016) proves to be quite important as it shows that negating transgender people undermines not only their human rights but also leads to their increased economic exclusion. The authors confirm that the inability to officially recognize gender, unfair access to health services, education and workforce sustains poverty and social invisibility cycles. It is this kind of exclusion that is believed to hurt the social fabric and economic output of societies making the institutions less efficient in a manner that is in most cases unnoticed by governments.

The United Nations Development Programme (UNDP, 2016) states that social exclusion hampers the achievement of quality employment, healthcare and education by individuals thus undermining their economic potential as well as the economy. of relevance to SDGs 3, 10, and 16, the UNDP insists that an inclusive development model that is based on rights needs to be able to comprehend the Sustainable Development Goals (SDGs).

The World Bank (2018) gives a different analysis of an economic impact of the marginalization of LGBTQ + based on GDP and labour force data. The study shows that the loss of up to 1.7 percent of GDP in a year, through underemployment, decrease in productivity and health related demerits, could be caused by nations that exclude LGBTQ + or even transgender people consistently. In its arguments, the study presents a convincing economic argument in support of inclusion and argues that policies against discrimination, inclusive work places, and fair access to education all protect human dignity and exist in harmony to contribute to economic standing and performance.

According to Knowles, creating inclusive education is vital to decent social justice and economic parity in education (2010). She writes about how institutional discrimination, fixed programs, and cultural differences often prevent children and other people with marginal backgrounds, especially ethnic minority or low-income women, to have access to education in mainstream settings. Knowles believes in participative forms of education which is responsive to the life-experiences, empowering and which enables life-long chances of work and learning.

Theoretical Frameworks

This study is primarily guided by Human Capital Theory and Social Capital Theory.

- Human Capital Theory was developed in 1964 by Gary Becker. Since education, training and healthcare triggers productivity and earning power, this will help drive economic growth. The human capital is not well developed and utilized when the people underprivileged cannot access resources because of exclusionary policies. This stagnation of inefficiency leads to macro-economic losses, loss of competitiveness and social mobility.

Research Gaps

Despite the fact that the current studies successfully demonstrate the expenses of exclusion and support alterations founded on rights, there are gaps and omissions notably in the aspect of assessing the potentially economic costs of marginalizing and placing transgender people in subordinate roles within educational establishments. Much of the current research remains descriptive or advocacy-oriented. Few studies have performed rigorous economic modelling or national cost-benefit analysis of inclusion programs.

Moreover, studies of transgender people are lacking, especially in low and middle-income countries, even though the overall LGBTQ+ studies are growing. No reliable data exists on how gender recognition legislation, comprehensive curricula or community education activities may serve as national developmental factors as identified by such parameters as GDP growth, rates of employment and productivity. In the same way, educational exclusion has drawn plenty of attention in the feminist and sociological literature; however, there is a young area of studies in the context of the relationship between educational exclusion and macroeconomic variables.

Summary of the Literature & Major Observations + Identification of the Problem

The study reveals that the segregation of other people on the grounds of gender identity and socio-economic status leads to systematic injustice and measurable economic harm. The study published by Divan et al. (2016), UNDP (2016), and the World Bank (2018) shows that the lack of access to the legal, educational, and healthcare system by transgender people may have a severe toll on the overall economy. Knowles (2010) and Clegg & McNulty (2002) both emphasize that the exclusion of individuals from educational institutions adversely affects the development of human capital, particularly for women from marginalized groups.

The basic argument of this essay is that exclusion, whether arising from legal non-recognition, lack of educational access, or societal stigma, results in an

ineffective utilization of human resources. This inefficiency manifests as reduced employment rates, underemployment, less innovation, and weakened social cohesion, all of which adversely affect the nation's economy.

Even while there are international frameworks and progressive laws in some countries, there is still a big gap between establishing policies and putting them into implementation. The systemic discrimination against individuals excluded in the economy severely denies them the chance to be included in the economy, which contributes to the trend of poverty and marginalization.

The lack of the use of the human capital, which is caused by the gender identity and socio-economic status related discriminatory behaviour, is the main problem that was found during this study. This kind of underutilization does not only hamper acquisition of power by other individuals but also slows down the growth of the economy in general. Point is, correcting exclusion is neither merely the work of justice, but also of economic necessity.

Objectives

- To analyse the economic impact of social exclusion along gender identity line or socio-economic status.
- To review the possible economic benefits of adopting inclusive practices and policies.
- To ascertain how education, legal recognition, and healthcare access may facilitate economic participation.
- To examine case studies in which inclusion has resulted in favourable economic and developmental outcomes.
- To provide policymakers with recommendations for incorporating gender and identity into economic planning.

Methods

Participants: This study does not involve direct human participants. It solely utilizes secondary data sources such as global reports, research articles, and legislative documents.

Method of Data Collection / Assessments

We obtained data from several credible and publicly accessible sources, including:

- Studies in gender and economic inclusion that have been peer-reviewed and published as journal articles
- Reports of organizations like the United Nations, the World Bank, and the World Economic Forum that are around the world.
- Legislative documents from Malta and Argentina pertaining to gender identity are available.

- Statistics on gender disparity can be obtained in the Global Gender Gap Report (2023).

Procedure: To reflect on this, we carried out an extensive literature search to locate relevant economic facts, data, and case studies regarding gender, identity and social inclusions. We selected materials that concentrated on the economic implications of inclusion or exclusion.

Data Analysis: We analysed the material we collected. We integrated essential variables such as GDP fluctuations, labour market participation, access to healthcare and education, and recorded case outcomes to obtain a comprehensive understanding of the economy.

Ethical Considerations: There was no need of direct ethical approval since no active participant was involved. About the maintenance of academic integrity, only proven, peer-reviewed, and officially published sources were used in the study and, therefore, did not precondition any data misrepresentation or distortion.

Results: The examination of secondary data and case studies reveals a distinct trend: the exclusion of individuals based on gender identity or socio-economic position incurs significant financial costs, whereas inclusive policies and community-based initiatives benefit the economy at both national and local levels.

1. Macro-Level Economic Costs of Exclusion

The World Bank (2018) indicates that countries exhibiting significant hostility towards LGBTQ+ individuals may forfeit up to 1.7% of their annual GDP. The casualties include the reduction in the size of the workforce, a decline in productivity caused by discrimination, and the fact that more of the population resources are spent on providing health and social care to disadvantaged people.

According to the report published by the World Economic Forum on global gender gap 2023, it is estimated that if the gap between men and women in education, work, and management is closed, it could add up to the 28 trillion dollars to the global GDP by 2025. This shows the high economic prospect that has not been tapped because of the structural discrimination.

2. National-Level Case Studies

Impact of Inclusive Laws: The Malta Gender Identity, Gender Expression and Sex Characteristics Act (2015) enabled more extended educational activity and improved occupational process of transgender people. Although enhancements in national GDP associated with this reform are not

unprecedented, local government sources indicate that transgender individuals exhibit increased participation in the labour market and a reduced dropout rate from high school.

Following the enactment of the Gender Identity and Health Comprehensive Care Act (2012) in Argentina, transgender individuals have access to complimentary gender-affirming healthcare. The UNDP (2016) states that this resulted in improved mental and physical health, facilitating access to formal employment and reducing dependence on informal sectors and government aid. The cost of healthcare improved because people became more active and preventive in their health.

3. Community-Level Outcomes from Inclusive Education

Clegg and McNulty (2002) investigated a northern England project which was Parents and Carers. It was found in research that when education is based on lived experiences of marginalized women, especially those belonging to ethnic minorities or in working-class origins, then the following consequences were witnessed:

- More participants in the program found jobs, especially ones relating to educational or community services, including parent link workers and teaching assistants.
- A rise in community activity, which included such things as involvement in parent-teacher organizations, school board candidatures, and attending regional conferences.

Severe self-esteem and agency leading to a positive learning and professional engagement cycle.

Economic Impacts of Inclusion Policies and Practices

| Context | Inclusive Measure | Observed Economic Impact | Source |
|----------------------------|-------------------------------|---|---------------------------------|
| Global (General) | Reduction of LGBTQ+ exclusion | As much as GDP lost contained at 1.7 percent | World Bank (2018) |
| Global (Gender Gap) | Closing gender labour gap | An extra 28 trillion dollars to GDP in 2025 | Global Gender Gap Report (2023) |
| Malta | Gender Identity Act (2015) | Better retention in schools and better employment rates among those who are trans | Malta Parliament, UNDP (2016) |

| | | | |
|-------------------------|---------------------------------------|--|-----------------------------|
| Argentina | Gender Identity and Health Act (2012) | Improved health, the transition to formal work, decreased dependence on public welfare | UNDP (2016), Argentina Gov. |
| Northern England | Community-based education for women | More job opportunities, community participation and economic stability | Clegg & McNulty (2002) |

Discussion

This study's results reveal a robust and enduring trend: policies that marginalize individuals based on gender identity or socioeconomic status generate significant economic issues, whereas inclusive policies enhance revenue and societal well-being. The reports by Divan et al. (2016) and UNDP (2016) indicate that transgender individuals lack legal recognition and access to fundamental services. This hinders their access to employment, education, and healthcare. This may lead to the reduction of the national production, the augmentation of healthcare expenses, and the growth of the reliance on the social support programs.

The situation of Malta after legal recognition and non-discriminative laws were formalized (Gender Identity, Gender Expression, and Sex Characteristics Act (2015)) proves that the barriers can be broken regarding some economic concerns. The first signs of economic integration are better school attendance and employment opportunities of transgender individuals. This confirms the idea that inclusion is useful to both people and the society at large. The healthcare policies of Argentina present a good case study on how universal accessibility to health care decreases the number of long-term government spending and economically makes the previously disadvantaged people self-reliant.

An example of community-based inclusive educational model, which targets the needs of women at the margin, is the case study conducted in northern England (Clegg & McNulty, 2002) and demonstrates how such a model can alter the way learners see themselves and produce the population of people who are skilled, confident, and do not lack a sense of economic activity. The traditional hierarchical education system may make people alienated in case they have some different experiences with the ones expected by the society. Learning with formal accreditation and connection to the real-life situations such as parenthood can encourage people to join workforce and civic life. This sustains the human capital theory (Becker, 1964) which stipulates that in order to improve economical productivity, education and skill development become necessary.

These findings go a long way in affirming that intentions to include within an economy go hand in hand with neither just a sense of morality, but also a good

business idea. Inclusive approaches utilize latent human power, increase the levels of diversity among workers, promote creativity, and resilience, especially in other growing complex markets. It must never be considered a moralistic sin; exclusion should furthermore be seen as a negative aspect on the economy.

The impacts of inclusion extend beyond conventional GDP metrics. The nations and the local units that have adopted all-inclusive policies record lower spending in matters concerning the health and welfare of the people, and claim to have a more resilience community. It is the indirect economic gains that are more difficult to measure in terms of abrupt fiscal impact; but they create the starting point of long-term economic and social stability.

Global sustainable development goals (SDGs) and especially goals 3 (good health and well-being), 10 (reduced inequality) and 16 (peace, justice and strong institutions) represent a framework that can be used to support this change. These purposes underline that inclusion, equity, and engagement are major pillars of sustainable development. This research asserts that the realization of these goals ought to be more than a discussion that is on paper. It requires the enforcement of the policies, community work and the use of frameworks that are aware and sensitive of the unique struggles of different marginalized groups.

The analysis shows a major contradiction between: the need to lead legal and policy reforms on the one hand and the inability of such reforms alone to make much difference without systems that can evolve around local habitus (Bourdieu, 1986). Individuals seeking to involve others in their lives and social frameworks must have the ability to access, utilize, and recognize the significance of educational or employment opportunities. Even meticulously crafted policies may fail to reach those most in need if this alignment is absent.

The study conclusively demonstrates that inclusive economies are more robust. They are more flexible, more imaginative and more even-handed. By making gender and identity as core constituents in the development of economic and educational systems, the governments and institutions can protect human rights, boost national productivity, decrease long-term governmental spending, and achieve sustainable state. Refusal to act on this information would not be just a missed opportunity, but a continuing economic and social burden that countries are finding themselves unable to bear.

Executive Summary

The research focuses on the economic aspects of gender, identity and social inclusion with focus on societal rejection of the transgendered community and the less privileged women lacking economic status. Analysis shows that exclusionary policies come with great economic consequences basing on secondary data obtained by authoritative international agencies like World Bank, UNDP, World Economic Forum and leading academic journals. These costs are

presented in form of low GDP, lack of jobs, high cost of healthcare and poor utilization of human capital.

The study indicates that discrimination, lack of legal recognition, and denial of access to services constitute violations of human rights and adversely affect the economy. According to the World Bank, not including LGBTQ+ people will cause up to 1.7 percent GDP loss. According to the Global Gender Gap Report (2023), closing the gender gap in employment could serve as an extra 28 trillion dollars to the global GDP by the year 2025. These figures show how important is the idea of large-scale measures.

Nations with such inclusive laws and reforms prove to have positive economic results at a policy level. The Act on Gender Identity, Gender Expression and Sex Characteristics in Malta (2015) helped the transgender to get employment and access education, thus improving their integration into society and the world of work. Argentina created the Gender Identity and Health Comprehensive Care Act (2012) to approve healthcare at no cost to governments that had confirmation of their gender identity. This had the effect of higher health rates and the participating in economic activity by transgender people. These illustrations show that changes enacted in law and institutions can turn apartheid into liberation: to the mutual advantage of the people and the economy of whole countries.

This study is a reflection of a community education project undertaken in the north of England that re-educated women with disadvantaged backgrounds using locally based, culturally apposite strategies. What is more, these women did not only finish credible courses but were also able to acquire other roles in both educational facilities and communities thus investing in the economies of the area as well as in the social capital. This is a story of how the inclusive and welcoming educational institutions can convert informal knowledge into formal interaction, which will contribute to the personal and economic growth.

These results prove that inclusive systems have their bearing not only in moral and social goals but also in economic goals. Where societies can remove the structural impediments limiting people to fully participate in health, education, or work, formerly unrealised potential can be released and efforts towards more robust, more equitable, and more productive economies made.

The document states that global guidelines like the Sustainable Development Goals (SDGs) (especially SDG 3 (Good Health and Well-being), SDG 10 (Reduced Inequalities), and SDG 16 (Peace, Justice, and Strong Institutions) should serve as a vision, yet at local levels, the concept needs to be altered to achieve the desired goal. Top-down policies alone are not enough, and proper development should be based on bottom-up strategies adopted in active participation and dependent on the concrete experiences and achieved with the help of the marginalized persons.

The study concludes with illustrations that inclusion is not only a desirable attribute, but an essential economic requirement. Stakeholders and policymakers in various spheres should consider that without diversity and equity, there is no sustainable development. By eradicating structural exclusion, human rights will be safe not only but the national competitiveness with, innovation, and the maintenance of social and economic stability will have been guaranteed. Inclusion should be incorporated in all policies and practices in order to establish a world where everybody regardless of gender or identity is accepted, recognised and empowered of achieving success.

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Migration and Urbanisation at a Crossroads: Economic Patterns from Asia and Africa

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Abstract

The study investigates the complex and dynamic economic relation that exists between migration, urbanization, and population change in some areas of Asia and Africa given special attention to the countries: China, Zambia, Zimbabwe, and Malaysia. The article focuses on the root causes behind the movement of people within the country, particularly the job opportunities, development of urban amenities, youth bulge or ageing population. It does this with the use of only secondary sources of data such as, empirical data, census data, and international development reports. This explores how these movements affected, and how they dealt with the way and speed in which urbanization was taking over the cities and this includes the merits and demerits that surrounded the rapid growth of the urban area. The study focuses on the fact that urbanization, whose flow could be largely explained by the fact that people left rural territories to move to the big cities, has led to the continuous and inclusive economic growth, better living conditions, and well-being of the migrating people. Effects of demographic changes including natural increase of population of urban areas and reduction of fertility are looked at on the economy and migration patterns. It mainly aims at studying the manner in which exclusionary urban policies like the hukou system in China and structural adjustment programs in Zambia has hindered the entry of migrants to access employment, housing and social amenities. These policies are incredibly often the cause of inequality worsening and reducing the economic potential of the migration. The document indicates that conventional migrant-driven urbanization trajectories are decelerating, whereas tendencies of informalization, circular migration, and counter-urbanization are increasing due to economic instability. The study employs a comparative methodology to provide a more detailed understanding of the

disparities in urban growth across areas and the evolving influence of migration on urban economies. This contradicts the conventional economic notion that urbanization invariably results in wealth.

Keywords: Economic relation, urbanization, circular migration, demographic changes.

The Case Scenario

There is major criticism of the traditional economic paradigm that perceives rural-urban migration as one of the major spurs to economic growth and urban sprawls in Asia and Africa. In China, as well as in the countries like Zambia and Malaysia, statistics show that there was a slowdown in the process of migration and the slow rate of urbanization. This indicates that the notion of rural migration directly resulting in urban economic growth is not universally applicable and is not assured. New elements such as cyclical migration, characterized by individuals relocating between rural and urban areas, alongside the increasing informality in housing and employment, have complicated matters, rendering classic urban economic models less effective. Exclusionary housing policies, gated redevelopment initiatives, and disparate access to formal employment are increasingly prevalent in urban areas, particularly in rapidly developing nations. The low-income and migratory people are marginalized by the existence of these policies. Rapid growth of peri-urban areas often has led to reverse progress in infrastructure development, causing economic stagnation, poor services delivery, and rising inequality. Informal sector keeps on attracting most of the migrant workers; however, it does not guarantee any migration of employment and it could not ensure employment security and the possibility of a career advancement. With such changes, the urbanization process is getting more controlled and strategic by the authorities. These policies often include controlling migration, decreasing entitlement to settlement, and rationalizing economy. With this changing situation there is a requirement of a general investigation of the economic setting of the problem to ascertain whether migration still plays its historical role of a driver of urban dynamism or whether it has become a signal of deeper problems associated with human mobility, labour market needs, and urban economic approaches.

Introduction

Migration and urbanization have been conventionally seen to promote economic developments especially in the developing countries since it enables redistribution of labour, industrialization, and modernization. The Harris-Todaro model has had a theoretical underpinning of migration of people in rural areas to the urban areas based on the assumption that people migrate with an aim of getting better incomes in the urban areas therefore improving the productivity of

the urban areas and changing the structural aspects of the urban areas. However, new empirical instances from China, Zambia, Zimbabwe, and Malaysia demonstrate that this traditional framework may inadequately account for contemporary urban migration and habitation patterns. Urbanization in numerous regions of Asia and Africa is not benefiting the overall economy; rather, it is increasingly becoming exclusive, relegating migrants to the peripheries of informal housing and labour markets. The emergence of unplanned peri-urban communities, circular and return migration, together the decrease in rural-to-urban migration rates, indicates an expanding disparity between demographic shifts and economic development. Urban populations continue to expand, primarily due to natural increase rather than migration. In many locations, formal industries have trouble in absorbing new labour and created underemployment, job insecurity and enhanced inequality. Moreover, urban programs promoted by the state may worsen the problem because they make it more difficult to receive services and find jobs by unregistered or informal migrants, and not integrate them. This paper seeks to analyse the changing trends by inquiring on the economic effects of migration and urbanization. It will particularly challenge the notion that demographic concentration fosters economic progress. It examines the inefficiencies within institutions, the labour market, and regulations that hinder urban growth despite increasing populations. Ultimately, it interrogates the sustainability of conventional urbanization patterns in the Global South.

Need and Significance of the Study

This research is essential as conventional development theories are increasingly losing relevance in numerous Asian and African nations. Historically, urbanization has been perceived as a direct consequence of economic expansion, characterized by the migration of individuals from rural regions to urban centres for employment in factories, hence enhancing industrial development, augmenting worker productivity, and elevating living standards. However, in recent decades, this presumed correlation has significantly diminished. Urbanization is no longer associated with economic growth in nations such as China, Malaysia, and Zambia. Cities are increasing in physical building as well as population; however, the increase has not been accompanied by a steady rise in employment opportunities, increase in formal sector jobs amongst the migrants or economic benefits to all the people living in the city. Lack of connectivity is also a trigger that causes us to reconsider basic frameworks that guide development policies and raises serious questions about future sustainability and transparency of urban growth.

Our dependency on the laws controlling the migration must be questioned. Many governments have also put in place rules and regulations which include but are not limited to internal passport systems (e.g. hukou in China), control over the

housing market, and anti-encroachment projects to limit or move migrants to the outskirts of cities. Such measures can temporarily lift pressure in cities; however, these policies entail huge costs to the economy in the long-term since these policies will result in inappropriate utilization of available labour, lack of demand and consumption in the urban areas, and failure to revel in opportunities that come with migration and entrepreneurship normally brought by immigrants. Exclusionary policies may reduce diversity in the urban economies to the extent of reducing urban resilience and economic growth of a nation in the long run.

Overview of Relevant Studies

Available empirical evidence regarding a number of the developing countries have revealed how the seeming relationships between urbanization, migration, and economic prosperity have changed. Such results show that the standard discourse of the ideology of development, one that implies that migration promotes the growth of cities and economic prosperity, is changing because of the arising social and economic issues.

The study by Zhang and Zhou (2020), entitled *Life Satisfaction of Rural-To-Urban Migrants: Exploring the Influence of Socio-Demographic and Urbanization Features*, contains valuable information concerning the unequal impacts of migration on different classes of the Chinese population. A survey, which used to cover more than 800 migrants, was conducted in a survey that traversed the high-growing Hangzhou and Ningbo cities. Approximately 39.2% of migrants expressed dissatisfaction with their living in the city. Historically, urbanization in China has been associated with industrialization and substantial economic growth; nevertheless, this study reveals that the advantages of urban migration are not equitably distributed. Education, income, and formal work were identified as significant predictors of life satisfaction. However, most of the migrants were in precarious employment, often in the informal economy, often in low-qualified jobs. The hukou system is the Chinese mechanism of household registration that makes it difficult to obtain public services by migrants. This perpetuates their social and economic exclusion despite relocating to a new area.

Theoretical Frameworks

Migration and urbanization have long been significant subjects in development economics. Fundamental models elucidate the dynamics of labour mobility and its perceived impact on a nation's economy. The Harris-Todaro model (1970) posits that individuals migrate from rural to urban regions mostly due to the perception of higher income potential in cities compared to rural locales. This neoclassical economic model posits that individuals assess the probability of employment in urban areas and the potential financial losses associated with rural employment. The model posits that, over time, migration equilibrates wage

disparities between rural and urban regions and facilitates the transition of workers to more productive sectors, hence enhancing economic growth and structural transformation.

The Harris-Todaro model perceives urbanization as beneficial for the economy. According to the model, relocation of people to a city results in an increase in productivity because of better infrastructure, expansion in access to technology, and spreading out costs economies. This strategy concurs with the traditional modernization theory which maintains the view that the shift of agriculture to industry can be viewed as a basic pointer of economic development. Immigration has the ability to push surpluses of labour in the rural areas of low productivity to the urban areas that are of high production. This acts as the basis of alleviating poverty and creating sustainable development.

But empirical reports of countries like China, Zambia, Malaysia, and Zimbabwe are making such traditional assumptions more and more invalid. The model significantly diverges from actual migration patterns in several critical aspects. Initially, migration is not invariably permanent or linear. It is becoming more and more circular, seasonal or temporary, especially in areas where employment markets in the metropolises are volatile and precarious. In Zambia and Zimbabwe, due high rate of economic degradation, people have migrated to rural places as there are no employment opportunities and the living standards in the cities have worsened. This is against the Harris-Todaro theory which holds that migration flow will be unit direction and only wage parity will see migration stagnation.

This contradicts the notion that migration fosters economic progress for individuals or communities.

To conclude, it is possible to note that traditional approaches like Harris-Todaro still define the migration and economic growth policy discussions; however, emerging empirical trends seem to point to the fact that theoretical models should be extended. The reasons why migration and urbanization have played different economic roles in various places lie in the interactions between dual labour market forces, urbanization segmentation and gatekeeping that the institutions provide. These systems note that the economic benefits of migration can only be potential depending on the ways by which individuals manage to migrate on one hand and the ability of the urban centres to support, accommodate, and more fairly serve the growing communities.

Problem Identified

Historically, migration and urbanization were perceived as the primary catalysts for economic transformation in developing regions. Nonetheless, recent empirical evidence challenges this notion. The economic potential of migration is being undermined by:

- Exclusion from urban advantages due to policy
- Insufficient capacity of the formal sector to assimilate
- Labor marketplaces in rapidly evolving cities
- Isolate urban spatial development
- Data deficiencies that obscure the true economic contributions of migrants and their most vulnerable circumstances

The underlying economic issue is that wealth can no longer be accumulated through migration, whereas an urbanization is not always followed by prolonged economic growth of cities. The difference between the two regions requires an overhaul of the policy of both city economic planning and migration policies in the Global South. We need to look at this in the light of structural inequities, fair growth, and demographic changes that can be linked with urban labour markets and investment environments.

Objectives

- To examine the economic determinants and consequences of migration and urbanization in certain Asian and African nations.
- To assess whether migration-induced urbanization continues to contribute positively to long-term economic growth.
- To examine the impact of stringent municipal rules on migrants' integration into the economy.
- To identify emerging trends that contradict conventional economic theories regarding urbanization.

Methods

Participants

The research in question does not imply a work with primary human participants instead, macroeconomic trends are considered and analysed based on secondary data. The categories of individuals known as the participants are based on the groups of groups that appear in the national census reports, scholarly literature, UN-Habitat studies, and on policies approved by local governments in China, Zambia, Zimbabwe, Malaysia, India, and other countries in Asia and Africa. These databases extend to the rural-urban migrants, the urban residents, and to the large demographic groups affected by the migration and urbanization dynamics. This enables a comprehensive economic examination across many temporal and spatial contexts.

Method of Data Collection / Assessments

This study utilized exclusively secondary data sources. This meant that a lot of scholarly articles and government reports as well as documents of foreign

developmental agencies like UN-Habitat and World Bank had been looked into. The national census records, migration and urbanization databases and other economic indicators on the level of employment, amount of income and growth rates in population were the sources of quantitative data that we gathered. A study of the social and economic aspects of migration was found using surveys on life satisfaction and demographic changes. These sources were a complete overview of many countries and several decades, which is needed to determine general trends in economic processes and the influence of urbanization and migration on the development path to national formation.

Procedure

The process of the research included the thorough gathering of statistics on peer-reviewed scientific articles, national census, and official documents between 1980 and 2025. We employed a comparative analytical methodology to examine and contrast patterns across several nations, primarily China, Zambia, Zimbabwe, Malaysia, India, and select Asian countries. We categorized the data according to themes such as migration patterns, urbanization rates, employment arrangements, and demographic trends. Analysing countries facilitated the identification of shared issues, variations in policy responses, and persistent economic impacts. This strategy enhanced our comprehension of the distinct dynamics of migration and urbanization processes across various countries.

Data Analysis

The research employed a combination of descriptive, comparative, and trend analysis techniques to interpret the acquired secondary data. Based on descriptive analysis, we analysed the main features that were migration flows, urbanisation rates, and rates of employment in each of the countries. The comparative study made it possible to assess how migration and urbanization affect the socio-economic development in different countries and exposed some similarities and differences between such geographical regions as Sub-Saharan Africa and Southeast Asia. We have determined the trend to consider how the level of urbanization, migration policies, and their long-term effects on the economy have developed during the past several decades. This comprehensive analytical method enabled a complete comprehension of the economic variables driving alterations in population and spatial dynamics.

Ethical Considerations

All the ethical standards were followed in this study because only public data sources of secondary type are used, that are published ethically. Each of them was publicly available or published by reliable institutions following ethical standards. Neither did the study involve contact to any person nor any primary data, thus addressing the problems of informed consent and data confidentiality

of personal information. Furthermore, strict citation standards were followed in an attempt to protect intellectual property as well as integrity in the academic context.

Results

Two phenomena that only sketch the surface of the claims of migration and urbanization being beneficial to the economy, the analysis of the secondary data of China, India, Malaysia, Zambia, and Zimbabwe presents numerous examples.

- 1. Slowing Rural-to-Urban Migration:** Internally, migration has traditionally been considered one of the driving forces behind urbanization; however, in most countries, it has considerably reduced. As the urban infrastructure continues to expand and evolve, the outflow of people in rural areas to urban areas has slowed down in the past years in China. India and Malaysia have exhibited analogous trends. Historically, numerous individuals departed from rural regions; however, recent data indicate that net migration has either stabilized or declined. This alteration indicates that the prospect of metropolitan opportunity is increasingly unfulfilled for migrants unable to secure employment.
- 2. Migration-Dependent Urbanisation in Africa:** In Sub-Saharan Africa, particularly in Zambia, urbanization has primarily resulted from migration to cities rather than the organic increase of urban populations. Crankshaw and Borel-Saladin examined the data provided by Zambian census records and identified migration as the main actor of urban growth between the years 1990 and 2010. The economic recession of the 1990s has stimulated a situation of counter-urbanization where some people moved to rural areas in the quest to find food. This tendency explains how economic grounds may be weak or even unstable, thus affecting the urbanization as a migration impact.
- 3. Peri-Urban Growth and Informality in Asia:** Due to the rapid expansion of the urban centres in the Asian region, the so-called transitional zones are also being developed, which are peri-urban areas located on the fringe of the cities. Such areas, especially that mostly seen along the outskirts of the Chinese and Indian towns would mostly grow without proper planning, infrastructure, and the availability of formal jobs. The two difficulties they have to deal with are the high population coupled with low economic status, which is marked with poor housing, few state provisions, and poor employment sectors.
- 4. Selective Urban Growth and Inequality:** Urban development is increasingly discerning. Cities of the world, like Shanghai, Kuala Lumpur

and Lusaka are getting an increased investment and the construction of more infrastructures, leaving the small cities and the villages in an economic stagnation. This selective growth increases concentration of wealth and opportunities in particular local areas, thus increasing urban inequality and blocking urban poor towards redistribution of wealth. Smaller cities and mid-size towns, which are an inevitable part of the region, are not very dynamic in their economy, and therefore, have little to offer in terms of attracting and keeping qualified staff.

5. **Exclusionary Urban Policies:** Institutional barriers do not allow migrants to participate in the economy completely. In China, the household registration system (hukou) persists to hinder the right to access of the migrants in the urban regions including the right to education, medical care, and shelter. The closed-city laws as well in Indonesia make it so that new migrants are unable to move to heavily populated cities. The highly strict rules intensify the dual nature of an urban system, leaving the migrants on the outskirts of the society and the economy as they provide labour. This diminishes their capacity to facilitate economic growth.
6. **Decoupling of Urbanisation and Economic Growth:** Many people are defying the conventional understanding of urbanization as a factor that implies economic growth. Urbanization in the regions under analysis such as China, Malaysia, Zambia, and Zimbabwe has not always led to relative increases in GDP, employment or reduction of poverty. The growth of cities, often determined by infrastructure levels and population density, does not always lead to higher formal employment, inclusive growth and welfare conditions. This split is a big problem to models of development that employ growth in the urban area as a proxy of economic progress.
7. **Circular Migration and Labour Market Volatility:** Individuals are increasingly transitioning between rural and urban locales, particularly in response to economic fluctuations. This phenomenon is referred to as circular migration. In cases of recession what happens is that the migrants go back to the rural areas due to lack of jobs or the fact that it is too expensive to live in cities. This volatility makes planning in the urban setting and the provision of services difficult, lowers the long-term productivity, and destabilizes labour markets. Circular migration complicates the measurement and planning of urban population changes, hence diminishing the efficacy of interventions.

Executive Summary

The paper will discuss how migration, urbanization and demographic changes affect the economy of some of the regions of Asia and Africa with special focus

on China, Zambia, Zimbabwe, Malaysia, and other fast urbanizing countries. The paper reviews the literature of the constantly held belief that the economic prosperity brought about by the migration triggered urbanization will be a long and lasting process. This is achieved by use of secondary information such as peer-reviewed articles, national census and international development reports, and government policy literatures.

The economic theory and the development policy has in the past agreed that rural-urban migration assists the structural transformation of the society. It is assumed that migrants move out of low productivity in the rural areas to high productivity industries in the urban, thus boosting the national production and even improving the health of the people. However, the information presented in this research indicates that this classical paradigm is inaccurate.

The primary findings indicate that the migration of individuals from rural regions to urban centers is decelerating on both continents. Despite the rapid urbanization in China, India, and Malaysia, the internal migration rates inside these nations have remained constant. In Zambia and Zimbabwe, urbanization has traditionally relied on net migration; nevertheless, economic downturns have prompted counter-urbanization, as migrants revert to rural areas due to deteriorating work opportunities and living circumstances. These figures show that people are quite willing to move in case when the economy is stable, there are jobs, and departure to the metropolitan facilities is possible.

It is notable that a considerable trend is the growth of the peri-urban communities, especially in Asia, where reserves of urban spaces expand within the outskirts of available cities. The regions traditionally lack proper services, have a lot of informal housing, and are limited in employment opportunities. In this context, labour markets have increasingly adopted an informal structure, particularly affecting migrant workers. The anticipated economic advantages of migration diminish when individuals are unable to secure permanent employment, social security, or opportunities for advancement.

The study further shows how the use of exclusionary policies works within urban localities. Hukou system of China, closed-city regulations of Indonesia are good examples of schemes preventing migrants to have access to housing, formal work and social amenities in the cities. These regulations impede migrants' ability to contribute to the economy and establish distinct urban economies; wherein numerous workers operate outside formal channels. This results in individuals underutilizing their skills, inadequately designed urban areas, and persistent inequity within cities.

The case with Malaysia is more complicated: cities in it have been experiencing steady growth, but migration in cities is no longer the main cause of their growth but rather natural population increase due to it. Despite this change, however, social and economic inequality has not been wiped off

the pages. Increasing geographical segregation is an issue for inclusive development.

The study concludes that migration and urbanization are no longer guaranteed mechanisms for economic enhancement. These processes are becoming ever more dominated by policy constraints, economic volatility and inequitable urban growth patterns. The long-established methodologies should be reconsidered in order to ensure the maximum benefits of migration-induced urbanization by governments and policymakers. Investing in inclusive city design, social security nets, formalizing workforce, and using the specific and disaggregated data to guide decision-making are all crucial to it. Evidence-based and collaborative policies are the only way by which the cities located in the Global South can attain sustainable, equitable, and economically resilient urban futures.

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Sustainable Trade Through Legal Interoperability: The Hainan and Asean Free Trade Zone Experience

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Abstract

This paper analyses the complexity in the pairing of legal cooperation and prolonged economic growth in the context of the Hainan Free Trade Port (HFTP) and the Southeast Asian Nations (ASEAN). HFTP is a potential platform to develop trade, get large sums of foreign direct investment (FDI) and economies with cross borders. It is placed at the center of the economic growth in China and the ASEAN regional integration. The paper explores the opportunities of harmonized legal systems to support customs operation, mitigate the regulatory friction and to have consistency in the enforcement of regulations across the borders. It does this by making use of secondary data such as trade statistics, bilateral treaties, the existence of formal legal government structures. This explores how coordinated legal changes would enable the creation of the digital economy, minimise company uncertainty, and increase investor conviction in the light of the transforming nature of the subsequent economic environment following the RCEP. Convergence in law is considered to be an important aspect in the effort to understand the market access, facilitation of dispute resolutions and the enduring trade relations. It is highlighted in the paper that unless proactive legal harmonization is sought, even free market instances like HFTP face the potential of legal disputes which will potentially impede long term, open, and sustainable development across the Asia-Pacific region.

Keywords: The Hainan Free Trade Port (HFTP), Regional Comprehensive Economic Partnership (RCEP), foreign direct investment (FDI) Free Commerce Zones (FCZs), Environmental, Social, and Governance (ESG), The Association of Southeast Asian Nations (ASEAN), Free Trade Zone (FTZ)

The Case Scenario

The Hainan Free Trade Port (HFTP) has been an issue that the President of China, Xi Jinping, has consigned to have a key role in the vast economic reform that the nation has been on. The aim is to allow transparency and international trade. HFTP is situated in South China Sea to be the pipeline of China to the ASEAN block. It makes it an important element of the long-term economic plan of Beijing towards the region and the world. This case scenario is after the Regional Comprehensive Economic Partnership (RCEP) which has been described as landmark trade agreement that has facilitated increased regional integration among the 15 member countries to which China and all countries in the ASEAN community belong. HFTP is observed to have much relation with the economy of Southeast Asia especially Vietnam, Malaysia, Singapore and Thailand. This makes it a very good platform to improve on trade, investment and cooperation on regulation. The ASEAN countries, which already manage advanced Free commerce Zones (FTZs), provide established frameworks for liberalized commerce, effective customs procedures, and organized legal systems. The synergy of HFTP experimental reforms with the existing structures of ASEAN in the post-RCEP scenario highlights the need for proliferation of legislations that serve as a catalyst of eventual growth. This has been a dynamic economic environment in a bid to achieve an efficient custom regime, cross-border legal harmonisation and increased accessibility to the market and therefore, it can be said that it would be prudent to make HFTP part of the dynamics in this burgeoning trade system in Asia-Pacific.

Introduction

With the ever-connected global economy, the idea of controlling trade and investment regulations has come in handy with ensuring economic stability, transparency of governance and sustainability in the longer run. Located on an island of the same name (the Hainan descending order), the Free Trade Port of Hainan (HFTP) opened its doors in 2018 and is the most ambitious push made by China toward the creation of a free trade zone that is competitive on the global level, which fosters open markets, lower tariffs, and innovation amongst businesses and organizations. However, if no firm structure of legal coordination is maintained, especially in cross-border relations with adjacent nations, the attempt to liberalize in these forms can be associated with the break-up of regulation, lousy compliance and the augmentation in trading conflicts or environmental concerns. Many ASEAN states have run thriving Free Trade Zones (FTZs) over the past decades and have associated institutional models together with best laws that could support structural changes in HFTP. These can be depicted by specific laws on customs, clearly specified in the means of solving disputes and being highly demanding in sustainability. HFTP is also targeting to

boost relations with the Southeast Asian countries through the regional comprehensive partnership (RCEP). This paper discusses how the legal partnership could also benefit the connectedness of the regional economy, resilience, and inclusiveness in the region. China and ASEAN may boost cross-border business trust by harmonizing trade regulations, investment policies, and environmental legislation, thereby establishing a new benchmark for sustainable economic governance in the Asia-Pacific region.

Need and Significance of the Study

A massive amount of research has been done on the nature of trade liberalization, investment trends and how Free Trade Zones (FTZs) work; however, a sizeable gap still exists in the research on the economic impact of legal cooperation in cross-border FTZs especially in the Asia-Pacific region. The lack of comparable legal quality constitutes a major threat to long-term economic integration with the internationalisation of value chains and increased awareness by investors of law-related effect on their investments. Firms with their operations in multiple jurisdictions like Hainan and ASEAN have to deal with high transaction costs, legal uncertainty and difference in compliance requirements. These act as a hindrance to foreign direct investment (FDI) and reduce the level of commercial efficiency. Moreover, regions should not only liberalize their laws but should also reform their legal systems to make the business environment transparent, equitable and accountable in a time where investment decision depends greatly upon sustainability and governance level and rule of law. The Regional Comprehensive Economic Partnership (RCEP) highlights the importance of studying that issue. It necessitates member states to establish more uniform laws and institutions. The objective of this study is to examine how legal cooperation might serve as a strategic instrument to optimize economic reforms, facilitate compliance, attract responsible investment, and establish a robust, sustainable regional trade framework. It accomplishes this by examining the convergence of law and economics.

Review of Literature (Overview of Relevant Studies)

Most of the literature about the Free Trade Zones (FTZs) was about how these areas can bring economic prosperity through opening trade, minimized tariffs, maximal processes involved in customs as well as a significant tax breaks. Such seminal works as Medlik (1993) and Forsyth (1995) demonstrate the application of Free Trade Zones (FTZs) as economic tools used by governments to attract Foreign Direct Investment (FDI), boost industrialization, and enable corporations to join the global supply chains. A study has been done on how Singapore, Malaysia, Thailand and Vietnam have been using the Free Trade Zones (FTZs) in order to maximize on their competitive advantage as well as facilitate efficient

trade activities within the ASEAN region. The Jurong Island and the Changi Free Zone of Singapore are praised to have transparent rules and a strong logistic infrastructure (ASEAN Secretariat, 2021). On the same note Malaysia Port Klang and Penang regions have regulations that are investor friendly. The Eastern Economic Corridor of Thailand and the Saigon Hi-Tech Park have become highly concentrated hubs of manufacturing and exports of technology in their respective countries.

The tourist industry has been of great concern as it contributes to free trade zones in a particular economy but it has not received much attention regarding its capacity to have more environmental sustainability especially with the small and medium sized business (SMEs). According to scholars such as Forsyth (1995), tourism companies tend to pass the responsibility of environmental disturbances to the governments of countries where they establish their services making it difficult to hold the companies liable. Trade associations, which can enhance legal understanding and advocate for sustainable practices, are similarly underutilized. A survey of 48 tourism trade organizations in the UK revealed that a minimal number were actively engaged in sustainability initiatives. The majority employed self-reporting techniques and unimplemented rules of conduct instead of enforceable legal or regulatory procedures.

Theoretical Frameworks

A variety of economic and legal concepts elucidate the functioning of legal cooperation within trade zones and its implications. Institutional economics defines that legal systems marked by clarity, predictability, and enforcement keep transaction costs low, encourage trust and boost the performance of the markets (North, 1990). The reason is important in Free Trade Zones because the provisions touching on customs, taxation, protection of investments, and dispute settlement should be unequivocal and consistent to ease cross-border businesses. In this sense, the legal coordination is needed in order to make full use of the economic potential of FTZs, especially in the multidimensional and cross-jurisdiction conditions like ASEAN-China trade.

The principle of sustainable governance means that there is the need to integrate social, environmental, and economic requirements in business and commerce. It argues in favour of regulations to help make FTZs be part of economic success of the country and abide by the international standards on the protection of labour rights, environment and business ethics. These concepts are, however, usually applied in isolation: economic text tend to discuss the quality of the institutions, or the extent of trading flows without referring to the legal details, whereas legal text, often, never refer to any criteria relating to either sustainability or to economic aspects, in their analysis.

Research Gaps

Extensive research exists on FTZs; nonetheless, significant gaps remain, particularly for HFTP and ASEAN:

- **Insufficient Legal Comparative Studies:** While extensive research exists on FTZ models in ASEAN from policy and economic perspectives, there is a paucity of studies comparing their legal frameworks to China's new HFTP model. Most of the literature has failed to look at the effects that inequalities in the investment law; contract enforcement, and dispute resolution procedures have on international business and investor confidence.
- **Digital Trade and Regulatory Lag:** Digital economy studies in Free Trade Zones accept the view that blockchain technologies, artificial intelligence, electronic commerce platforms have revolutionized business processes. Digital innovation is ahead of the rate at which the law can be updated and this means a lag in regulations. There is a lack of research on how the Free Trade Zone (FTZ) can successfully integrate digital legal systems, therefore improving the cross-border effectiveness of electronic-commerce, digital banking, and regulatory frameworks of cybersecurity systems.

Summary of the Literature & Major Observations

The constant reviewed current surveys show ASEAN states are making good use of Free Trade Zones (FTZs) to boost their economic performance through trade liberalisation, customs acceleration, and investment incentives in very specific sectors. Countries like Singapore, Malaysia and Vietnam have set perfect models of Free Trade Zones with a sound infrastructure and regulations that are favourable to the investors. It is important to appreciate that laws are different in different regions. Lack of standardised norms and rules especially in the area of dispute settlement, investment protection, environmental adherence and electronic governance is a major hindrance to bilateral trade and Foreign Direct Investment (FDI) stability. The lack of consistency creates problems to the firms entering the market with operations across borders and also makes the form of long-term investment far less attractive because the legal risk and uncertainty is now high. The research indicates a significant deficiency in empirical studies linking legal interoperability to sustainable outcomes in Free Trade Zones (FTZs). Numerous economic performance indicators exist; however, there is insufficient data about the impact of various legal regimes on environmental protection, ethical labour practices, and sustainable resource management. This is particularly applicable to small and medium-sized enterprises (SMEs) and tourism businesses prevalent in free trade zones (FTZs).

Objectives

- To examine the impact of legislation on commerce and foreign direct investment (FDI) within the HFTP–ASEAN region.
- To identify the impediments to legal harmonization and propose economically viable solutions.
- To examine the role of digital economy legislation and compliance frameworks in sustaining growth within Free Trade Zones.
- To examine the economic impacts of legal modifications in Hainan and juxtapose them with those in ASEAN Free Trade Zones such as Jurong Island (Singapore) and Port Klang (Malaysia).

Methods

Participants

This study involves no direct participants as it exclusively analyses secondary data. Polls, interviews, focus groups and observational studies did not occur. No individuals had to be enlisted thus there was no need to seek their consent, their demographics had to be defined. This study primarily focuses on analysing and interpreting existing economic, legal, and institutional documents and databases.

Method of Data Collection / Assessments

We obtained the information for this investigation by examining publicly accessible secondary sources. They included official publications like Hainan Free Trade Port Law (2021), laws of the Regional Comprehensive Economic Partnership (RCEP), governmental entities in the report of trade and investment. The main magazines used were the Ministry of Commerce of the People Republic of China (MOFCOM), ASEAN Secretariat, international trade observatories and economic performance bulletins. Also, scholarly academic journals, policy whitepapers, and case study reports were deployed to investigate how legal procedures have transformed and how an open trade-liberalization policy and foreign direct investment (FDI) affect them. The analysis was enhanced by data from global FDI databases and trade organization websites, which provided further insights into regional integration and sustainability initiatives.

Procedure

The procedure employed a multi-phase archiving technique. Initially, we compiled a list of economic and legal papers pertinent to the objectives of this study. Topics covered in the texts majorly dealt with Legal coordination, trade policy and sustainability within Free Trade Zones. The sources were checked with respect to credibility, source, and authorship so as to make sure that the research is not spoiled with bad sources. We meticulously examined legal

documents from HFTP and various ASEAN, FTZs to identify areas of consensus, divergence, or ambiguity. These laws were later pitted against economic indices including volumes of trade and inflows of foreign direct investments with focus on areas of adjustment linked to policy adjustments. The data was put in a systematic order in order to explain temporal differences and institutional responses and made to facilitate wholesome comparison between jurisdictions. No direct interventions or fieldwork were conducted; all procedures adhered to the protocols for desktop research.

Data Analysis

We examined the data obtained by qualitative content analysis and descriptive statistics approaches. Thematic coding was applied to textual materials to identify prevalent legal and economic tendencies, such as regulatory alignment, institutional deficiencies, and sustainability allusions. We utilized tables and graphs to illustrate temporal variations in trade quantities, FDI inflows, and the development of legal instruments. The emphasis was on identifying significant legal occurrences and correlating them with economic transformations in the HFTP and ASEAN FTZs. The research strategy excluded econometric modelling, regression analysis, and predictive simulations as it aimed to avoid identifying causal relationships. It was rather interested in applying its knowledge base to understand and situate patterns.

Ethical Considerations

There were no issues regarding ethical treatment of human participants, non-coercive consent, or privacy since the study did not involve use of primary data. All these materials were authentic scholarly, governmental or institutional sources. The text was written according to the scholarly standards and avoided plagiarism by using proper sources and references throughout the article. The data sets were obtained at free websites allowing to use them both in research and in educational purposed. Academic integrity, transparency and proper use of intellectual property principles were complied with during the research.

Results

HFTP's Economic Performance (2023)

The Hainan Free Trade Port (HFTP) has shown positive economic development in 2023 and this will definitely establish the importance of the HFTP to the economy of the region and internationally, in general, to the Chinese economy. According to the reports of the Ministry of Commerce, the total trade volume of HFTP reached CNY 231.28 billion with an increase of 15.3 percent compared with the previous year. It went up as a part of increased trading with nations that were included in the Regional Comprehensive Economic Partnership (RCEP) and

produced CNY 80.09 billion growth, which was 37.9 percent more compared to the previous year. The level of foreign direct investment (FDI) is also remarkable since HFTP attracted USD 3.88 billion, which is a high 104.9 growth and far ahead of the country average. This is an indication that the port is a good source of investment. The data indicates that the legal and economic modifications implemented by the HFTP are significantly impacting the economy, establishing it as one of Asia's premier Free Trade Zones.

Digital Economy Growth

The HFTP digital economy has become an important factor that drives the development, which is consistent with the national drive to attain innovation and integration of the region in its digital space. The region registered more than 52,000 serviced internet enterprises in 2023 with a cumulative digital economy revenue of above CNY 140 billion. These tech firms include fintech, internet shopping, transportation, cloud service, and artificial intelligence technology. HFTP also improved its online connection in the region by initiating the two new submarine communication cables connecting it directly to the ASEAN countries. This better infrastructure enables safe transmission of information and communications, thus providing a boost to e-commerce and online services between the Hainan and Southeast Asian economies. The above additions show how the physical infrastructure, regulatory framework and emerging technology have synergistic properties to promote sustainable economic growth.

Legal Framework Innovations

The changes in the legislations have made HFTP more credible and transparent in its functions as well as rules. A big step was the Market Access Commitment System (2022). It established a systematic legal framework to facilitate company operations and enhance compliance procedures. This strategy focuses on risk-related inspections, which focuses the level of regulatory control on the risk posed by the activities of companies. It further penalizes those persons who contravene the laws with fines which are an amount of 10,000 yuan to 100,000 yuan. This compels people to look again at the violation of rules and still be fair to enterprises. The reform supports interdepartmental cooperation and allows administrating separately, thus achieving administrative efficiency and responsiveness of agencies. These legal tools correspond with the ASEAN Bilateral Investment Treaties (BITs) and customs protocol, thus laying the way to trade and an improvement in the legal complementarity among regional partners. This harmonization minimizes transaction costs and legal complexities and at the same time make investors have more courage considering the predictability and clarity of law procedures.

Discussion

The Hainan Free Trade Port (HFTP) is discussing the feasibility of economic development, which is carried out by a flexible and comprehensive legal system that allows promoting the growth of trade activities and encouraging foreign direct investment (FDI). The high trade and investment growth in 2023 implies that the institutional reforms (like the Market Access Commitment System) can help enterprises to enter into the market, provide regulatory predictability, and increase the confidence of the investors. All the above has proved that new acts, especially the ones that help to make compliance and interdepartmental cooperation easier is essential to the performance of the economy and the sleek work of corporations.

Nevertheless, the larger picture of the area is much more complicated. Despite the presence of efficient Free Trade Zones (FTZs) in many ASEAN countries, legislative cooperation with China, particularly regarding HFTP, remains inadequate. Various governments have significantly different policies in the domain of ensuring the safety of intellectual property, environmental laws, data processing, and the creation of a virtual juridical framework. As an example, Singapore has rather strict rules of intellectual property and advanced digital protocols, whereas the two other countries in the ASEAN, Vietnam and Indonesia, are living in a less-established system. This inconsistency does not only increase the cost of operations but also makes it hard to overcome the level of disputes and enforce the law across borders.

Most of the trade associations within the local areas have missed the mark as the implementers or providers of sustainability in the tourism industry and small businesses. These groups usually depend on voluntary norms of conduct and they have no legal or financial competencies to supervise or enforce the environmental norms. Therefore, tourism industry, which relies heavily on environmental protection, is not eager to turn toward the adoption of sustainable practices. Inaction is worsened by lack of awareness on the part of the customer on the regulatory standards and eco certification, which makes changes difficult on the part of the enterprise.

Further comprehensive and deep legal collaboration among HFTP and ASEAN economies is necessary in order to transform the reactive regime of compliance into a proactive one of sustainability. This could involve international legal bodies forming universal regulatory norms, uniform certification methodologies on environmental and digital compliance, as well as some form of a public-private portal supplying small and medium-sized companies with legal materials and training strategies, in addition to self-evaluation techniques. Proper attention should be paid to the necessity of harmonizing digital commerce, cybersecurity, and environmental protection standards in the fast-growing environment of digital globalization. Such integrated legal frameworks would facilitate trade and

embed sustainability as a fundamental aspect of company operations, ensuring that economic liberalization yields enduring social and environmental advantages.

Overall, HFTP's legal structure has functioned effectively domestically, however it requires integration with ASEAN's legal systems. The region requires legislative innovation and regional harmonization to achieve its full potential. These modifications must to be grounded in more than mere economic objectives; they should also reflect shared commitments to sustainable development and governance based on established rules.

Executive Summary

This paper will review the possible cooperation between the Hainan Free Trade Port (HFTP) and Free Trade Zones (FTZs) to sustainable development in Southeast Asian Nations (ASEAN). The present research explores the significance of law system in facilitating trade and mobilizing investment by stating that globalization does not simply focus on cutting tariffs but also refers to such issues like environmental resistance, integration into the digital economy, and regulation transparency. The research relies exclusively on secondary data sources, including trade performance figures, legal policy documents, international whitepapers, and ASEAN economic reports. These sources enable us to compare and qualitatively understand the functioning of legal interoperability throughout the Asia-Pacific region.

The findings indicate that HFTP's regulatory modifications, particularly the Market Access Commitment System initiated in 2022, have significantly enhanced institutional efficiency and attracted increased foreign direct investment (FDI). In 2023, the Port experienced a 15.3% increase in total trade (CNY 231.28 billion) and a 104.9% surge in foreign direct investment (USD 3.88 billion). The Port's affiliations with Regional Comprehensive Economic Partnership (RCEP) nations were evident in the 37.9% rise in trade volume with member states. This indicates its increasing significance as a regional economic center. Simultaneously, HFTP's digital economy, encompassing over 52,000 online enterprises and over CNY 140 billion in revenue, exemplifies China's objective of establishing a technology-driven trade ecosystem.

The report identifies legal fragmentation as a significant barrier to enhanced cross-border integration with ASEAN economies, notwithstanding the potential benefits. Inconsistent regulations in critical domains like as environmental standards, data governance, intellectual property protection, and customs procedures diminish corporate efficiency and hinder the development of trade ties. According to the poll, the trade associations and SMEs especially those in the tourism sector, often lack the legal expertise, power or incentive to carry out the sustainable practices. Underutilized voluntary guidelines and eco-

certifications diminish adherence to regulations rather than facilitating significant transformations.

The discussion suggests a complex approach to harmonization of laws in order to fill the gaps that exist. The major implications are to initiate the coordination councils of law at a regional level, use the cross-border programs of law education and introduce a cross-border norms of enforcing sustainability. The approaches will improve the uniformity of trade laws and help small and medium enterprises (SMEs) and trade bodies to identify the long-term economic goal of sustainability. The study supports the usage of digital tools of governance, new types of synchronized cyber regulations, and online customs declarations to meet the fast-changing digital trade environment.

In conclusion, our study demonstrates the significance of cohesive legal frameworks within trade ecosystems to facilitate ethical, efficient, and future-oriented commerce. As HFTP and ASEAN advance towards economic integration under the RCEP framework, establishing legal collaboration as a permanent component of trade zones will be essential for transforming them from competing silos into catalysts for sustainable globalization.

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FinTech and the Digital India Vision: Catalysing E-Commerce Growth and Startup Innovation for Viksit Bharat 2047

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Abstract

This research paper explores the transformative role of FinTech in advancing India's Digital Vision and accelerating the goals of Viksit Bharat 2047. The study highlights how financial technology is revolutionizing the e-commerce landscape and strengthening the startup ecosystem. Using secondary data and qualitative content analysis, the paper identifies key trends, innovations, and policy supports that position FinTech as a catalyst for inclusive economic growth. With a focus on current statistics, policy interventions like UPI, ONDC, and Startup India, and the changing behaviour of digital consumers, this research provides a roadmap for harnessing FinTech to achieve long-term national development objectives.

Keywords: FinTech, Digital India, Viksit Bharat 2047, E-commerce, Indian startups, Financial Inclusion, Digital Payments, Innovation Ecosystem

Important Definitions

FinTech: Technology-driven financial services that enhance delivery, accessibility, and innovation in banking, lending, investing, and payments.

Digital India: A flagship Government of India initiative aimed at transforming the country into a digitally empowered society and knowledge economy.

Viksit Bharat 2047: A national vision to make India a fully developed economy by the year 2047, with key goals across infrastructure, digital economy, startups, sustainability, and inclusive growth.

E-commerce: The buying and selling of goods and services using the internet, and the transfer of money and data to execute these transactions.

Startup: A newly established business, often in the technology or innovation sector, with high growth potential and disruptive business models.

UPI (Unified Payments Interface): A real-time payment system developed by NPCI facilitating inter-bank transactions.

ONDC (Open Network for Digital Commerce): A government initiative to democratize digital commerce and break platform monopolies.

Objectives of the Study

- **To analyse the role of FinTech in enhancing digital financial inclusion.** Financial inclusion is a cornerstone for equitable growth, and FinTech platforms offer scalable solutions for underserved populations in India.
- **To examine how FinTech is transforming the e-commerce ecosystem in India** FinTech solutions like BNPL (Buy Now Pay Later), digital wallets, and embedded finance are integral to digital commerce expansion.
- **To assess the contribution of FinTech in supporting Indian startups:** Access to credit, digital payments, and financial automation provided by FinTech firms reduce barriers to entry and foster innovation.
- **To align FinTech-driven development with the goals of Viksit Bharat 2047.** Understanding how FinTech fits into national development priorities will enable policymakers to optimize its regulatory and infrastructural support.

Review of Literature

RBI (2023) outlines current trends in Indian banking, emphasizing how digitalization has accelerated due to FinTech advancements and the proliferation of affordable smartphones. Startup India (2023) provides insights into the growth of Indian startups, noting FinTech's major role in facilitating access to funding and markets through streamlined processes and a democratization of capital.

NITI Aayog (2022) proposes a strategic framework to align FinTech with national goals like financial inclusion and digital empowerment by 2025. The report highlights plan to establish specialized regulatory sandboxes and innovation hubs to foster synergies between startups and institutions. World Bank (2022) highlights how digital financial services can close economic gaps in developing economies through cost-effective and scalable platforms, provided issues of network connectivity and data privacy are adequately addressed.

NASSCOM and PwC (2023) document innovation trends in the FinTech sector, especially in payment infrastructure, lending mechanisms, and Insurtech. Alternative data and advanced analytics are transforming risk assessment and access to credit. MeitY (2023) describes the architecture and progress of ONDC, which enables open access and democratization of e-commerce for MSMEs. Initial results show promising participation from merchants and customers across the country.

EY India (2024) analyses Tier II and III city adoption of FinTech tools, showing

the deepening penetration of financial technology beyond urban centres as more non-metropolitan regions become well-connected. However, the gender gap in digital access remains sizable.

This qualitative and exploratory study relies solely on secondary data collected from government reports, academic journals, and industry whitepapers published between 2020 and 2025. Thematic content analysis and comparative analysis were used to identify patterns and synthesize insights related to the role of FinTech in India's evolving digital and entrepreneurial landscape.

Research Methodology

- **Approach:** Qualitative, Exploratory
- **Data Source:** Exclusive reliance on secondary data from scholarly journals, government reports, industry whitepapers, and verified statistics from 2020–2025.
- **Tools Used:** Thematic content analysis, comparative analysis, and policy document review.

Limitations of the Study

1. The study relies solely on secondary data, limiting primary insights from real-time stakeholders.
2. The FinTech industry is evolving rapidly, and data may become outdated quickly.
3. Certain policy impacts may not yet be visible due to the time-lag effect.
4. Regional disparities in FinTech adoption are not fully explored.
5. Limited focus on global benchmarks or comparisons with other developing economies.

Tables and Charts:

Table 1: UPI Transaction Volume (2020–2025)

| Year | Transaction Volume (Billion) |
|------|---------------------------------|
| 2020 | 2.0 |
| 2021 | 4.2 |
| 2022 | 7.1 |
| 2023 | 10.0 |
| 2024 | 13.0 |
| 2025 | 15.5 |

Table 2: Number of FinTech Startups by Year (2015–2025)

| Year | FinTech Startups |
|------|------------------|
| 2015 | 450 |
| 2016 | 580 |
| 2017 | 750 |
| 2018 | 910 |
| 2019 | 1150 |
| 2020 | 1380 |
| 2021 | 1620 |
| 2022 | 1950 |
| 2023 | 2300 |
| 2024 | 2700 |
| 2025 | 3100 |

Chart 1: Growth of E-Commerce Transactions Enabled by FinTech (2020–2024)

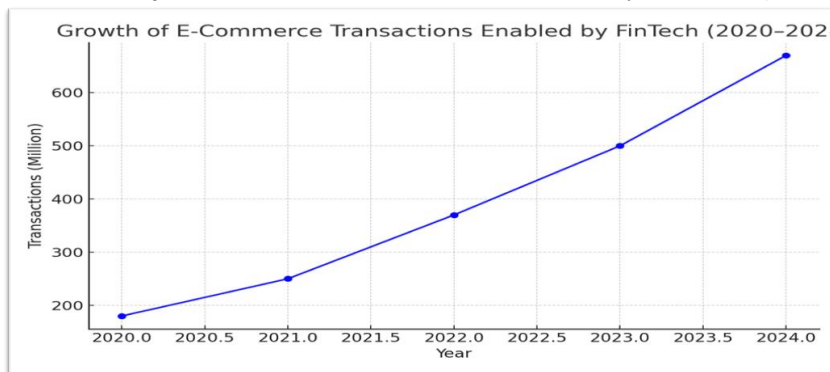
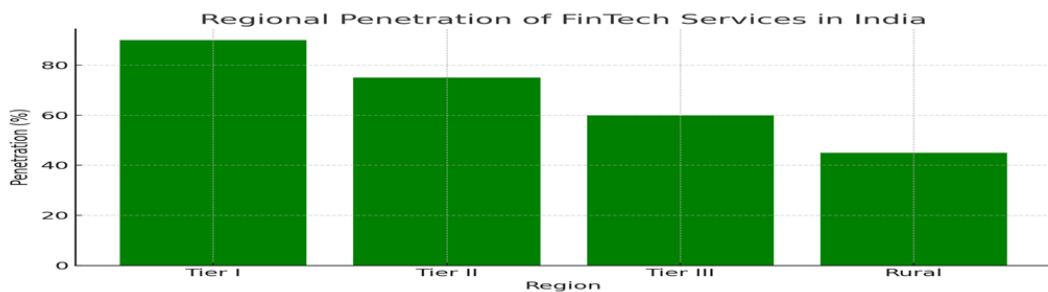


Chart 2: Regional Penetration of FinTech Services in India



(Interpretation of these charts is embedded within the discussion points.)

Discussion

1. FinTech as a Driver of Financial Inclusion

FinTech companies like Paytm, PhonePe, and BharatPe are simplifying financial services for the unbanked and underbanked. As per NPCI (2024), UPI transactions crossed 13 billion/month, with significant rural penetration. Through Aadhaar-enabled services and mobile wallets, FinTech bridges the urban-rural financial divide and supports goals of inclusive development in Viksit Bharat 2047.

2. Enabling Credit Access for Startups and MSMEs

Platforms like CredAble, Razorpay, and Lendingkart are easing credit availability for startups and MSMEs. As per SIDBI (2023), 65% of Indian startups cited FinTech as a major enabler of early-stage funding. Algorithm-based credit scoring and invoice financing bypass traditional bank constraints, crucial for startup scalability.

3. Boosting E-Commerce through Embedded Finance

E-commerce giants rely on FinTech to enhance consumer experience via options like BNPL, EMI, and one-click UPI checkout. According to Bain & Co. (2023), 74% of digital shoppers preferred platforms offering flexible FinTech solutions. This accessibility strengthens consumer trust and expands the digital market base.

4. Role of UPI, Aadhaar Stack, and Account Aggregators

The integration of UPI, Aadhaar, and DigiLocker provides a seamless digital infrastructure for FinTech. The launch of Account Aggregators (AA) further improves financial data sharing and lending efficiency. These pillars directly support the digital economy ambitions of Viksit Bharat 2047.

5. ONDC: Democratizing Digital Commerce

ONDC, launched in 2022, seeks to decentralize digital commerce by offering interoperability and open access. As per MeitY (2024), over 1.5 lakh sellers joined ONDC, 60% of them from Tier II and III cities. This opens markets for small sellers and aligns with FinTech inclusivity goals.

6. Government Support and Regulatory Framework:

Schemes like Digital India, Startup India, and FinTech Sandbox by RBI foster a conducive environment. The 2023 Budget also announced ₹1,500 crore for FinTech growth. These efforts align public policy with private innovation, reinforcing the Viksit Bharat agenda.

7. Rural and Tier II/III Penetration

FinTech is no longer an urban phenomenon. According to BCG (2023), over 45% of new digital payment users came from non-metro regions. Neo-banking, micro-loans, and agritech-FinTech hybrid models are empowering Bharat beyond metros.

8. Startups as Innovation Hubs for National Development

FinTech startups are hubs of innovation, offering tailored solutions in health, education, and agriculture financing. Their contribution to job creation and export revenue generation aligns with the GDP and employment goals of Viksit Bharat 2047.

Conclusion and Recommendations

FinTech plays a foundational role in achieving Viksit Bharat 2047 by fostering digital inclusion, entrepreneurial growth, and economic democratization. While challenges remain in terms of regulation and data privacy, the benefits significantly outweigh the risks. To sustain this momentum, the following recommendations are proposed:

- **Enhance digital infrastructure in rural areas.**
- **Promote public-private partnerships in FinTech R&D.**
- **Expand the FinTech Sandbox to include sector-specific innovation.**
- **Implement robust digital literacy programs.**
- **Facilitate faster integration of FinTech tools in government service delivery.**
- **Strengthen cybersecurity and consumer protection laws.**

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Assessing Consumer Perception towards Swiggy Using the UTAUT2 Model: Evidence from Delhi-NCR Region

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Abstract

Consumer behaviour has changed as a result of the growth of online meal delivery services, especially in cities like Delhi-NCR. This study looks at how behavioural intention to use the Swiggy app is influenced by UTAUT2 components (Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Hedonic Motivation, Price Value, and Habit), and how this intention affects actual app usage. According to the data, social influence has a considerable impact on behavioural intention, which is consistent with theories that highlight the importance of peer recommendations. On the other hand, it appears that Performance Expectancy, Effort Expectancy, Price Value, Hedonic Motivation, Facilitating Conditions, and Habit have low significance when it comes to behavioural intention. Furthermore, although if behavioural intention is a reliable predictor for actual utilization of apps. Its low R Square value suggests that it only accounts for a tiny percentage of the variation, underscoring the importance of other unaccounted-for factors. These results add to our knowledge of the factors influencing app usage and point the way for future investigations into the effects of other factors on online meal delivery services.

Keywords: UTAUT2 Model, Behavioural Intention, Swiggy App, Online Meal Delivery, Consumer Behaviour, Technology Adoption.

Introduction

India is not an exception to the extraordinary worldwide expansion of the online meal delivery (OMD) sector, which is led by Swiggy and Zomato. The OMD sector has grown rapidly, particularly in metropolitan areas like Delhi-NCR,

because to the ease of ordering food via mobile applications and evolving tastes of customers.

The post-pandemic demand for digital services and contactless delivery has expedited the uptake of such platforms (Mittal & Jain, 2021). To stay in the market and satisfy customers, businesses now need to know how consumers see OMD services in light of growing competition and technological improvements.

Among the most populated urban areas in India, Delhi-NCR, offers a distinct setting where customers look for quick, convenient, and high-quality meal delivery. In response to increasing demand, platforms such as Swiggy have expanded their menu of eateries, improved their smartphone interfaces, and guaranteed on-time delivery. Nonetheless, there are a wide range of intricate aspects that affect how satisfied customers are with these services. These elements include of performance, social influence, convenience of use, and the presence of favourable circumstances (Rai & Ahluwalia, 2022).

The Unified Theory of Acceptance and Use of Technology (UTAUT2) model, which has shown to be a useful framework for analyzing consumer behaviour in technology-driven contexts, is applied in this study to address these variables. In order to explain technology adoption and usage behaviours, the UTAUT2 model incorporates concepts such as performance expectancy, effort expectancy, social influence, and enabling factors (Venkatesh et al., 2012). According to recent studies, these structures have a big influence on customer satisfaction and adoption in the OMD industry (Bhatnagar & Singh, 2023). This study aims to objectively evaluate how these characteristics influence customer perception and the overall user experience, with a particular focus on Swiggy in the Delhi-NCR region.

Theoretical Framework

The theoretical basis for this study is based on the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) model, which gives a comprehensive approach to analyzing consumer behaviour in technology adoption. To describe the elements affecting users' behavioural intention to accept and utilize technology, this model includes seven fundamental constructs: Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Facilitating Conditions (FC), Hedonic Motivation (HM), Price Value (PV), and Habit (HAB). The purpose of this study is to elucidate the variables that affect consumer adoption and usage trends by analyzing these constructs in the context of the Swiggy app.

Key Terms and Definitions

Online Meal Delivery (OMD)

It describes the practice of placing an order for food via digital channels like websites or mobile applications, and having it delivered to customers' locations. This research looks at customer behaviour in the Delhi-NCR area in relation to OMD providers like Swiggy.

Performance Expectancy (PE)

According to Venkatesh et al. (2003), Performance Expectancy (PE) refers to the extent to which a person feels that utilizing the system would help them perform better. PE in this research refers to the consumer's belief that ordering meals from Swiggy would be more convenient and satisfying.

Effort Expectancy (EE)

"The ease associated with using a particular system or technology" is what Venkatesh et al. (2003) refers to as Effort Expectancy (EE). EE denotes in this study how user-friendly and simple users find the program to be.

Social Influence (SI)

According to (Venkatesh et al., 2003). "The extent to which individuals perceive that important others believe they should use the technology" is known as social influence (SI) In this study, SI takes into account how social media, family, and friends might affect a consumer's choice to use Swiggy.

Facilitating Conditions (FC)

According to Venkatesh et al. (2003), "the belief that the technical and organizational infrastructure supports the use of of the system" is one of the Facilitating Conditions (FC). When we talk about FC in relation to Swiggy, we're talking about the availability of both operational and technological support (such on-time delivery and customer service) as well as device compatibility and internet connection.

Hedonic Motivation (HM)

According to Venkatesh et al. (2012), hedonic motivation (HM) is the enjoyment experienced when utilizing a technological device. HM investigates how much pleasure users derive from utilizing Swiggy's services, such dining discovery and discount shopping, in this research.

Price Value (PV)

Price Value (PV) is the term used to describe how consumers weigh the app's perceived benefits against its price (Venkatesh et al., 2012). In this study, PV investigates how consumers evaluate the value of Swiggy offerings in relation to

their cost, taking into account discounts, delivery fees, and meal costs.

Habit (HAB)

"The degree to which individuals have learned to carry out behaviours on autopilot" (Venkatesh et al., 2012). Whether for convenience or habit, HAB investigates Swiggy users' regular usage in this research.

Behavioural Intention (BI)

According to Venkatesh et al. (2003), behavioural intention (BI) describes a user's desire or readiness to use a certain system or service. In this instance, BI represents a customer's propensity to use the Swiggy app according to the previously specified components.

Actual Use (AU)

The term "actual use" describes how often or in real life users of the Swiggy app utilize it. This study assesses the relationship between behavioural intention and actual app usage trends in Delhi-NCR.

Literature Review

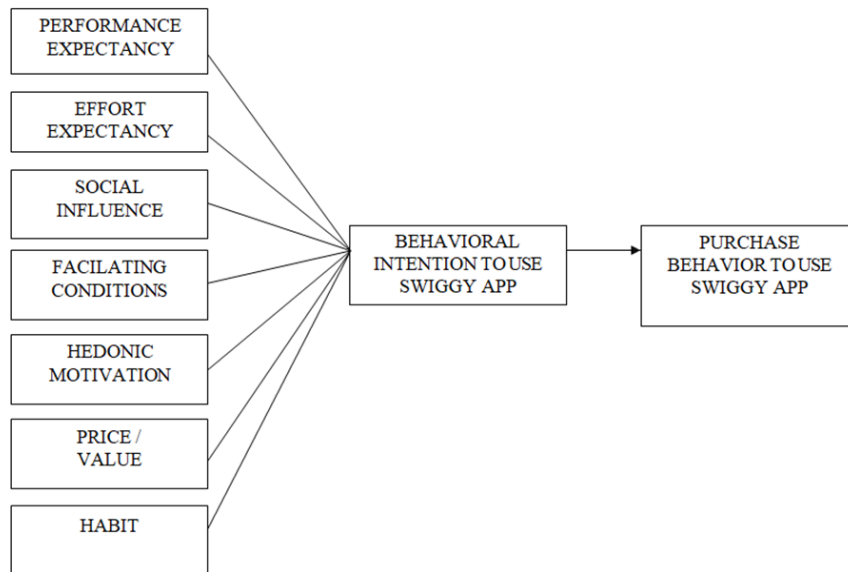
| Author(s) | Title of Study | Construct Taken | Findings |
|--|---|---|---|
| Venkatesh, V., Thong, J. Y., & Xu, X. (2012) | "Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology" | Performance Expectancy, Effort Expectancy, Social Influence, Hedonic Motivation, Price Value, Habit | Performance Expectancy and Hedonic Motivation significantly influence technology acceptance; Effort Expectancy and Habit also play important roles. |
| Limayem, M., Hirt, S. G., & Cheung, C. M. (2007) | "How Habit Limits the Predictive Power of Intention: The Case of Information Systems Continuance" | Habit | Habitual use of technology reduces perceived effort and increases user satisfaction. |
| Bagozzi, R. P., & | "Goal Setting and Goal | Hedonic | Enjoyment and pleasure from using technology |

| | | | |
|---|---|---|--|
| Dholakia, U. M. (2018) | Striving in Consumer Behavior” | Motivation | enhance user engagement and satisfaction. |
| Kim, S. S., Chan, H. C., & Gupta, S. (2020) | “Value-based Adoption of Mobile Internet Services: The Role of Customer Satisfaction and Loyalty” | Effort Expectancy, Performance Expectancy | Ease of use (Effort Expectancy) and perceived benefits (Performance Expectancy) are crucial for user satisfaction and continued use. |
| Xu, H., & Li, L. (2018) | “The Role of Social Influence in Technology Acceptance: Evidence from Online Shopping” | Social Influence | Social recommendations and societal norms significantly affect consumer behavior towards online shopping platforms. |
| Choi, S. Y., & Kim, J. H. (2018) | “The Role of Hedonic Motivation and Habit in Predicting the Use of Mobile Social Networking Services” | Hedonic Motivation, Habit | Hedonic Motivation and Habit significantly influence the use of mobile social networking services. |
| Lee, M. S., & Park, J. H. (2019) | “Determinants of Consumer Adoption of Food Delivery Apps: An Application of the UTAUT2 Model” | Performance Expectancy, Effort Expectancy, Social Influence, Hedonic Motivation | All UTAUT2 constructs, except for Price Value, significantly affect consumer adoption of food delivery apps. |

| | | | |
|-------------------------------|--|---|--|
| Yang, H., & Jolly, M. (2019) | “The Impact of Perceived Value on Consumer Loyalty: A Case Study of Food Delivery Services” | Price Value | Consumers’ perception of value for money impacts their loyalty towards food delivery services. |
| Liu, X., & Zhang, L. (2022) | “Exploring the Impact of Performance Expectancy and Effort Expectancy on Mobile Banking Adoption” | Performance Expectancy, Effort Expectancy | Performance Expectancy and Effort Expectancy significantly affect mobile banking adoption. |
| Gao, L., & Zhang, J. (2021) | “Understanding Users' Continuance Intention towards Mobile Payment Services: An Integrated Model of UTAUT2 and Flow” | Performance Expectancy, Effort Expectancy, Hedonic Motivation | Performance Expectancy and Hedonic Motivation are significant predictors of continuance intention towards mobile payment services. |
| Liu, J., & Li, X. (2020) | “The Impact of Social Influence on Consumer Behavior in Mobile Commerce: Evidence from China” | Social Influence, Habit | Social Influence and Habit are strong predictors of consumer behavior in mobile commerce. |
| Singh, A., & Sinha, P. (2022) | “Analyzing the Impact of Price Value and Hedonic Motivation on | Price Value, Hedonic Motivation | Price Value and Hedonic Motivation play critical roles in determining consumer satisfaction with online food delivery |

| | | | |
|------------------------------|--|--------------------------------------|--|
| | Online Food Delivery Services” | | services. |
| Zhang, Y., & Zhao, X. (2024) | “Investigating the Effects of Social Influence and Hedonic Motivation on E-Commerce Platforms” | Social Influence, Hedonic Motivation | Social Influence and Hedonic Motivation are significant predictors of user engagement on e-commerce platforms. |
| Chen, Z., & Huang, L. (2023) | “Examining the Role of Habit in Mobile Health App Usage” | Habit | Habit plays a critical role in the continued usage of mobile health apps. |
| Jiang, Y., & Wang, H. (2023) | “The Influence of Price Value and Habit on Mobile App Usage: A Longitudinal Study” | Price Value, Habit | Price Value and Habit both have long-term effects on mobile app usage. |
| Ahn, J., & Choi, M. (2017) | “The Effects of Hedonic Motivation and Price Value on Online Shopping Behavior” | Hedonic Motivation, Price Value | Hedonic Motivation and Price Value significantly affect online shopping behavior. |

Research Model



Source: Developed for this research

Hypothesis Formulation

Based on the above model and previous studies, the following hypothesis has been proposed:

H1: Consumers' behavioural desire to utilize Swiggy as their online meal delivery service is significantly influenced by Performance Expectancy (PE).

H2: Consumers' behavioural desire to utilize Swiggy as their online meal delivery service is significantly influenced by Effort Expectancy (EE).

H3: Consumers' behavioural desire to utilize Swiggy as their online meal delivery service is strongly influenced by Social Influence (SI).

H4: The behavioural intention of customers to utilize Swiggy as their online meal delivery service is greatly influenced by the Facilitating Conditions (FC).

H5: Consumers' behavioural intention to utilize Swiggy as their online meal delivery service is significantly influenced by hedonic motivation (HM).

H6: Consumers' behavioural desire to utilize Swiggy as their online meal delivery service is highly influenced by Price Value (PV).

H7: Consumers' behavioural desire to utilize Swiggy as their online meal delivery service is significantly influenced by habit (HA).

H8: Real purchasing behaviour toward Swiggy is highly influenced by behavioural intention (BI).

Research Methodology

Research Design

With a particular focus on Swiggy, this study uses a quantitative research approach to examine the variables influencing consumers' perceptions of online meal delivery services. The study examines how many elements, including performance expectation, effort expectancy, social impact, and enabling circumstances, affect customer satisfaction and behavioural intention to use Swiggy using the Unified Theory of Acceptance and Use of Technology (UTAUT2) model.

Sample Selection

One hundred from Delhi-NCR make up the study's sample. The snowball sampling methodology, a non-probability sampling strategy, was used to choose the participants. It involves current research participants recruiting potential new subjects from their social networks. This approach was selected due to its capacity to effectively reach a certain demographic that is familiar with online meal delivery services.

Data Collection

A systematic questionnaire was given to respondents in order to gather data. The UTAUT2 model's constructs mentioned above were the foundation for the questionnaire's design. In order to learn more about the respondents' age, gender, and frequency of use of online meal delivery, demographic questions were also added.

Tools used for Data Analysis

The following statistical instruments were employed in order to assess the gathered data:

To investigate the associations between the dependent and the independent factors, regression was used for this research. Correlation analysis is employed to evaluate the direction and strength of correlations between variables.

Testing for Reliability (Cronbach's Alpha)

To evaluate the survey instrument's dependability and internal consistency. For dependability, a Cronbach's Alpha value of 0.7 or above was deemed appropriate.

Data Analysis

Table 1: Reliability of the constructs used in the study

| Constructs | No. of Items | CROANBACH ALPHA |
|------------|--------------|-----------------|
| PE | 4 | .620 |
| BI | 4 | .702 |
| EE | 4 | .754 |
| SI | 4 | .560 |
| FC | 4 | .770 |
| HM | 4 | .677 |
| PV | 4 | .778 |
| HAB | 4 | .612 |
| UBI | 3 | .633 |

Reliability Analysis: Cronbach's Alpha was used in the reliability analysis to gauge internal consistency. According to George and Mallery (2003), the coefficients varied from 0.560 to 0.778, showing adequate reliability for exploratory research. Even lower alpha values in preliminary research can be deemed appropriate, according to Lance, Butts, and Michels (2006), proving the objects used were dependable and consistent.

Table 2: Pearson Correlation Matrix among Key UTAUT Variables

In the Study of Swiggy Users

| | | PE | BI | EE | SI | FC | HM | PV | HAB | UBI |
|----|----------|-------|-------|-------|--------|------|-------|--------|-------|--------|
| PE | Pearson | 1 | -.014 | .129 | .152 | .130 | -.001 | .235** | .017 | .025 |
| | Sig. (2- | | .862 | .108 | .058 | .102 | .987 | .003 | .834 | .757 |
| | N | 158 | 157 | 156 | 156 | 158 | 158 | 158 | 158 | 155 |
| BI | Pearson | -.014 | 1 | -.066 | .268** | .075 | .001 | -.072 | .132 | .242** |
| | Sig. (2- | .862 | | .415 | .001 | .347 | .993 | .367 | .098 | .002 |
| | N | 157 | 159 | 157 | 157 | 159 | 159 | 159 | 159 | 156 |
| EE | Pearson | .129 | -.066 | 1 | -.001 | .150 | .130 | .258** | -.072 | -.022 |
| | Sig. (2- | .108 | .415 | | .001 | .061 | .103 | .001 | .366 | .782 |
| | N | 156 | 157 | 158 | 156 | 158 | 158 | 158 | 158 | 155 |

| | | | | | | | | | | |
|-----|----------|--------|--------|---------|-------|--------|--------|--------|-------|-------|
| SI | Pearson | .152 | .268** | -.001** | 1 | .054 | -.025 | -.118 | .068 | -.075 |
| | Sig. (2- | .058 | .001 | .001 | | .502 | .755 | .140 | .399 | .356 |
| | N | 156 | 157 | 156 | 158 | 158 | 158 | 158 | 158 | 155 |
| FC | Pearson | .130 | .075 | .150 | .054 | 1 | .199* | .331** | .049 | .123 |
| | Sig. (2- | .102 | .347 | .061 | .502 | | .012 | .000 | .536 | .124 |
| | N | 158 | 159 | 158 | 158 | 160 | 160 | 160 | 160 | 157 |
| HM | Pearson | -.001 | .001 | .130 | -.025 | .199* | 1 | .252** | .170* | .012 |
| | Sig. (2- | .987 | .993 | .103 | .755 | .012 | | .001 | .031 | .886 |
| | N | 158 | 159 | 158 | 158 | 160 | 160 | 160 | 160 | 157 |
| PV | Pearson | .235** | -.072 | .258** | -.118 | .331** | .252** | 1 | .049 | .146 |
| | Sig. (2- | .003 | .367 | .001 | .140 | .000 | .001 | | .539 | .069 |
| | N | 158 | 159 | 158 | 158 | 160 | 160 | 160 | 160 | 157 |
| HAB | Pearson | .017 | .132 | -.072 | .068 | .049 | .170* | .049 | 1 | .027 |
| | Sig. (2- | .834 | .098 | .366 | .399 | .536 | .031 | .539 | | .734 |
| | N | 158 | 159 | 158 | 158 | 160 | 160 | 160 | 160 | 157 |
| UBI | Pearson | .025 | .242** | -.022 | -.075 | .123 | .012 | .146 | .027 | 1 |
| | Sig. (2- | .757 | .002 | .782 | .356 | .124 | .886 | .069 | .734 | |
| | N | 155 | 156 | 155 | 155 | 157 | 157 | 157 | 157 | 157 |

Source: ** Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis reveals a number of important connections between the components. Price Value (PV) and Effort Expectancy (EE) have a positive correlation ($r = 0.235$, $p < 0.01$) with Performance Expectancy (PE) and PV, respectively. ($p < 0.01$, $r = 0.258$). The importance of social variables on technology adoption is confirmed by the high association between Behavioural Intention (BI) and Social Influence (SI) ($r = 0.268$, $p < 0.01$) and Facilitating Conditions (FC) ($r = 0.242$, $p < 0.01$) (Venkatesh et al., 2003). Hedonic Motivation (HM) ($r = 0.170$, $p < 0.05$) and Use Behaviour (UBI) ($r = 0.027$, $p < 0.05$) are positively connected with Habit (HAB), confirming the findings of Brown & Venkatesh (2005) that habitual actions influence future usage. These associations are consistent with other studies on acceptability of technology (Venkatesh et al., 2012; Dodds et al., 1991).

Analysis The Effects of UTAUT Construct on Behavioural Intention (Bi) To Use Swiggy App

The model shown IN Table 3 shows a strong positive relationship ($R=0.71$ $R^2=0.5041$) between the variables, explaining 50.41% of the variance in the dependent variable ($R^2=0.5041$). The adjusted R^2 of 0.4999 confirms model reliability, and the standard error of 0.89621 indicates good predictive accuracy.

Table 3: "Model Summary: Relationship between UTAUT2 Construct and Behavioural Intention to Use Swiggy App"

| Model | R | R Square | Adjusted R Square | Std. Error of the estimate |
|-------|------|----------|-------------------|----------------------------|
| 1 | 0.71 | 0.5041 | 0.4999 | 0.89621 |

a. Predictors: (Constant), HAB, PE, FC, SI, HM, EE, PV

The ANOVA Table 4 below indicates the regression model strongly predicts behavioural intention (BI) with F-value of 2.208 and a p-value of 0.037, The regression sums of squares for the model, which explains some of the variance in BI, is 55. 578.The residual sum of squares is 521.363, showing the unexplained variance. The predictors significantly impact BI at a 5% significance level.

Table 4: ANOVA Summary for Regression Model Predicting Behavioural Intention (BI)

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|----------|------------|----------------|-----|-------------|-------|-------|
| 1 | Regression | 55.578 | 7 | 7.94 | 2.208 | .037b |
| | Residual | 521.363 | 145 | 3.596 | | |
| | Total | 576.941 | 152 | | | |

a. Dependent Variable: BI

b. Predictors: (Constant), HAB, PE, FC, SI, HM, EE, PV

The regression analysis reveals that Social Influence significantly impacts the behavioural intention to use the Swiggy app ($p < 0.05$), indicating that peer

recommendations and social factors are crucial. Other variables of UTAUT2 do not significantly affect this intention.

Table 5: Coefficients Table: Impact of UTAUT2 Constructs on Behavioural Intention to use Swiggy App"

| | | Unstandardized Coefficients | | Standardized Coefficients | | |
|-------|------------|-----------------------------|------------|---------------------------|--------|-------|
| Model | | B | Std. Error | Beta | T | Sig. |
| | (Constant) | 9.294 | 1.416 | | 6.566 | 0 |
| | PE | -0.045 | 0.058 | -0.064 | -0.767 | 0.445 |
| | EE | 0.01 | 0.054 | 0.016 | 0.187 | 0.852 |
| | SI | 0.181 | 0.061 | 0.249 | 2.949 | 0.004 |
| | FC | 0.056 | 0.055 | 0.086 | 1.011 | 0.314 |
| | HM | -0.019 | 0.07 | -0.023 | -0.272 | 0.786 |
| | PV | -0.057 | 0.059 | -0.087 | -0.955 | 0.341 |
| | HAB | 0.091 | 0.058 | 0.127 | 1.582 | 0.116 |

Analysis the effects of Behavioural Intention to Actual Use SWIGGY APP

Table 6: "Model Summary: Relationship between Behavioural Intention and Actual Use of the Swiggy App"

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|----------------------------|
| 1 | .242a | 0.059 | 0.052 | 1.12446 |

a. Dependent Variable: BI

The R value of 0.242 indicates a weak positive relationship between behavioural intention and actual use of the Swiggy app. With an R Square of 0.059, only 5.9% of the variance in app usage is explained by behavioural intention, suggesting that other factors influence app use. The adjusted R Square of 0.052 reflects a minor adjustment for predictors, and the standard error of 1.12446 shows prediction deviations.

Table 7: "ANOVA Table: Significance of Behavioural Intention in Predicting Actual Use of the Swiggy App"

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|-------|------|
| | Regression | 12.12 | 1 | 12.12 | 9.585 | .002 |
| 1 | Residual | 194.72 | 154 | 1.264 | | |
| | Total | 206.84 | 155 | | | |

a. Predictors: (Constant), BI

The outcomes of the ANOVA show that the regression model is statistically significant ($F = 9.585$, $p = 0.002$), indicating that behavioural intention significantly contributes to explaining the variance in actual Swiggy app use. Although the model is significant, the low R Square suggests that behavioural intention alone does not fully account for the variation in app usage, emphasizing the requirement for extra variables.

Table 8: Coefficients Table: Impact of Behavioural Intention on Actual Use of the Swiggy App"

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|------------|-----------------------------|------------|---------------------------|--------|-------|
| | B | Std. Error | Beta | | |
| (Constant) | 8.602 | 0.556 | 0.242 | 15.462 | 0 |
| 1 | | | | | |
| BI | 0.141 | 0.046 | | 3.096 | 0.002 |

The constant term ($B = 8.602$) is significant, representing the baseline level of app usage when behavioural intention is zero. The positive coefficient for behavioural intention ($B = 0.141$, $p = 0.002$) indicates that increased behavioural intention leads to higher app usage. The standardized Beta value of 0.242 shows a moderate effect, suggesting that while behavioural intention influences app use, it is not the sole factor.

Hypothesis Testing

| Hypothesis | Supported/Not Supported |
|---|-------------------------|
| H1: Consumers' behavioral desire to utilize Swiggy as their online meal delivery service is significantly influenced by Performance Expectancy (PE). | Not Supported |
| H2: Consumers' behavioral desire to utilize Swiggy as their online meal delivery service is significantly influenced by Effort Expectancy (EE). | Not Supported |
| H3: Consumers' behavioral desire to utilize Swiggy as their online meal delivery service is strongly influenced by Social Influence (SI). | Supported |
| H4: Consumers' behavioral intention of customers to utilize Swiggy as their online meal delivery service is greatly influenced by the Facilitating Conditions (FC). | Not Supported |
| H5: Consumers' behavioral intention to utilize Swiggy as their online meal delivery service is significantly influenced by hedonic motivation (HM). | Not Supported |
| H6: Consumers' behavioral desire to utilize Swiggy as their online meal delivery service is highly influenced by Price Value (PV). | Not Supported |
| H7: Consumers' behavioral desire to utilize Swiggy as their online meal delivery service is significantly influenced by habit (HA). | Not Supported |
| H8: Real purchasing behavior toward Swiggy is highly influenced by behavioral intention (BI) | Not Supported |

Findings Of the Study

The present study's results are consistent with other investigations that underscore the impact of social factors on consumer behaviour, particularly the notable influence of social influence on behavioural intention. Venkatesh et al. (2012), for instance, found that social influence significantly affects users' utilization and adoption of technology, emphasizing the role that peer recommendations have in

forming behavioural intentions. In a similar vein, the research conducted by Alalwan et al. (2017) shown that, in the context of mobile applications, social influence is a crucial factor in determining behavioural intention.

Conversely, though, this study differs from other previous studies in that it found non-significant impacts on behavioural intention for Performance Expectancy, Effort Expectancy, Facilitating Conditions, Hedonic Motivation, Price Value, and Habit. In contrast to the results presented, Venkatesh et al. (2012) revealed that behavioural intention in technology adoption is significantly predicted by both performance expectancy and effort expectancy. This disparity might indicate that the particular setting in which online meal delivery applications is adopted is different from other contexts for technology adoption. Furthermore, the limited ability of behavioural intention to explain actual app use is consistent with earlier research showing other variables, such contextual variables and user experience, are equally important in predicting actual behaviour (Davis et al., 1989).

Theoretical Framework

The substantial effect of social context on intention to act is consistent with sociological and psychological models that highlight the importance of social networks and peer recommendation. This lends credence to the idea that social variables should be mentioned in theoretical representations of consumer behaviour. However, in contrast, it appears that other UTAUT2 components (PE, EE, FC, HM, PV, and HAB) may not be as important in predicting behavioural intention when it comes to online meal delivery applications, based on their non-significant impacts. This emphasizes the necessity of reevaluating these notions' applicability and taking into account new or different elements. The study highlights the need to look at additional factors that may affect app usage in addition to intention, while also reiterating the importance of behavioural intent as a predictor for actual app usage.

Limitations Of This Research

First, both models' low R Square values show the existence of other influencing variables beyond the scope of the study, as the analyzed components and predictors only partially explain the variation in intent to behave and real use of apps. Secondly, the emphasis on the Swiggy mobile application in the area of Delhi-NCR restricts the ability to generalize of the results to other locations or alternative varieties of delivery services for food that operate online. Third, the operationalization and measurement of variables may have an impact on the preciseness of the results; so, subsequent research may find it advantageous to improve these measurements. Furthermore, the study's cross-sectional methodology limits the capacity to establish causal relationships between intention to act and actual utilization. Longitudinal research may provide further

light on these connections. Lastly, the reliability and generalization of the results may be impacted by the quantity of samples and variation in demographics, indicating that future findings may be strengthened by a bigger and more varied population.

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Sustainable Branding and Youth Perception: A Pre-Post Experimental Study on Green Marketing

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Abstract

This research investigates the impact of environmental marketing promotion on brand choice and green awareness among postgraduate and undergraduate students, framed against the wider ESG (Environmental, Social and Governance) context.

Using a pre-post experimental design, it examines how green marketing campaigns exposure affects students' attitudes towards responsible consumption for the environment and brand loyalty. A standardized questionnaire assessed environmental consciousness, green behaviour and favoured brands prior to and after exposure to some green advertisements. Targeting mainstream brands and their green marketing efforts, the research measures how such initiatives are compatible with ESG principles-especially environmental awareness and social responsibility. Consistent with the latest literature (Dixit & Singh 2024; Iliopoulou et al., 2024), the research confirms the increasing strength of green communication and online media the influencing environmentally responsible consumer behaviour.

The research adds to the knowledge of how ethical marketing can be a strategic weapon for sustainable management, ethical governance and long-term environmental goal compliance.

Keywords: Green Marketing, ESG, Consumer Behaviour, Brand Preference, Environmental Sustainability, Sustainable Management.

Introduction

The increasing need to address environmental degradation, depletion of natural resources, and global warming has altered consumer values, business plans and policy structures worldwide. In the midst of this change, ESG (Environmental, Social and Governance) factors have come to occupy the core position of corporate decision-making and compliance for policymakers.

Green marketing—the marketing of products, services has become a key support under the Environmental facet of ESG. It is an indication of an Organizational practices that are environmentally sustainable company's commitment to environmentally friendly practices, transparency, and social responsibility (DixitSingh,2024; Sharma,2021).

Beyond being an advertising tool, green marketing includes environmental product design, responsible sourcing, green pricing, and transparent, verifiable communication regarding sustainability activities (Majeed et al., 2022). As regulations on ESG tighten and consumers become more conscious, brands now use green marketing as a means of proving compliance, avoiding reputation damage, and driving sustainable management practices.

One interesting trend here is the rising participation of younger consumers—particularly undergraduate and postgraduate students—in sustainable consumption. These digitally native, climate-conscious consumers are not just the biggest drivers of today's market but also the leaders of the future business world, governments, and sustainability advocates. Their values and expectations signify an arising need for transparency, corporate social responsibility, and a match with global ESG agendas (Bharti & Satsangi, 2024; Mehraj & Qureshi, 2022).

Urbanization, growing levels of education, and more digital engagement in India have also made young people more sensitive to environmental communication.

With the choices of the previous generations influenced mainly by price and convenience, today's student consumer tends to value sustainability, ethical branding, and environmental authenticity when making decisions (Fang, 2024). Research also shows that social media and interactive digital communications are productive ESG communication channels that influence trust, loyalty, and buying behaviour among young people (Iliopoulou et al., 2024).

Furthermore, green marketing mix factors like environmentally friendly packaging, ethical procurement, and valid green claims have been found to drive both brand reputation and consumer willingness to pay a premium (Das et al., 2024; Pancić et al., 2023). Nevertheless, in an increasing sense of greenwashing fear, there also lies an evident need for compliance, verification, and accountability—those principles that are at the heart of ESG governance (Fang, 2024).

In spite of growing research efforts, there are still holes in knowledge about the effects of green marketing on consumer attitude in a fast-moving, real-time environment. Most research has been based on cross-sectional data and neglected younger generations, who play a pivotal role in driving future market and governance (Tan et al., 2022; Sharma, 2021).

To fill these gaps, this research uses a pre-post experimental design for UG and PG students in India. Participants were evaluated on environmental consciousness and brand preference pre and post-

exposure to green adverts of prominent brands like Coca-Cola, Nescafé, H&M, MG ZS, and Alexa. The significance of changes in perception was measured through a structured questionnaire and one-tailed paired t-test.

With its emphasis on the youth consumer segment, this study not only informs green marketing strategy but also makes a contribution to ESG-congruent sustainable management. Student consumers are future stakeholders in market institutions and governance systems. Their reactions to green communication offer crucial information for brands, marketers, and policymakers aiming to establish long-term ecological responsibility and ESG compliance.

This research highlights the strategic importance of green marketing as a means of raising awareness of sustainability and pushing ESG agendas forward. It offers empirical evidence for foster environmental awareness, improve brand loyalty and reinforce the social aspect of corporate governance.

Literature Review

Green marketing has been extensively researched in the last few years, especially in the way it influences consumer behaviour and environmental mindsets. A number of studies have established that green marketing campaigns have a substantial impact on brand choice and buying behaviour, especially if the consumers take the message to be genuine and consistent with their core values (Das et al., 2024; Bharti & Satsangi, 2024).

Environmental consciousness has increasingly affected consumer choice, with a discernible trend toward environmentally friendly products and services. Consumers in India are more willing to pay for environmentally friendly goods when green adverts clearly articulate environmental advantage (Dixit & Singh, 2024; Das et al., 2024). Involvement of green marketing mix factors—such as green product design, eco-pricing, and eco-labeled packaging—has been found to be linked with positive consumer attitudinal responses and purchase propensity (Bharti & Satsangi, 2024; Majeed et al., 2022). Research also indicates that environmental commitment and value congruence are communicated continuously to foster green brand loyalty (Pancić et al., 2023).

Communication is central to the development of green consumerism. Social media, online campaigns, and influencer marketing have become significant arenas for communicating sustainability and getting consumers engaged in conversations about the environment (Iliopoulou et al., 2024; Fang, 2024). Studies identify that authentic, transparent, and reliable communication reinforces consumers' trust and augments green purchasing intentions, especially among technology-oriented young generations who examine brand genuineness critically. Nevertheless, the possibility of greenwashing—environmental exaggeration or misinformation—can severely weaken brand reputation as well as customer trust (Fang, 2024).

Environmental marketing in emerging markets such as India is confronted with specific opportunities and challenges. While awareness of the environment is growing, socio-economic factors like price sensitivity and poor access to information may influence green product adoption (Wazirchand, 2024). Yet, research indicates that focused marketing efforts, such as green labelling, educational campaigns, and CSR, can increase consumer acceptability (Lee et al., 2021; Mehraj & Qureshi, 2022). Crucially, student segments exhibit higher inclinations to consider green messages, making them a critical group for sustainable brand building (Tan et al., 2022).

In spite of the strong body of work, important gaps persist. The majority of previous research utilizes cross-sectional data and self-reported attitudes and does not provide much insight into how consumer attitudes change over time under direct exposure to green ads. Furthermore, few researches have clearly isolated student populations as a self-contained demographic segment. Since they continue to have long-term impacts on market forces and policy trends, this group merits closer empirical examination.

This study fills these lacunae by using a pre-post experimental design to assess changes in environmental consciousness and preference for the brand among undergraduate and postgraduate students after exposure to green ads. Through the use of real-life brands and systematic survey instruments, the study presents evidence on how green marketing impacts the youth segment—a pivotal consumption segment in India's sustainability path. The research hopes to advise marketers, educators, and policymakers on creating more effective green campaigns that appeal to the values and aspirations of the younger generation.

Research Methodology

Research Design

The present research uses a pre-post experimental design to evaluate the effectiveness of green marketing advertisements on customers' brand preferences and environmental awareness among undergraduate and postgraduate students. A quantitative method was employed to quantify differences in perceptions prior to and following exposure to chosen green marketing advertisements.

The research design is within-subject experimental, and the same set of participants filled a standardized questionnaire twice—pre- and post-exposure to green marketing advertisements. The design enables comparisons of individual responses directly and aids in ascertaining whether exposure to marketing concerned with sustainability affects students' brand attitude and environmental consciousness.

Sample and Data Collection

The research focused on undergraduate (UG) and postgraduate (PG) students as

respondents due to their growing exposure to environmental sustainability and influencing the future pattern of consumers. A standardized questionnaire was prepared to capture participants' environmental awareness, green behaviours, and green brand preferences prior and subsequent to watching a set of green marketing commercials. The questionnaire was administered to a wide range of students, and 52 participants provided complete answers—34 UG and 18 PG.

Experimental Procedure

Participants initially answered the first questionnaire that evaluated their environmental attitudes and brand choices. Participants were then shown ads by five popular brands—Coca-Cola, Nescafé, H&M, Alexa, and MG ZS—that promoted their green initiatives and green marketing. After watching the ads, participants again answered the same questionnaire to gauge their changed perceptions.

Research Hypotheses

To test the effect of green marketing advertisements, the following hypotheses were set independently for overall sample size of 52 students, Undergraduate students (34) and post-graduate students (18). Since the T-test is conducted over all 3-sample test separately so the results are also verified on H_0 and H_1 .

H_0 (Null Hypothesis): There is no increase in students' brand preferences and environmental awareness following exposure to green marketing adverts.

H_1 (Alternative Hypothesis): There is an increase in students' brand preferences and environmental awareness following exposure to green marketing adverts.

Data Analysis

A one-tailed paired t-test was used to test for differences between pre- and post-exposure responses to check if green marketing adverts had a significant impact on consumer preferences and environmental awareness. The analysis was carried out separately for Undergraduate Students, Postgraduate students and overall Students including undergraduate and Postgraduate.

A paired t-test was used to establish whether the post-exposure means were significantly greater than the pre-exposure means, with a positive change in brand attitude and environmental consciousness resulting from green marketing activities.

Results and Analysis

Table 1: T-Test: Paired Two Sample for Means -T-test is performed for pre and post experiment for the total sample size of 52 which includes for both Undergraduate and Post graduate Students.

| | Post Experiment | Pre <i>Experiment</i> |
|------------------------------|--------------------|--------------------------|
| Mean | 136.8269231 | 123.9807692 |
| Variance | 427.6361237 | 555.2741327 |
| Observations | 52 | 52 |
| Pearson Correlation | 0.476534439 | |
| Hypothesized Mean Difference | 0 | |
| Df | 51 | |
| t Stat | 4.068238554 | |
| P(T<=t) one-tail | 8.23143E-05 | |
| t Critical one-tail | 1.67528495 | |
| P(T<=t) two-tail | 0.000164629 | |
| t Critical two-tail | 2.00758377 | |

Interpretation

The post-experiment mean is greater than the pre-experiment, it indicates that the green marketing advertisement exposure has heightened environmental awareness and preference towards the brand.

Because t Stat (4.07) > t Critical one-tail (1.68), we reject H_0 and because p-value (0.0000823) < 0.05, the outcome is significantly statistically significant at a 95% confidence level (even 99% confidence level).

Pearson Correlation (0.477) revealed the moderate positive relationship between pre- and post-experiment scores.

Following all the arguments, we can conclude that there is a great boost in brand choice and green awareness among students upon exposure to green marketing messages.

Table 2: T-Test: Paired Two Sample for Means -T-test is performed for pre and post experiment for the 34 Undergraduate Students.

| | <i>Post Experiment</i> | <i>Pre Experiment</i> |
|----------------------------|----------------------------|-----------------------|
| Mean | 134.9705882 | 123.8529412 |
| Variance | 491.6657754 | 387.9474153 |
| Observations | 34 | 34 |
| Pearson Correlation | 0.608356141 | |
| Hypothesized Difference | Mean 0 | |
| Df | 33 | |
| t Stat | 3.473924654 | |
| P(T<=t) one-tail | 0.000727615 | |
| t Critical one-tail | 1.692360309 | |
| P(T<=t) two-tail | 0.001455231 | |
| t Critical two-tail | 2.034515297 | |

Interpretation

Post-experiment mean is greater than the pre-experiment, it indicates that exposure towards green marketing ads has enhanced the brand preference and eco-awareness.

As t Stat (3.47) > t Critical one-tail (1.69), we reject H_0 and because p-value (0.000727) < 0.05, the result is extremely statistically significant at a 95% confidence level (even at a 99% confidence level).

Pearson Correlation (0.608) also indicate the strong to moderate positive relationship between pre- and post-experiment scores.

It may be implied that there is a high rise in brand choices and green awareness among under graduate students following exposure to environmentally friendly marketing adverts.

Table 3: T-Test: Paired Two Sample for Means -T-test is performed for pre and post experiment for the 18 post-graduate Students.

| | <i>Post Experiment</i> | <i>Pre-Experiment</i> |
|------------------------------|----------------------------|-----------------------|
| Mean | 140.3333333 | 124.2222222 |
| Variance | 308.5882353 | 912.6535948 |
| Observations | 18 | 18 |
| Pearson Correlation | 0.338255998 | |
| Hypothesized Mean Difference | 0 | |
| Df | 17 | |
| t Stat | 2.327834709 | |
| P(T<=t) one-tail | 0.01626249 | |
| t Critical one-tail | 1.739606726 | |
| P(T<=t) two-tail | 0.032524979 | |
| t Critical two-tail | 2.109815578 | |

Interpretation

The post-experiment mean is greater than pre-experiment, it indicates that green marketing advertisements exposure has enhanced the brand preference and environmental awareness.

As t Stat (2.33) > t Critical one-tail (1.74), we reject the null hypothesis (H_0) and as p-value (0.016) < 0.05, the result is statistically significant at a 95% confidence level.

Pearson Correlation (0.338) also indicate the moderate positive relationship between pre- and post-experiment scores.

It is possible to assert that postgraduate students experience a marked rise in brand choice and ecological awareness following exposure to green marketing advertisements.

Discussion

The results of this study provide strong empirical evidence that green marketing promotions significantly affect environmental concern and students' brand choice. The outcomes are consistent across the three groups: the overall sample

($n = 52$), undergraduate students ($n = 34$), and postgraduate students ($n = 18$). In both cases, the post-experiment means scores significantly exceeded the pre-experiment mean scores, confirming that exposure to green marketing communications leads to a positive shift in students' attitude and preferences.

The paired t-tests conducted in each group yielded statistically significant improvements in brand preference and environmental awareness (p -values < 0.05 in all cases), rejecting the null hypotheses (H_0). The effect was greatest in the combined sample ($t = 4.07$, $p = 0.00008$), then undergraduates ($t = 3.47$, $p = 0.0007$) and postgraduates ($t = 2.33$, $p = 0.016$). These findings imply that both UG and PG students react favourably to green marketing efforts, but with varying degree of effect across groups.

The findings align with previous work that younger consumers, especially students, are environmentally sensitive and respond well to green marketing efforts. The moderate-to-high Pearson values (0.338 to 0.608) also support the idea that students' attitudes towards brands and sustainability are connected.

Conclusion and Implications

The current study confirms that students' brand attitudes and ecological awareness are significantly and favourably impacted by green marketing promotions. Both undergraduate and graduate students showed statistically significant increases in their preference for sustainable brands after being exposed to green advertisements, according to the experimental results, which were based on a pre-post design using a one-tailed paired t-test. According to these results, students are not only open to green marketing, but are also impacted by it in ways that strengthen consumer attitudes toward the environment and brand loyalty.

Crucially, this group reflects the new consumer generation that will influence market demand in the years to come. Their values and preferences will have a significant impact on brand expectations and consumption patterns as they move into economically active roles. Consequently, this offers marketers a calculated chance to support and participate in green marketing campaigns. Businesses can develop long-term brand equity and help foster a more sustainable consumer culture in the future by interacting with students through environmentally conscious branding today.

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Exploring Intertextuality in Salman Rushdie's *Midnight's Children*: A Postmodern Perspective

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Abstract

This chapter examines how Salman Rushdie's *Midnight's Children* makes considerable use of the postmodern idea of intertextuality, emphasising the ways in which the story is interlaced with literary, cultural, political, religious, cinematic, historical, and self-referential allusions. Rushdie uses intertextuality to give the reader a deeper comprehension of the topics and characters, resulting in a narrative that is intricately layered and complex. Rushdie creates a book that captures the complexities of Indian history and identity by incorporating historical events and characters, referencing literary traditions, evoking religious and cultural mythology, and interacting with political and cinematic materials. The chapter also looks at critical viewpoints on Rushdie's intertextual strategies, showing how they question traditional narrative structures and encourage contemplation of the relationships between texts and the meaning-making process.

Keywords: Intertextuality, multifaceted narrative, self-referentiality, Narrative Intertextuality.

Introduction

The idea of intertextuality dates back to ancient times, when authors frequently made allusions to or references to past works in order to build relationships and have a literary discussion. However, intertextuality became more well-known as a purposeful and self-aware literary device in the 20th century. In English literature, intertextuality refers to how literary references and borrowings establish the intertexts of works from different genres and eras. The term "intertextuality," which was first used by Mikhail Bakhtin and Julia Kristeva, refers to the effort made by texts to engage, remember, and rewrite other texts. This is especially clear if one looks at the examples provided, which span from Renaissance literature to the present and demonstrate how the manipulation of

intertextuality depends on the age in which it was created.

It is evident that intertextuality is not limited to literature and may be used in various media, including television shows and films. In order to understand how texts interact for readers at various historical periods, the study shows how intertextual concerns are relevant to the way meaning is constructed in literary texts and how the book affects the reader. The study enhances our comprehension of literature as an intertextual process and creates opportunities for future research, including in-depth analyses of intertextuality in digital media and/or non-Western literature.

In order to understand how texts interact for readers at various historical periods, the study shows how intertextual concerns are relevant to the way meaning is constructed in literary texts and how the book affects the reader. The study enhances our comprehension of literature as an intertextual process and creates opportunities for future research, including in-depth analyses of intertextuality in digital media and/or non-Western literature. Intertextuality's power resides in the way it enriches the original discourse with fresh concepts. Although it is understandable that other texts would make intertextual references to the Bible, which is one of the most read books ever, *Paradise Lost* is still arguably the most powerful example. The interaction between texts—such as plays, movies, books, music, games, etc.—is known as intertextuality. Stated otherwise, it occurs whenever a text is cited in another text. The finest results from intertextuality come from explicit explanations followed by implicit references. In any event, this method is an excellent means of exchanging shared references about ourselves and our surroundings.

Intertextuality is frequently employed in contemporary literature to establish a feeling of continuity, honour past works, or participate in a literary discussion. Modernist authors aimed to experiment with language and form while eschewing conventional narrative conventions. They were able to use intertextuality as a method to include various voices, viewpoints, and styles in their works. James Joyce's 1922 book *"Ulysses"* is a noteworthy example, as it significantly references Homer's *"Odyssey."* Joyce's book explores questions of identity and human experience while reimagining the events of a single day in Dublin and comparing it to Odysseus's journey. Vladimir Nabokov's 1955 book *"Lolita"* is another instance of intertextuality in contemporary literature. Humbert, the main character in Nabokov, regularly makes references to and allusions to a variety of literary classics, such as Shakespeare, Edgar Allan Poe, and Lewis Carroll. Nabokov invites readers to interact with the text on several levels by incorporating these intertextual references into his story, which give it additional depth and meaning.

References and relationships between various texts are introduced by the effectiveness of intertextuality in text construction. Authors benefit from this

since it gives them a chance to reply to earlier writers and give readers a theme and motif analysis. For instance, Joyce's *Ulysses* is a modernised version of Homer's *Odyssey* that combines perspectives from both periods to improve the reader's comprehension. Relevance is also used to guide readers' viewpoints and provide them with information on how to access the text and learn more if they want to understand the text's multiple levels of meaning.

Establishing how this phenomenon varies in accordance with changing literary and cultural practices is made easier by intertextuality in terms of various eras and genres. As a result, intertextual references to Milton's epics and Shakespeare's plays aid in the discussion of current issues. The practice of intertextuality in postmodernism is distinct from the use of intertext in modern and contemporary works because it aims to reimagine or subvert previous forms of confined to one cultural medium, as evidenced by cross-media influences. As a result, intertextuality helps to preserve literary traditions while also enhancing text enjoyment by revealing how works link to one another and evolve over time.

Objectives

- To create layers of meaning
- To challenge originality and authorship
- To encourage reader engagement.
- To identify and analyse intertextuality

Methodology

With an emphasis on literary analysis, this study employs qualitative research methods to examine intertextuality in English literature. It enables comprehension of the way intertextuality functions within the context of diverse literary eras and text kinds.

Intertextuality takes a new form in postmodern literature. Intertextuality is frequently used by postmodern authors to dissect and question conventional narratives, genres, and cultural presumptions. They converse with literature and popular culture in a light-hearted and self-referential manner. Italo Calvino's 1979 book *"If on a Winter's Night a Traveller"* is a well-known example. Calvino's book is made up of several interrelated stories that mimic several literary genres. Calvino investigates the act of reading and the interaction between the reader and the text using this intertextual method.

Salman Rushdie's *"Midnight's Children"* (1981) is a noteworthy work of postmodern literature that illustrates intertextuality. Rushdie creates a story that is both profoundly anchored in its cultural setting and intertextually engaged with a wide range of literary and historical allusions by fusing aspects of Indian mythology, magical realism, and historical events. Rushdie questions conventional ideas of history and identity by utilising intertextuality. This

centuries-long intertextuality presents an amazing opportunity for academic study. It is particularly feasible to see the evolution of English literature and the practice of writers, who have always engaged with their literary forebears, when reading texts from different eras, genres, and civilisations.

It is impossible to overestimate *Midnight's Children's* impact on modern writing, which has received widespread praise for its creative use of intertextuality. In addition to inspiring a number of critical assessments, the novel's intertextual engagement with history, literature, culture, politics, religion, and narrative forms has had a significant influence on other literary works. Rushdie's book has received recognition for its skill in fusing numerous, intricate allusions into a seamless, gripping story, producing a literary masterpiece with several levels of complexity. The importance of Rushdie's intertextual approach in influencing modern literature has been recognised by critics.

According to Bhabha (1994), Rushdie's use of intertextuality highlights the ways in which history and identity are produced and contested while also "challenging and disrupting conventional narrative forms" (Bhabha, 1994, p. 56). This critical viewpoint emphasises how crucial intertextuality is to comprehending the novel's exploration of historical, identity, and representational concerns.

The novel's involvement with historical events, or historical intertextuality, is one of the most notable examples of intertextuality in *Midnight's Children*. Saleem Sinai, the main character, was born on August 15, 1947, the day India gained independence from British domination. Rushdie emphasises the connection between national and individual identities by incorporating historical events into the characters' personal narratives. Rushdie's book has references to a number of historical personalities in addition to the historical setting. Since Saleem Sinai's life reflects the turbulent history of the nation, he is frequently viewed as a symbolic embodiment of India.

The novel's incorporation of Indian mythology is among the most notable instances of cultural intertextuality. Saleem Sinai's persona is sometimes likened to mythological characters like Shiva and Vishnu, whose tales are intertwined throughout the story. "Like Shiva, I am both a destroyer and a preserver," Rushdie writes (Rushdie, 1981, p. 250). By using these legendary characters, Rushdie highlights the myths' continuing impact on modern Indian identity while placing the story in a larger cultural and religious framework.

Another noteworthy feature of *Midnight's Children* is its religious intertextuality. There are numerous allusions to different religious traditions throughout the book, such as Christianity, Islam, and Hinduism. The varied and diversified character of Indian culture, as well as the manner in which religious identities interact and overlap, are highlighted by these allusions. For instance, the figure of Shiva symbolises both the creative and destructive energies in Indian society in addition to being a reference to the Hindu god. According to Rushdie (1981, p.

304), "Shiva, the god of destruction and transformation, ... dances the tandava of cosmic dissolution." Because it examines how religious myths and symbols influence both individual and community identities, this religious intertextuality gives the story a deeper level of complexity.

Numerous critical analyses have focused on Rushdie's use of religious intertextuality. Rushdie's use of religious allusions, according to Ghosh (1992), "complicates and enriches the narrative, highlighting the ways in which religious identities are constructed and contested in postcolonial India" The significance of religious intertextuality in comprehending the novel's examination of identity and belonging is emphasised by this viewpoint. In addition to being highly intertextual, *Midnight's Children's* structure and style draw on a variety of storytelling genres and approaches.

This critical viewpoint emphasises how crucial narrative intertextuality is to comprehending the novel's exploration of historical, identity, and representational concerns. Salman Rushdie uses an on-linear, fractured story that alternates between viewpoints and chronological eras. Modernist writing, especially that of Virginia Woolf and James Joyce, is reminiscent of this narrative approach. Both the fractured and disputed character of postcolonial history and the chaotic and complex nature of Indian identity are reflected in Rushdie's narrative construction. The importance of this narrative intertextuality has been pointed up by critics. According to Slemon (1988), Rushdie "disrupts and challenges conventional narrative forms, highlighting the ways in which history and identity are constructed and contested" through the employment of modernist storytelling techniques.

Self-referential intertextuality is also present in *Midnight's Children*, as Rushdie regularly references both the writing process and his own past works. In addition to emphasising the narrative process, this self-referentiality challenges the reader to consider how fiction and reality interact and how stories influence how we perceive the world. Numerous critics have criticised Rushdie's use of self-referential intertextuality.

Cinematic intertextuality has also been used by Salman Rushdie. The widespread impact of Bollywood on Indian culture is shown in his novel's repeated references to well-known films and movie personalities. For instance, the famous Bollywood actress Madhubala serves as the model for the character Parvati-the-which. Rushdie states that even the hardest hearts may be won over by Parvati's Madhubala grin (Rushdie, 1981, p. 345). By using these allusions, Rushdie challenges the ways that popular culture both affects and reflects societal norms and values while also placing the story within a particular cultural framework. According to Bose, Rushdie uses Bollywood references to "highlight the ways in which popular culture shapes and reflects societal norms and values, and to

critique the ways in which these cultural forms are used to construct and contest identity," (Bose, 2009, p. 78).

Another important component of intertextuality in *Midnight's Children* is the Indian political scene. The political events and beliefs that have influenced contemporary India are extensively discussed in Salman Rushdie's book, and these allusions are interwoven throughout the story. The Emergency, a time of political unrest and persecution in India from 1975 to 1977, is among the most important political allusions. The widow, also known as Indira Gandhi, is a thinly veiled portrayal of the Prime Minister in real life. In addition to criticising the Emergency's authoritarianism, Rushdie considers the wider ramifications of political power and corruption in postcolonial India through this political intertextuality. The importance of this political intertextuality has been pointed up by critics. Goonetilleke said, Rushdie's portrayal of the Emergency is a critique of the misuse of power and the deterioration of democratic principles in India. (1998)

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It is impossible to overestimate *Midnight's Children's* impact on modern writing, which has received widespread praise for its creative use of intertextuality. In addition to inspiring a number of critical assessments, the novel's intertextual engagement with history, literature, culture, politics, religion, and narrative forms has had a significant influence on other literary works. Rushdie's book has received recognition for its skill in fusing numerous, intricate allusions into a seamless, gripping story, producing a literary masterpiece with several levels of complexity. The importance of Rushdie's intertextual approach in influencing modern literature has been recognised by critics.

Conclusion

Midnight's Children by Salman Rushdie is a deep and intricate book that uses intertextuality in a number of ways to tell a story with multiple levels. The novel provides a thorough examination of Indian identity and history through its interaction with historical events, literary texts, cultural allusions, political ideologies, religious traditions, cinematic genres, and self-referential components. In addition to enhancing the story, Rushdie's creative use of intertextuality challenges the reader to consider how texts are related to one another and how they influence how we perceive the world. As a result, *Midnight's Children* is a monument to the ability of intertextuality to produce a profoundly moving and provocative piece of literature.

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