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FOREWORD

It is with immense pleasure and pride that I extend my heartfelt congratulations on the occasion of the publication of Maitreya 2025- (book/Journal) call for papers publication organized by the IQAC & Research Committee of Dr.Ambedkar College,Wadala,Mumbai.

I wish to commend the authors, the editorial team, and everyone involved in this collaborative effort for their hard work. I appreciate the Internal Quality Assurance Cell and the Research Committee for their keen interest in the research field and for opening a new avenue by publishing this journal to spread knowledge globally.

Hon. Mr. Anandraj Y. Ambedkar
Chairman
People's Education Society

FOREWORD

I am delighted in acknowledging the Maitreya 2025- (book/Journal) call for papers publication organized by the IQAC & Research Committee of Dr.Ambedkar College,Wadala,Mumbai.

I wish to commend the authors, the editorial team, and everyone involved in this collaborative effort for their hard work. I congratulate the IQAC and Staff members for their enthusiastic participation for various activities and making each event a grand success.

Hon. Mr.Sanjeev Boudhankar
Member, Secretary
People's Education Society

FOREWORD

I am happy to share first publication from our college. It's a pride moment for our college to achieve and promote excellence in research & publications. The college has taken the initiative towards a publication of research papers through (journal/book) which encourage teachers, research scholars to enrich their research work.

I congratulate to all the authors for contributing their papers for Maitreya -2025 publication. I congratulate the IQAC and Research committee for their perseverance & continuous hard work towards college progress.

Prof. Dr.Yashodhara S.Varale
I/c Principal
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Wadala, Mumbai - 400031.

FOREWORD

The IQAC being an integral part of the college works towards realizing the goals of quality enhancement by developing a system for conscious, consistent and catalytic improvement in different aspects of functioning of the institution.

The primary goal of IQAC is to promote a culture of continuous improvement in all aspects of the college. Research committee actively engage in research, foster research-driven learning, and create an environment that encourages holistic development.

I extend my sincere thanks to our chairman, secretory and Principal for their constant support and encouragement. I thanks to all the authors for their enthusiastic participation in paper publication.

Dr. Gangotri S. Nirbhavane
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MAITREYA CALL FOR PAPERS

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Original Article

From Cash to Clicks: Evaluating the Economic and Operational Effects of Digital Payments on Indian Small Businesses

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Abstract

Digital payment systems are changing the way small businesses in India operate. This study examines the impact of digital payments on the economic growth and day-to-day operations of these businesses. The research draws on surveys and existing studies to investigate whether digital payments enable small firms to increase sales, reduce costs, and expand their customer base. It also considers the challenges that many business owners face, such as limited internet access, a lack of digital skills, and uneven infrastructure across regions. The findings show that digital payments can improve transparency, reduce transaction costs, and open new market opportunities. However, the benefits are not the same everywhere, as some businesses struggle more than others to adopt the technology. This study highlights the need for stronger digital infrastructure, better financial literacy programs, and policies that ensure small businesses across India can take full advantage of digital finance.

Keywords: *Unified Payments Interface (UPI), Micro, Small, and Medium enterprises, Msme.*

Introduction

India has seen a major shift in the way people and businesses handle money, with digital payments becoming a common part of daily life. Tools like UPI, mobile wallets, and QR codes have made transactions faster and more convenient. For small businesses, which play a vital role in India's economy, this change has created both opportunities and challenges.

Traditionally, many small businesses relied on cash, which often limited their growth and made it harder to keep records or reach new customers. Moving "from cash to clicks" is not just about using new technology—it is about changing how businesses operate and compete in a digital economy. Digital payments can help reduce costs, improve transparency, and connect businesses to wider markets.

At the same time, not all small businesses benefit equally. Issues such as poor internet access, lack of digital skills, and uneven infrastructure make adoption difficult in some areas. This study explores how digital payments affect the economic performance and daily operations of small businesses in India. It also looks at what can be done, through better infrastructure, training, and supportive policies, to ensure that small businesses across the country can fully benefit from digital finance.

Review Of Literature

- Overview of scholarship in India

Recent literature on digital payments in India highlights the rapid growth of the ecosystem driven by policy interventions such as demonetization, Digital India, and the rollout of interoperable platforms like UPI. Scholars consistently emphasize core attributes—convenience, speed, accessibility, security, cost-effectiveness, and integration with other services—as the main ways digital payments transform business practices.

- **Economic effects on small businesses**

Empirical case-study evidence from small firms in New Delhi reports sizable post-adoption gains: average annual revenue increased by 46.7%, customer acquisition rose by 62.1%, and operational efficiency improved by 40.2%.

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The same study notes enduring benefits for financial management and customer satisfaction, suggesting a sustained performance uplift beyond short-term novelty effects[2]. Broader reviews converge with these findings, arguing that digital tools expand sales opportunities while reducing cash-handling frictions for small enterprises[3].

- **Operational effects and process improvements**

Operational literature points to faster checkout, reduced paperwork, and improved record-keeping as the main channels of efficiency, enabled by real-time settlements and automated digital trails. Digital payments help businesses by speeding up transactions, reducing paperwork, and keeping better records. They also make it easier to track sales, manage inventory, and build trust with customers[1][2][3].

- **Financial inclusion and access to credit**

Reviews stress that digital payments can deepen financial inclusion by formalizing transactions, improving cash flow visibility, and potentially easing access to credit for micro and small firms. The development literature links digitalization with broader inclusion outcomes, while India-focused papers note that transparent digital histories can help lenders assess risk and tailor products for MSMEs[3].

Objectives of the Study

- Study how digital payments affect the income and growth of small businesses in India.
- See how digital payments improve daily operations like speed, record-keeping, and cost savings.
- Find out what encourages small businesses to start using digital payments.
- Understand the problems and challenges they face in using these systems.
- Explore how digital payments help small businesses get loans and join the formal financial system.
- Compare the benefits for businesses in cities and rural areas.
- Suggest ways to improve digital payment use for small businesses

Research Methodology

This study adopted a descriptive research design based entirely on secondary data to evaluate the economic and operational effects of digital payments on small businesses in India. Information was collected from reliable sources such as government reports, Reserve Bank of India publications, industry studies, academic research papers, and trusted online databases. The focus was placed on data from the last 8–10 years, with particular emphasis on the post-2016 period to capture the effects of demonetization and the growth of UPI.

The collected information was reviewed and organized into key themes, including economic impact, operational changes, benefits, challenges, and regional differences. Comparative analysis was conducted to identify patterns and trends across different studies. The findings from these sources were synthesized to draw conclusions and to suggest ways in which digital payments could better support small businesses in India.

Benefit of Moving From Cash to Click.

- Faster Payments & Better Cash Flow: Digital modes like UPI, QR codes, and mobile wallets enable instant settlements, reducing delays from cheque clearances or manual reconciliations[1].
- Lower Cash-Handling Costs: Eliminates expenses and risks linked to storing, counting, and transporting cash, while reducing theft and human error[1].
- Improved Record-Keeping & Transparency: Every transaction is automatically recorded, making it easier to track sales, manage accounts, a:nd prepare for tax compliance[2].
- Increased Customer Convenience: Customers can pay anytime, anywhere, using their preferred method—boosting satisfaction and loyalty[2][3].
- Wider Market Reach: Enables small businesses to serve customers beyond their immediate locality, including online buyers[2].
- Access to Credit & Financial Inclusion: Digital transaction histories help build a credit profile, making it easier to secure loans and other financial services [1][2].
- Operational Efficiency: Speeds up checkout, reduces paperwork, and integrates with inventory or accounting systems for smoother operations[3].
- Competitive Edge: Keeps businesses relevant in a market where consumers increasingly expect digital payment options [1].

Challenges of Moving From Cash To Click.

- Poor Internet Connectivity:- Unreliable or slow internet, especially in rural areas, disrupts smooth transactions.
- Low Digital Literacy:- Limited knowledge of using payment apps, QR codes, and online banking among business owners and staff.
- Security Concerns:- Fear of fraud, phishing, hacking, and data breaches reduces trust in digital platforms.
- Transaction Costs:- Merchant fees, device purchase/maintenance, and other charges can be burdensome for low-margin businesses.
- Technical Glitches:- Failed transactions, delayed settlements, or system downtime can disrupt operations.

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- Customer Resistance:- Some customers still prefer cash, limiting the benefits of going fully digital.
- Regulatory Complexity:- Frequent policy changes and compliance requirements can create uncertainty.
- Infrastructure Gaps:- Lack of reliable electricity or access to digital devices in certain areas.

Results and Findings:

❖ **Positive Outcomes:**

- Sales and revenue increased for many small businesses after adopting digital payments.
- Customers were more satisfied due to faster and more convenient transactions.
- Reduced costs and risks linked to handling cash.
- Better record-keeping and easier tax compliance through automated transaction logs.
- Improved access to loans and credit because of verifiable transaction histories.

❖ **Challenges Observed:**

- Poor internet connectivity and power supply issues, especially in rural areas.
- Fear of fraud, hacking, and data breaches reduced trust in digital systems.
- Lack of digital skills among business owners and staff.
- Some customers still preferred cash, limiting full adoption benefits.

❖ **Overall Insight:**

- Digital payments improved performance and efficiency, but the benefits were greater where infrastructure, skills, and customer readiness were stronger.

Conclusion and Suggestions

This study found that moving from cash to click (digital payments) has helped many small businesses in India increase sales, work more efficiently, reduce cash-handling risks, and gain easier access to loans. Digital records have made accounting and tax compliance simpler, while also improving customer trust. However, problems like poor internet, low digital skills, security concerns, transaction costs, and customers who still prefer cash limit the full benefits, especially in rural areas.

To overcome these issues, there is a need to improve internet and electricity access, provide training for business owners, strengthen security systems, lower transaction fees, and run awareness campaigns for customers. Using digital payment records to make it easier for small businesses to get loans can also help. With these steps, the benefits of going from cash to clicks can reach more businesses across India and support long-term growth.

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Original Article

AI for Personalized and Inclusive Education

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Abstract

Artificial Intelligence (AI) is transforming the field of education by enabling new ways of teaching and learning. Traditional classroom methods often follow a uniform approach, which does not address the diverse needs of individual learners. AI offers solutions through personalized learning systems that adapt content, pace, and difficulty according to the student's abilities and interests. At the same time, AI promotes inclusive education by providing assistive technologies for differently-abled students, language translation tools for learners from varied linguistic backgrounds, and affordable digital platforms that reach rural and underprivileged communities. These innovations align with the United Nations Sustainable Development Goals, particularly SDG 4 (Quality Education) and SDG 10 (Reduced Inequalities). However, the integration of AI in education also raises concerns related to data privacy, teacher training, and equitable access to technology. This paper explores the role of AI in creating personalized and inclusive educational experiences, examines real-world applications, discusses challenges, and highlights the future potential of AI in ensuring that education is accessible, effective, and equitable for all.

Keywords: *Artificial Intelligence, Personalized Learning, Inclusive Education, Sustainable Development, Assistive Technology*

Introduction

Education is one of the most powerful tools for shaping individuals and societies. However, traditional teaching methods often adopt a one-size-fits-all approach, where all learners receive the same content and instruction regardless of their unique needs, abilities, or learning styles. This approach can create gaps in understanding, reduce student engagement, and fail to address the requirements of learners with disabilities or those from disadvantaged backgrounds. In the 21st century, the demand for education that is both personalized and inclusive has become essential for achieving equity and quality in learning.

Artificial Intelligence (AI) has emerged as a transformative force in addressing these challenges. By analyzing student data, AI systems can identify learning patterns, strengths, and weaknesses, and then provide customized learning experiences. For example, adaptive learning platforms adjust the level of difficulty in real time, ensuring that students receive content suited to their pace. Similarly, intelligent tutoring systems act like virtual teachers, offering instant feedback and additional support outside the classroom. Such innovations make education more effective by placing the learner at the center of the process.

In addition to personalization, AI also plays a crucial role in promoting inclusivity. Assistive technologies such as speech-to-text converters, screen readers, and real-time translation tools help break barriers for learners with disabilities and those from diverse linguistic backgrounds. Moreover, AI-driven platforms enable access to quality education in remote and rural areas, thus reducing inequalities in learning opportunities. These applications are closely aligned with the United Nations Sustainable Development Goals (SDG 4: Quality Education and SDG 10: Reduced Inequalities), emphasizing the global significance of AI in education.

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This paper explores the potential of AI in creating personalized and inclusive education systems. It examines the current applications, highlights real-world examples, and discusses both the opportunities and challenges of integrating AI in learning environments. By doing so, the study aims to contribute to a deeper understanding of how AI can support sustainable development through education that is equitable, effective, and accessible to all.

Literature Review

AI in Education: An Overview
Early research on AI in education began with Intelligent Tutoring Systems (ITS) in the 1980s, designed to simulate one-on-one teaching (Woolf, 2009).Recent developments in machine learning and natural language processing (NLP) have expanded AI applications into adaptive platforms, virtual classrooms, and assessment systems.

AI for Personalized Learning
Adaptive Learning Systems: Research shows AI can dynamically adjust learning materials to match the pace and level of each student, improving engagement and performance (Pane et al., 2015).Learning Analytics: AI-based analytics predict student performance, identify at-risk learners, and suggest targeted interventions (Siemens & Baker, 2012).
Case studies (e.g., Khan Academy, Duolingo, BYJU's) demonstrate how AI personalizes learning through data-driven insights. Scholars argue personalization improves motivation, retention, and academic success (Chen et al., 2020).

AI for Inclusive Education
Assistive Technologies: Speech-to-text, screen readers, and AI-powered captioning tools enhance accessibility for students with hearing and visual impairments (Al-Azawei et al., 2017).Language Inclusivity: AI translation and real-time voice recognition help overcome linguistic barriers, especially in multilingual classrooms (Nguyen et al., 2019).
Rural and Remote Education: Studies highlight AI-driven e-learning platforms that bring quality education to underprivileged areas, reducing inequality (Miao et al., UNESCO, 2021).

Challenges Identified in Literature
Ethical Concerns: Risk of bias in AI algorithms, over-reliance on data, and student privacy issues (Holmes et al., 2021).Digital Divide: Unequal access to technology in low-resource settings may widen educational gaps rather than bridge them (Zawacki-Richter et al., 2019).Teacher Readiness: Literature emphasizes the need for teacher training to effectively integrate AI tools into classrooms.

Research Gap
Most studies focus on either personalization or inclusion, but fewer examine the combined impact of AI on both. Limited research exists in developing countries, where AI has the potential to address systemic educational inequalities. This gap highlights the need to study AI not only as a tool for learning improvement but also as a driver of sustainable and equitable education systems.
Methodology
This study adopts a qualitative research approach, relying primarily on secondary data analysis. The methodology is structured in the following steps:

Research Design
A descriptive and exploratory design was selected to examine the role of Artificial Intelligence in enabling personalized and inclusive education. The focus was not on conducting experiments but on synthesizing findings from existing literature, case studies, and policy documents.

Data Sources
Peer-reviewed journal articles published between 2015 and 2024 from databases such as IEEE Xplore, Springer Link, Science Direct, and Google Scholar. Reports and white papers from organizations such as UNESCO, OECD, and RAND Corporation. Case studies from educational platforms (Coursera, Khan Academy, Duolingo, Byju's, etc.) that demonstrate the implementation of AI for personalized learning and inclusivity.

Inclusion Criteria
Studies focusing on AI applications in K–12, higher education, and skill development.
Research addressing personalized learning, inclusivity, or accessibility. Empirical studies, systematic reviews, and conceptual frameworks relevant to AI in education.

Data Analysis
The selected literature was reviewed and categorized into three thematic areas:
- **Personalized Learning:** Adaptive learning, recommendation systems, and AI tutors.
- **Inclusive Education:** Assistive technologies, language translation, and accessibility tools.
- **Challenges and Limitations:** Data privacy, algorithmic bias, digital divide, and teacher readiness.

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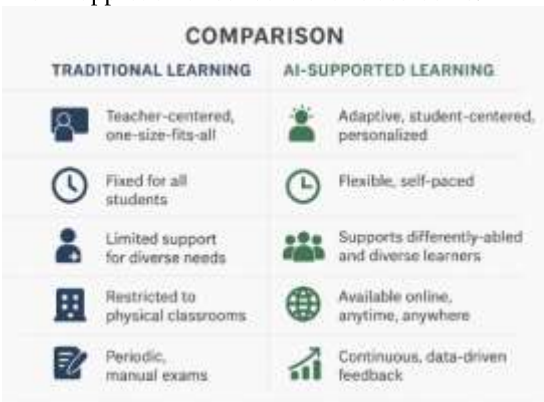
Validation

Findings were cross-verified with recent reports (e.g., UNESCO 2021, OECD 2022) to ensure alignment with global perspectives on AI in education.

Findings & Discussion

AI-supported learning environments differ markedly from traditional methods in terms of pace, inclusivity, accessibility, and assessment, as illustrated in the table below. AI enables personalized and accessible learning experiences, moving beyond the uniform approach of conventional classrooms.



As the table shows, AI enables more personalized and accessible learning experiences compared to the one-size-fits-all approach of traditional classrooms.

Conclusion and Future Scope

Artificial Intelligence has emerged as a transformative force in education, with the potential to bridge long-standing gaps in access, quality, and inclusivity. By enabling personalized learning, AI ensures that students are not restricted by a one-size-fits-all approach, but instead progress at their own pace with tailored support. At the same time, inclusive AI applications, such as assistive technologies and translation tools, allow differently-abled and linguistically diverse learners to participate fully in the educational process. Case studies from global and Indian contexts demonstrate that AI-driven platforms significantly improve student engagement, accessibility, and learning outcomes.

However, this progress does not come without challenges. Data privacy concerns, algorithmic bias, digital divides, and the need for teacher training remain critical barriers. Without addressing these issues, the benefits of AI may remain concentrated in privileged regions, further widening inequalities. Therefore, the integration of AI in education must be guided by ethical frameworks, inclusive policies, and investments in infrastructure.

Looking ahead, AI in education holds immense promise for achieving the United Nations Sustainable Development Goals, particularly SDG 4 (Quality Education) and SDG 10 (Reduced Inequalities). Future developments may include the design of low-cost, localized AI platforms for rural areas, advanced adaptive systems that combine emotional and cognitive learning, and collaborative AI tools that empower teachers rather than replace them. With responsible implementation, AI can play a decisive role in shaping a more equitable, sustainable, and future-ready education system.

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Original Article

Challenges of sustainable development in India

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Abstract:
Sustainable development in India seeks to balance economic growth, social equity, and environmental protection. However, challenges such as poverty, population pressure, pollution, deforestation, and climate change hinder progress. Rapid urbanization and industrialization often lead to resource depletion and ecological imbalance. Despite these challenges, sustainable development is vital for long-term prosperity and intergenerational equity. It ensures poverty reduction, inclusive growth, environmental conservation, and better quality of life. Remedies include promoting renewable energy, enforcing environmental laws, and adopting green technologies. Community participation, awareness, and strong policy implementation are equally important. Through coordinated efforts, India can achieve an inclusive, resilient, and sustainable future.

Keywords: *Sustainable Development; India; Population Growth; Urbanization; Industrialization; Environmental Degradation; Poverty and Inequality; Air Pollution; Water Pollution; Climate Change; Resource Depletion; Regional Disparities; Policy Implementation; Renewable Energy; Sustainable Development Goals (SDGs).*

Introduction:

Sustainable development refers to a development process that meets the needs of the present without compromising the ability of future generations to meet their own needs. It emphasizes a balanced approach to economic growth, social progress, and environmental protection, ensuring long-term prosperity and well-being. Originating from the 1987 Brundtland Commission Report, the concept has become central to global policy discussions, especially in the context of climate change, resource depletion, and social inequality. The adoption of the United Nations Sustainable Development Goals (SDGs) in 2015 provided a comprehensive framework of 17 interconnected goals to be achieved by 2030, addressing issues such as poverty, hunger, health, education, gender equality, clean energy, climate action, and biodiversity conservation. Achieving sustainable development requires coordinated efforts by governments, businesses, and civil society, along with responsible consumption, innovation, and global cooperation. It represents not just an environmental necessity but also a pathway to equitable and inclusive growth for present and future generations. For India, sustainable development holds special importance due to its large population, rapid urbanization, and environmental challenges such as pollution, deforestation, and climate change. India has aligned its policies with the United Nations Sustainable Development Goals (SDGs) 2030 Agenda, adopting initiatives like the National Action Plan on Climate Change, National Solar Mission, Swachh Bharat Abhiyan, and Smart Cities Mission. While significant progress has been made in renewable energy, sanitation, and poverty reduction, challenges such as inequality, resource depletion, and climate risks remain. Achieving sustainable development in India requires strong policy implementation, technological innovation, and active citizen participation to build an inclusive, resilient, and environmentally sustainable future.The present research has made attempt to highlight the challenges of the sustainable development in India and challenges and suggested the some improvements in order to overcome this issue.

Challenges of sustainable development in India has explained by the following points.

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Population:

Population growth in India, crossing 1.4 billion people, is one of the biggest hurdles to sustainable development. High population density creates enormous pressure on natural resources, infrastructure, and social services.

Population growth in India, with over 1.4 billion people, poses a major challenge to sustainable development. High population density increases the demand for food, water, energy, and land, leading to over-exploitation of natural resources and environmental degradation such as deforestation, soil erosion, and loss of biodiversity. Rapid migration to urban areas results in slums, congestion, poor sanitation, and pollution, while unemployment and poverty rise because job creation cannot keep pace with the growing workforce. Additionally, public health and education systems face immense pressure, reducing the quality of services. Addressing population pressure through family planning, women's education, sustainable urban planning, efficient resource management, and job creation is essential for achieving balanced economic growth, social equity, and environmental sustainability in India.

Rapid urbanization and industrialization:

In India rapid urbanization and industrialization have become major challenges to sustainable development. Large-scale migration from villages to cities has led to overcrowded urban areas and the growth of slums. Cities face problems like traffic congestion, inadequate housing, poor sanitation, and water scarcity. Industrial growth, while boosting the economy, often causes air, water, and soil pollution. Unplanned industrial expansion leads to the overuse of natural resources and environmental degradation. Urbanization increases energy demand, contributing to higher carbon emissions and climate change. Industrial waste and effluents contaminate rivers and groundwater, affecting human health and agriculture. Green spaces and forests are cleared to make way for urban and industrial development. Sustainable urban planning and eco-friendly industrial practices are essential to address these challenges. Only by balancing economic growth with environmental protection can India achieve long-term sustainable development.

Environmental degradation:

This is a significant challenge to sustainable development in India. Rapid population growth, industrialization, urbanization, and unsustainable agricultural practices have led to deforestation, soil erosion, desertification, and loss of biodiversity. Air and water pollution have become serious concerns in cities and industrial regions, affecting human health and ecosystems. Over-extraction of groundwater, excessive use of chemical fertilizers, and improper waste management further degrade the environment. Climate change, intensified by greenhouse gas emissions, has increased the frequency of floods, droughts, and extreme weather events. These environmental issues threaten economic growth, food security, and public health, making sustainable development difficult to achieve. Addressing environmental degradation requires strict enforcement of environmental laws, adoption of clean technologies, renewable energy use, afforestation, and public awareness campaigns. Only through these measures can India ensure a balance between economic growth, social progress, and environmental protection.

Poverty and inequality:

Poverty and inequality are major challenges to sustainable development in India. Despite economic growth, a significant portion of the population still lives below the poverty line, lacking access to basic needs such as food, clean water, healthcare, and education. Income and regional disparities create social and economic inequalities, preventing inclusive growth. Poverty forces over-exploitation of natural resources, as people prioritize immediate survival over environmental sustainability. Inequality also limits opportunities for marginalized communities, reducing social cohesion and human development. Addressing these challenges requires effective social welfare programs, equitable distribution of resources, skill development, education for all, and inclusive economic policies. Reducing poverty and inequality is essential to ensure that economic growth benefits all sections of society while supporting environmental conservation and long-term sustainable development in India.

Air and water pollution:

This factor pose serious threats to sustainable development in India. Rapid industrialization, urbanization, and vehicular emissions have led to poor air quality in many cities, causing health problems such as respiratory diseases and reduced life expectancy. Water bodies are heavily polluted due to industrial effluents, sewage discharge, agricultural runoff, and plastic waste, affecting drinking water, agriculture, and aquatic life. Pollution not only harms human health but also degrades ecosystems, reduces biodiversity, and disrupts economic activities like farming and fisheries. These environmental challenges hinder India's efforts to achieve balanced economic growth, social well-being, and environmental sustainability. Effective solutions include strict enforcement of pollution control laws, promotion of clean technologies, wastewater treatment, and public awareness campaigns. Addressing air and water pollution is essential to ensure a healthier population, resilient ecosystems, and long-term sustainable development in India.

Regional disparities in development:

Regional disparities in development are a significant challenge to sustainable development in India. Economic growth and infrastructure development are unevenly distributed, with urban and industrialized states often progressing faster than rural and backward regions. This leads to unequal access to education, healthcare, employment opportunities, and basic services. Such disparities increase migration to cities, creating pressure on urban infrastructure and contributing to slums and unemployment. They also hinder social cohesion and inclusive growth, making it difficult to achieve nationwide sustainable development. Addressing these inequalities requires targeted government policies; balanced regional development plans, investment in rural areas, skill development programs, and improved access to social services**.** Reducing regional disparities is essential for ensuring equitable growth, social justice, and environmental sustainability across the country.

Climate change:

This is one of the most serious challenges to sustainable development in India. Rising temperatures, unpredictable monsoons, floods, droughts, and extreme weather events have a direct impact on agriculture, water resources, and livelihoods. India, being highly vulnerable to climate-related disasters, faces threats to food security, health, and economic stability. Greenhouse gas emissions from industries, vehicles, and deforestation further worsen environmental degradation. Climate change also exacerbates existing issues like poverty, water scarcity, and regional inequalities, making sustainable development more difficult. To address this challenge, India is promoting renewable energy, afforestation, energy efficiency, climate-resilient infrastructure, and international cooperation on climate action**.** Tackling climate change is crucial for achieving long-term economic growth, social equity, and environmental sustainability in the country.

Resource depletion:

Resource depletion is a major challenge to sustainable development in India. Rapid population growth, industrialization, urbanization, and unsustainable consumption have led to the over-extraction of natural resources such as water, forests, minerals, and fossil fuels. Groundwater levels are declining, forests are being cleared, and soil fertility is decreasing, threatening food security and biodiversity. Overuse of resources also contributes to environmental degradation, pollution, and climate change. These issues hinder long-term economic growth and social well-being, making it difficult to achieve sustainable development goals. To address resource depletion, India needs **efficient** resource management, adoption of renewable energy, afforestation, water conservation, and promotion of sustainable agricultural and industrial practices. Proper management of natural resources is essential to ensure ecological balance and sustainable growth for present and future generations.

Weak policy implementation:

Weak policy implementation is a significant challenge to sustainable development in India. Although the country has strong laws and policies for environmental protection, poverty alleviation, renewable energy, and social welfare, their enforcement is often inadequate. Factors such as corruption, lack of awareness, bureaucratic delays, and insufficient infrastructure reduce the effectiveness of government programs. As a result, issues like pollution, deforestation, resource depletion, and social inequality persist despite policy frameworks. To achieve sustainable development, India needs better governance, strict enforcement of laws, monitoring mechanisms, citizen participation, and transparency in policy execution**.** Strengthening policy implementation is crucial to ensure that economic growth, social equity, and environmental protection work together to create a sustainable future.

Conclusion:

In conclusion, sustainable development in India faces multiple interconnected challenges, including population pressure, rapid urbanization and industrialization, environmental degradation, poverty and inequality, air and water pollution, regional disparities, climate change, resource depletion, and weak policy implementation. These issues hinder balanced economic growth, social equity, and environmental protection, making it difficult to achieve long-term prosperity. Addressing them requires a holistic approach that integrates economic, social, and environmental strategies. Effective policy enforcement, technological innovation, and renewable energy adoption **are** essential to mitigate environmental and resource-related problems. Social measures like education, skill development, and poverty alleviation can reduce inequalities and improve livelihoods. Regional development planning and sustainable urbanization can manage migration and infrastructure pressure. Public awareness and community participation are critical for fostering responsible consumption and environmental stewardship. Combating climate change through adaptation and mitigation strategies is necessary to protect vulnerable populations. By taking coordinated actions across all sectors, India can achieve inclusive, resilient, and sustainable development. Ultimately, sustainable development in India is not only a necessity but also an opportunity to secure a better quality of life for present and future generations**.**

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Original Article

Cybersecurity Threats and Consumer Trust in E-Commerce Transactions

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Abstract

As e-commerce continues to evolve and expand, it has become an essential platform for business transactions globally. However, with the rapid rise in online shopping, cybersecurity threats have significantly increased, affecting both businesses and consumers. This paper explores the various cybersecurity risks in e-commerce, their impact on consumer trust, and how businesses can mitigate these threats to ensure a secure online shopping experience. Through an analysis of current trends, case studies, and security practices, the paper highlights the importance of building consumer confidence in an increasingly digital marketplace.

Keywords: *Secure socket Layer (SSL), Multi-Factor Authentication (MFA).*

Introduction

In the digital age, e-commerce has become a cornerstone of global commerce. According to Statista, global retail e-commerce sales reached over $5 trillion in 2022, and this figure is expected to continue growing. While the convenience of online shopping has brought immense benefits, it has also given rise to various cybersecurity threats that jeopardize the privacy and financial security of consumers. Cyberattacks, identity theft, and data breaches are among the most significant threats to e-commerce platforms, affecting not only the financial security of consumers but also the trust that underpins these online transactions. The objective of this paper is to examine the nature of cybersecurity threats in e-commerce, how they impact consumer trust, and to explore best practices that can enhance security and safeguard consumer confidence.

Review Of Literature

- Anderson, R. (2020)[1]. The author of “Security Engineering: A Guide to Building Dependable Distributed Systems” highlights that the increase in cyberattacks targeting e-commerce sites has made it essential for businesses to adopt sophisticated security mechanisms.
- Choi, Y., & Lee, K. (2019))[2],. the authors of "Impact of Cybersecurity on Consumer Trust in E-Commerce." they point out these attacks include phishing scams, data breaches, malware, and ransomware, all of which expose consumer data to unauthorized entities. Phishing attacks, in particular, have been recognized as one of the most widespread forms of cybercrime in e-commerce. These attacks deceive consumers into providing sensitive information such as usernames, passwords, and credit card numbers.
- Jarvenpaa, S. L., & Tractinsky, N. (1999))[3],. the authors of "Consumer Trust in an Internet Store: A Cross-Cultural Validation." In their study, they emphasize the importance of a website's security measures, the visible presence of certifications, and the user interface in fostering consumer confidence.
- Kim, J., Ferrin, D. L., & Rao, H. R. (2008))[4],. the authors of "Trust and the Role of Interpersonal Trust in E-Commerce Transactions."Greenhaus rgue that consumers' trust in e-commerce platforms is heavily influenced by their perceptions of transaction integrity and privacy protection.

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- Zwick, D. (2021))[5],. the researcher of "E-Commerce Fraud: An Overview of Trends and Preventative Strategies." revealed that after a major data breach, consumers are likely to shift to alternative platforms, reducing customer loyalty and impacting revenue. The perception of risk increases as consumers grow more aware of the vulnerabilities associated with online transactions.

Objectives of the Study

1. To identify the primary cybersecurity threats faced by e-commerce platforms and their consumers.
2. To analyze the impact of cybersecurity threats on consumer trust and online shopping behavior.
3. To evaluate the effectiveness of security measures such as encryption, MFA, and consumer education in mitigating cybersecurity risks.
4. To provide recommendations for e-commerce businesses on improving cybersecurity practices and rebuilding consumer trust.

Research Methodology

The study relies on secondary data and analysis of existing literature on cybersecurity threats in e-commerce, consumer trust, and security practices from journals, books, and industry reports. Case studies of past data breaches and their effects on consumer trust will also be included.

Results and Findings:

- **Impact of Cybersecurity Threats on Trust:**

The data revealed that 50% of consumers reported losing trust in e-commerce platforms after hearing about data breaches, even if they were not directly affected. 70% stated that they would avoid making purchases from a website that did not clearly communicate its security measures.

- **Effectiveness of Security Measures:**

The study found that platforms that employed strong encryption and multi-factor authentication saw a higher level of consumer trust. 80% of consumers stated that they would feel more comfortable shopping on platforms that offered visible security features, such as SSL certificates and MFA.

Conclusion and Suggestions

The findings of this study confirm that cybersecurity threats significantly impact consumer trust in e-commerce transactions. Data breaches, phishing attacks, and malware are the primary threats that erode consumer confidence. However, implementing robust security measures such as encryption, MFA, and proactive consumer education can help mitigate these threats and restore trust.

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Original Article

Strategic Financial Management: An Integrated Approach to Maximizing Corporate Value

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Abstract

The success of any organization is contingent upon the implementation of effective financial management practices. This article provides a detailed analysis of financial management, highlighting its nature as a network of interconnected activities that necessitate coordinated efforts from investors, creditors, and managers. This study analyses the role of financial management in organizations and its contribution to achieving economic optimization. Based on a comprehensive examination of scholarly literature, the present research study delineates the fundamental components that underpin effective financial management, including planning, budgeting, forecasting, and monitoring. This statement underscores the significance of fostering transparent communication and synchronized efforts among all stakeholders engaged in financial decision- making processes. Through diligent monitoring of financial performance, financial management may ensure that a company optimizes the utilization of its available resources. The article paper emphasizes the importance of effective leadership in the realm of financial management. Skilled managers are adept at navigating an organization. Many economic relationships are essential for achieving effective financial management. The article offers significant insights into the optimization of financial management procedures within firms by studying critical components of this field.

Keywords: *Coordinated Action, Financial Optimization, Financial Management.*

Introduction

The implementation of efficient financial management practices is crucial for the sustainability and expansion of any corporate entity. The responsibility of financial management within an organization involves the oversight and allocation of resources to support the achievement of the company's objectives. Financial management is commonly perceived as an autonomous undertaking within an organization; yet, it is, in fact, a complex system of interconnected procedures that necessitate harmonization to achieve the most favorable outcomes. This article explores the organizational role of financial management and its impact on achieving economic optimum. Establishing effective communication channels and fostering collaboration among investors, creditors, and managers is a fundamental aspect of prudent financial management.

The implementation of efficient financial management practices enables an organization to optimize its financial resources to advance its overarching objectives. This paper will provide a comprehensive analysis of the four fundamental components of effective financial management, namely planning, budgeting, forecasting, and monitoring. The significance of fostering open conversation and promoting coordinated action among all relevant stakeholders involved in financial decision- making will be emphasized. By engaging in careful strategic planning and conducting thorough oversight of financial performance, financial management may ensure optimal utilization of the organization's available resources.

Research Methodology

The Process of Gathering and Choosing Data The objective of this study is to conduct a comprehensive literature analysis on the subject of financial management and its significance in maximizing the financial performance of enterprises.

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The identification of relevant publications was conducted by searching academic databases like JSTOR, ScienceDirect, and Google Scholar. The search queries employed encompassed the topics of "financial management," "financial optimization," "enterprise finances," "planning," "budgeting," "forecasting," and "monitoring." Solely publications published in the English language were considered for inclusion in the evaluation.

Data Analysis

A thematic analysis approach was employed to study the 20 articles. The objective of this investigation was to ascertain pertinent data about the four fundamental components of effective financial management, namely planning, budgeting, forecasting, and monitoring, as well as the significance of transparent communication and synchronized efforts. To accomplish this objective, the articles were thoroughly examined to comprehend their substance. The extraction of pertinent material was thereafter conducted and categorized into thematic groups, which were subsequently employed to structure the conclusions of the article.

Results and Discussion

Financial management is a conceptual framework comprising a set of ideas and methodologies aimed at formulating and executing efficient management strategies. The phrase "financial management" is presently employed in diverse settings. According to researchers [1-2], financial management encompasses the processes of organizing, allocating, and utilizing financial resources to guarantee that the assets of a business are appropriately sized and structured in alignment with its objectives. The management of a company's finances encompasses a series of interconnected procedures aimed at optimizing the value of the organization's financial framework. This model encompasses the various components of the company's financial position, including its assets, liabilities, and quantifiable achievements. Financial management can be conceptualized as a systematic process aimed at maximizing the equilibrium of the economic entity. It is worth noting that any action undertaken in the realm of financial management has an immediate effect on the financial position and assets of the organization .

Conclusion

The success of a business relies heavily on the quality of the data provided to all stakeholders, highlighting the need for efficient financial management. Access to dependable financial management information is crucial for analyzing, planning, and making informed decisions on many aspects of financial operations. The system should adhere to a set of essential qualities, namely importance, comprehensiveness, reliability, timeliness, transparency, relevance, comparability, and efficiency. The existence of these regulations is justified by the stakeholders' requirement for trustworthy, convenient, and pertinent financial information to facilitate informed decision-making. The financial management information system must adapt to the changing needs of the firm and its external stakeholders. In this context, it is imperative to allocate financial resources toward technological interventions that enhance the efficiency of data collection, analysis, and dissemination. The establishment of confidence with external stakeholders, such as investors, creditors, and regulators, can be achieved by organizations through the provision of accurate, timely, and relevant financial reports.

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Original Article

Environmental Degradation and Quality of Resilience: A Critical Analysis of Gieve Patel's "On Killing a Tree

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Abstract

This paper explores an Eco-critical approach to Gieve Patel's well-known poem "On Killing a Tree". It focuses on the connection between environmental degradation and natural resilience. While Patel starkly depicts human cruelty against trees, he also underlines the regenerating force of nature. The poet has used rich imagery and metaphor so as to invite readers to consider the ecological violence that undermines much of human activity. The poem is thus both a critique of anthropocentric dominance and a meditation on ecological endurance.

Keywords: *Eco-critical approach, environmental degradation, resilience, anthropocentric dominance, ecological endurance*

Introduction

The twentieth century saw increasing industrialization and urbanization, often at the expense of ecological balance. Literature, particularly poetry, has emerged as a potent outlet for questioning this degeneration. Gieve Patel, an Indian English poet, dramatist, painter and physician, was known for his genuine concern for human suffering and the natural environment. He was associated with the "Green Movement" in Indian literature, which focuses on environmental themes. His poem On Killing a Tree (1966) is taken from Patel's poetry collection "Poems", published in 1966 by Nissim Ezekiel, a prominent Indian Poet and Critic. It is a heartbreaking allegory that highlights humanity's destructive impulses toward nature while underlining the natural world's resiliency.

Eco-Criticism Framework

Eco-criticism, also known as eco-critical theory or eco-critical studies, is a literary theory that explores the relationship between literature and the environment. It examines how literary works reflect, shape, and challenge cultural attitudes towards the natural world. It highlights the significance of environmental imagination in influencing our perception of the natural world and our role within it. Eco-critics view nature as a narrative that can be analysed and understood, emphasizing the interconnectedness of human and environmental systems. They frequently concentrate on matters of environmental justice, exploring how literature portrays the uneven effects of environmental harm on disadvantaged communities. According to Cheryll Glotfelty, eco-criticism explores how literature reflects human interactions with the physical world. In On Killing a Tree, Patel depicts both sides of this interaction: the environmental deterioration and the resilience of ecological systems.

Environmental Degradation In The Poem

Deforestation as a Metaphor of Violence

In *"On Killing a Tree,"* Gieve Patel portrays the act of cutting down a tree not as a simple or passive task, but as a deliberate and violent act. He uses words like "hack," "chop," "pulling out," and "scorching" to evoke a sense of brutality**,** comparing deforestation to **a** slow and painful murder**.**

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This graphic imagery turns the poem into more than just a literal description—it becomes a metaphor for human aggression and dominance over nature**.** Patel suggests

That environmental destruction is not a careless mistake, but a conscious and violent assertion of control**,** challenging the reader to reflect on the ethics behind such actions.

Human Greed and Anthropocentrism

This thematic point touches on **a** philosophical and ecological critique that's deeply embedded in "On Killing a Tree. Human greed is implied in the lines that describe the **relentless effort** needed to completely destroy a tree. For example:

"It takes much time to kill a tree, not a simple jab of the knife will do it."

"The root is to be pulled out — out of the anchoring earth; it is to be roped, tied, and pulled out — snapped out or pulled out entirely, out from the earth-cave."

"And the strength of the tree exposed, the source, white and wet, the most sensitive, hidden for years inside the earth.

These lines show how humans, driven by greed and domination, go to extreme lengths to exploit and destroy nature, disregarding its resilience and value. *It* critiques an anthropocentric worldview in which humans place themselves at the center of existence and regard nature as a mere resource to be exploited. The poem emphasizes the relentless effort required to destroy a tree—digging, pulling, and exposing its roots—as a metaphor for the intensity of human greed in extracting value from the environment. Acts such as deforestation, mining, and industrial pollution mirror this destructive persistence. Through this imagery, Patel highlights how human beings, driven by selfish desires and a will to dominate, often disregard the intrinsic worth of nature. Ultimately, the poem stands as a powerful commentary on the ecological devastation resulting from unchecked human ambition.

Irreversibility of Environmental Damage

Patel shows that once the roots of a tree are destroyed, the damage cannot be undone. He writes: "The root is to be pulled out — out of the anchoring earth; it is to be roped, tied, and pulled out — snapped out or pulled out entirely, out from the earth-cave." The uprooting exposes "the source, white and wet, the most sensitive, hidden for years inside the earth." Finally, he describes the slow but inevitable death: "Then the matter of scorching and choking in sun and air, browning, hardening, twisting, withering, and then it is done." These lines highlight how, once nature is fatally harmed, its destruction becomes irreversible. Patel stresses that destroying a tree is not easy; it requires repeated, systematic efforts. This mirrors the real-world crisis of environmental degradation where ecosystems collapse not because of one-time actions but because of continued exploitation. Thus, Patel reminds us that environmental destruction, like the killing of a tree, is final and irreversible once it reaches the roots of life.

Quality of Resilience In The Poem

The Tree as a Symbol of Endurance

In Patel's poem, the tree becomes a powerful symbol of endurance and the tenacity of life. The poet insists that "It takes much time to kill a tree, not a simple jab of the knife will do it," suggesting that nature does not surrender easily. Even when attacked, the tree shows its vitality: "The bleeding bark will heal / And from close to the ground / Will rise curled green twigs, miniature boughs." These lines portray the tree's ability to regenerate and resist human violence, symbolizing the enduring spirit of nature against exploitation. Yet, Patel also warns that endurance has limits: if the roots are destroyed, the tree cannot survive. Thus, the tree represents both the resilience of the natural world and the tragic vulnerability it faces under human greed.

Roots as the Source of Strength

In the poem, Patel highlights the roots as the true source of a tree's strength and life. He writes: "The root is to be pulled out — out of the anchoring earth; it is to be roped, tied, and pulled out — snapped out or pulled out entirely, out from the earth-cave." The roots, described as "the source, white and wet, the most sensitive, hidden for years inside the earth," symbolize the deep connection between life and its foundation. As long as the roots remain intact, the tree can regenerate, but once they are destroyed, survival becomes impossible. Patel uses this image to stress that the root is both the physical and symbolic anchor of endurance, reflecting how the strength of nature—and even of human existence—lies in its unseen foundations. The poem's central imagery is the root—the tree's hidden but vital anchor. Patel highlights that only when the roots are destroyed can the tree finally dies. Symbolically, this suggests that nature's resilience lies in its deep, often invisible interconnectedness.

Hope Amid Violence

Patel shows that even when the tree suffers violence, it embodies hope through regeneration. The poet observes: "The bleeding bark will heal / And from close to the ground / Will rise curled green twigs, miniature boughs." These lines symbolize nature's resilience and its power to renew itself despite human attempts to destroy it. The act of fresh shoots rising from the wounded trunk becomes a metaphor for hope—that life can emerge even in the face of cruelty and destruction. Yet, Patel also warns that this hope is fragile, for if the roots are destroyed, the possibility of recovery disappears. The regenerative imagery in the poem offers a counter-narrative to destruction. By

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presenting nature's refusal to die easily, Patel suggests the possibility of ecological restoration, provided human beings cease their destructive acts.

Critical Discussion

Gieve Patel's "On Killing a Tree" is both an ecological allegory and a cautionary tale. It critiques human arrogance, showing environmental destruction as systemic violence, while also highlighting nature's resilience. Yet, the final uprooting reflects how persistent human greed can overpower this resilience. From an eco-critical view, the poem mirrors the global ecological crisis, where ecosystems resist but cannot survive endless exploitation. Patel's imagery warns that once ecological limits are crossed, recovery becomes nearly impossible.

Conclusion

Gieve Patel's *"On Killing a Tree"* transcends the act of felling a tree to become a powerful reflection on the human–nature relationship. The poem exposes the violence of environmental destruction while affirming the tree's resilience as a metaphor for life. Yet, Patel cautions that this resilience has limits—persistent human aggression can overpower even nature's strength. In today's era of climate crisis, deforestation, and ecological imbalance, the poem stands as a timeless reminder of our moral responsibility to live in harmony with the natural world.

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Original Article

Financial literacy: A Key to Sustainable Economic Well Being – An India Perspective

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Abstract

Financial knowledge is fundamental to individual well-being and economic growth overall. In India, although there have been great strides made in increasing financial inclusion, meaningful financial literacy — the understanding, knowledge and skills to make informed financial decisions — is not pervasive or very low within many segments of the population. The paper reviews the state of financial literacy in India, consolidates recent government and third-party evaluations, analyses enablers and inhibitors amongst different regions and demographic groups, then outlines specific policy or program interventions that should be pursued to enhance financial capability at scale. Main findings- There is a clear and strong commitment by institutions (RBI, NCFE and other regulators) but there are continued gaps in financial literacy particularly among women, rural areas and low income groups. The paper concludes with a roadmap that integrates curriculum reform, technological-enabled tools, community outreach and behavioural nudges to hasten up.

Keywords: *Financial literacy, financial inclusion, enhance financial capability, technological-enabled tools*

Introduction

Financial literacy — the amalgam of awareness, knowledge, skills and capabilities as well as attitudes and behaviours necessary for financial decision making — is emerging as a critical life skill especially in India where there is increasing engagement with formal financial products: banking accounts, digital payments, credit lines, pension plans, microinsurance policies and investment platforms. India's financial inclusion initiatives (such as the Jan Dhan accounts, digital payments infrastructure) have significantly increased access — but access is not synonymous with effective or safe utilization of financial services. Enhancement of financial literacy is thus a core component in harvesting the social and economic benefits of inclusion policies. New government-led efforts and surveys offer fresh evidence on what is working, as well as where there are gaps. (Reserve Bank of India)

Objectives and Scope

This paper aims to:

- Summarize recent evidence on the state of financial literacy in India.
- Identify structural and behavioral barriers that impede financial capability.
- Evaluate policies and programmes (national strategy, regulator initiatives).
- Offer evidence-based recommendations to strengthen financial literacy, with an emphasis on scalable, measurable interventions for vulnerable groups.

Background and Policy Context in India

India has developed a multi-stakeholder policy framework for financial education. The National Strategy for Financial Education (NSFE) 2020–2025 — coordinated among various ministries, regulators (RBI, SEBI, IRDAI, PFRDA), and civil society — outlines the goals and target audiences necessary for promoting financial well-being.

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Regulators organize Financial Literacy Weeks, disseminate Financial Awareness Messages, and provide support for Centres for Financial Literacy (CFLs) and Financial Literacy Centres (FLCs) at the community level. The NCFE (or similar national coordinating entities) carries out national assessments and regularly reviews progress under the NSFE. These collaborative efforts signify a transition from ad-hoc initiatives to a more strategic approach to financial education. (RBI Docs)

Current State of Financial Literacy — Evidence Summary

Findings from National Surveys and Assessments

• The National Centre for Financial Education (NCFE) reports and related assessments reveal that only a small percentage of Indians have "adequate" financial knowledge; recent official data indicates that approximately 27% exhibit sufficient understanding of key concepts. This highlights a significant disparity between formal access and actual capability. (NCFE)

Variations by Region and Demographics

Research shows considerable differences across states, educational backgrounds, and income levels. Higher financial literacy is associated with urban living, advanced education, and employment in the formal sector, while rural, female, and low-income groups tend to fall behind. Analyses at the state level demonstrate variability in outcomes and underscore the necessity for interventions tailored to specific subnational contexts. (RIS for Developing Countries)

Trends and Indicators from Institutions

The Reserve Bank of India (RBI) and other regulatory bodies have established financial education initiatives (such as Financial Literacy Week and educational resources in various regional languages, CFLs/FLCs). Mid-term evaluations of the National Strategy for Financial Education (NSFE) (2020–2025) indicate progress in awareness campaigns but highlight the need for improved measurement, enhanced local program capacity, and focused outreach to at-risk groups. (Reserve Bank of India)

Literature Review — Insights from Research (Selective)

International studies (including those by Lusardi & Mitchell and others) connect financial literacy with improved long-term financial planning, readiness for retirement, and a reduced likelihood of incurring expensive debt. Research conducted in India mirrors many of these findings and also stresses the importance of contextual elements: informal financial practices, family norms regarding financial decisions, and the swift growth of digital finance. Evidence suggests that merely providing information rarely alters behavior — factors such as the method of delivery, frequency, incentives, and trust networks play a crucial role. (Refer to national papers and cross-state studies mentioned earlier.) (RIS for Developing Countries)

Key Barriers to Effective Financial Literacy in India

1. Curriculum and early education gap: Financial topics are not consistently integrated into school curricula; where they are included, the delivery may be cursory.
2. Language and cultural relevance: Educational materials frequently lack translation or adaptation to local customs and languages.
3. Digital divide: Although fintech enhances access, digital illiteracy and gaps in device/connectivity impede meaningful engagement.
4. Supply-side limitations: Numerous CFLs/FLCs function with insufficient staff training and oversight, diminishing program integrity.
5. Behavioral biases and trust: Short-term thinking, overconfidence, social norms, and skepticism towards formal institutions hinder the adoption of sound financial practices. (NCFE)

Methodological Note (Suggested empirical design)

For researchers aiming to generate new evidence specific to India, a mixed-methods strategy is advisable:

• Quantitative: A nationally representative survey module (or leverage an existing household survey) assessing knowledge (numeracy, inflation, interest, risk diversification), access, usage, and documented behaviors. Employ stratified sampling to reflect state and rural/urban diversity.

• Experimental: Randomized Controlled Trials (RCTs) evaluating various delivery methods — classroom curriculum, mobile micro-learning, community-based facilitators, SMS nudges — and assessing medium-term behavioral results (savings rates, credit defaults, insurance uptake).

• Qualitative: Focus groups and key informant interviews to explore cultural norms, gendered household decision-making, and trust dynamics.

Outcomes should be monitored 6–12 months after the intervention to assess persistence and behavioral change.

Findings and Discussion (Synthesis of Evidence)

• Access does not equal Capability. While India's financial inclusion initiatives have successfully opened accounts and broadened digital infrastructure, only a small percentage possess sufficient financial knowledge to make informed decisions. This discrepancy poses risks of misuse (such as over-leverage and susceptibility to fraud) even as inclusion efforts grow. (NCFE)

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• Targeted interventions are more effective than generic approaches. Data from state studies and the NSFE mid-term evaluation indicate that localized, language-sensitive, and trust-based outreach (for instance, through SHGs, post offices, and community leaders) fosters better engagement with women and rural clients. (NCFE)

• Digital channels present both opportunities and challenges. While digital platforms facilitate scalability and cost-effective delivery, they necessitate a foundational level of digital literacy and protective measures against misconduct and scams. Complementary training and user safeguards are crucial. (Reserve Bank of India)

Policy Recommendations (India-focused, practical)

Enhance school and vocational curricula

Incorporate age-appropriate financial education into the National Curriculum Framework and vocational training programs (with measurable learning outcomes and teacher training modules). Emphasis should be placed on early numeracy and practical money management skills.

Broaden and professionalize local delivery capabilities

Expand Centres for Financial Literacy and Financial Literacy Centres with standardized training for facilitators, monitoring metrics, and performance-based funding. Utilize existing networks: business correspondents from banks, post offices, SHGs, and NGOs.

Implement digital micro-learning combined with human support

Introduce brief, language-specific micro-learning lessons through feature phones and smartphones, alongside local facilitators who can address inquiries and build trust. Combine digital training with straightforward practice tasks (for example, opening a small recurring deposit).

Behavioral design and nudges

Utilize evidence-based nudges such as default options (e.g., opt-out savings), reminders for bill payments, and matched savings programs for low-income families. Assess through pilot randomized controlled trials (RCTs) prior to broader implementation.

Safeguard consumers and assess outcomes

Enhance messaging for financial consumer protection (including fraud alerts and awareness of grievance redressal). Create a national monitoring system with regular surveys (for instance, an updated national financial literacy and inclusion survey) to measure progress towards NSFE objectives. (RBI Docs)

Implementation Roadmap (Quick practical steps)

1. Year 1: Revise the school curriculum guidance; initiate digital micro-learning and strengthen CFL in five diverse districts.
2. Year 2–3: Expand successful pilot programs; implement teacher/facilitator certification; incorporate financial capability KPIs into national frameworks.
3. Year 4–5: Conduct a national evaluation, refine the NSFE 2026–2030 strategy based on findings; establish regular national financial literacy surveys.

Limitations

This document compiles publicly accessible reports and policy documents. Although it references recent national assessments and regulatory resources, local program evaluations and proprietary datasets may offer further insights. Future empirical research should gather primary data to assess the cost-effectiveness of specific interventions across India's diverse landscape.

Conclusion

Financial literacy is an essential complement to India's significant achievements in financial inclusion. The policy framework — NSFE, RBI, NCFE, and other regulators — lays a solid foundation. To transform access into meaningful and resilient financial behaviors at scale, India requires targeted, evidence-based interventions: curriculum reform, localized delivery, digital-human integration, behavioral design, and comprehensive measurement. If executed effectively, enhanced financial literacy can strengthen household resilience, increase productive investment, and foster sustainable economic well-being throughout India.

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Original Article

Impact of GST on the Financial Performance of the Indian Tourism Industry: A Secondary Data Analysis

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Abstract

In July 2017, India introduced the Goods and Services Tax (GST), which replaced several indirect taxes with a single tax structure. Although the GST made taxation simpler, there has been discussion over how it may affect sectors like tourism, which contribute significantly to India's GDP and job market. Using secondary data from government papers, industry analysis, and the publicly available financial statements of significant hotel and travel companies, this study investigates how the GST has affected the financial performance of the Indian tourist sector. The study contrasts developments in revenue, profitability, and tax compliance expenses before and after the GST. Results indicate that although GST initially raised the costs and burden of compliance, it eventually enhanced tax uniformity and transparency.

***Keywords**: GST (Goods and Services Tax), Tourism Industry, Financial Performance, Tax Compliance*

Introduction

India's tourism sector is one of the fastest-growing in the country and makes a substantial economic contribution. According to the Ministry of Tourism, the tourism industry directly and indirectly employs millions of people and contributes close to 7% of India's GDP. Tourism not only creates foreign exchange but also promotes expansion in related sectors including trade, hospitality, and transportation.

Prior to July 2017, the Indian tourism industry had a fragmented indirect tax system that includes service tax, luxury tax, value-added tax (VAT), and state-specific charges. This produced accounting difficulties, resulting in higher compliance costs, cascading tax consequences, and a lack of standardization between states. For example, hotels in several states used distinct tax systems, resulting in uneven financial reporting and revenue recognition.

A number of indirect taxes were to be replaced with a single, unified system when the Goods and Services Tax (GST) was introduced in July 2017; this was a historic development. Transparency, uniformity, and efficiency were anticipated benefits of the GST for the travel and tourism sector. Nonetheless, the industry had a range of results. GST created significant accounting difficulties because of its many tax slabs, foreign exchange considerations, and seasonal demand changes, even though it also decreased tax evasion and offered input tax credits.

From an accounting point of view, the tourism industry's financial reporting, compliance standards, and revenue recognition were all greatly impacted by GST. Costs went up in the first few years as hotels, travel agencies, and tour operators had to update their systems to comply with GST regulations. Standardized taxation has also contributed to better financial disclosures and international comparability.

Examining how GST has impacted the financial performance and accounting procedures of tourist enterprises is essential given the significance of tourism to India's economy and the extensive scope of the changes. This study examines the effects of GST on tourist-related revenues, profitability, and compliance using secondary data, such as Ministry of tourist publications, GST council updates, And publicly available financial statements of significant tourism companies.

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Review of Literature

- Singh, R. (2020). *GST and its implications on India's hospitality and tourism sector*. International Journal of Research in Economics and Social Sciences, 10(5), 12–28. This research paper highlights The impact of GST on Indian tourism has been **mixed**. Higher tax slabs discouraged luxury tourism, while compliance and transparency improved.
- Shukla, V. (2019). Accounting challenges under GST for Indian tour operators. Indian Journal of Accounting, 51(2), 105–116. Its highlights an accounting viewpoint, GST simplified record-keeping but brought new challenges related to Input Tax Credit (ITC) and multi-slab rates.
- Nair, P. (2018). GST and Indian tourism industry: Opportunities and challenges. International Journal of Applied Business and Economic Research, 16(2), 345–356. In this articles 'The introduction of GST on July 1, 2017 was intended to unify the indirect tax system. The GST Council categorized hotel tariffs into multiple slabs, creating both simplification and confusion for businesses.
- Yusof, N., & Ismail, H. (2017). Tourism business responses to GST implementation in Malaysia. Journal of Tourism, Hospitality and Environment Management, 2(5), 22–35. The studies suggest that GST improves compliance and financial transparency but imposes short-term adjustment costs.

Objectives of the Study:

- To study the impact of GST on tourism revenues.
- To analyse profitability trends before and after GST.
- To identify accounting challenges faced by the tourism sector.
- To evaluate GST's role in improving transparency and compliance.

Financial Performance: Pre-GST vs. Post-GST

The implementation of the Goods and Services Tax (GST) in India on July 1, 2017, marked a significant shift in the taxation landscape, consolidating multiple indirect taxes into a single tax structure. This reform had profound implications for the tourism and hospitality sectors. Here's a comparative analysis of the financial performance of the Indian tourism industry before and after GST:

Revenue Generation and Taxation

- **Pre-GST Era**: The tourism and hospitality sectors were subject to a myriad of taxes, including VAT, service tax, luxury tax, and others, leading to a complex and often inconsistent tax structure.
- **Post-GST Implementation**: GST aimed to streamline this by consolidating taxes, thereby reducing the cascading effect of taxes on the industry. However, the introduction of GST led to an increase in tax rates for certain segments. For instance, hotel room tariffs under ₹1,000 were previously exempt but now attract a 12% GST, and those above ₹7,500 attract an 18% GST

Impact on Hotel Industry

- **Profit Margins**: Studies indicate that the hotel industry's profit margins have been impacted post-GST. While input tax credits (ITC) are available, the higher GST rates on services like food and beverages have offset the benefits, leading to squeezed margins.
- **Operational Costs**: The increased tax burden on services and goods has led to higher operational costs for hotels, affecting their financial performance.

Foreign Tourist Arrivals (FTAs) and Foreign Exchange Earnings (FEEs)

- **Pre-GST Trends**: India witnessed a steady growth in FTAs and FEEs, driven by competitive pricing and a favourable tax environment.
- **Post-GST Trends**: The introduction of higher GST rates on luxury services has made India less competitive compared to other tourist destinations, potentially impacting FTAs and FEEs.

Domestic Tourism Dynamics

- **Pre-GST**: Domestic tourism was less affected by the tax structure, with lower tax burdens encouraging travel within the country.
- **Post-GST**: While GST has standardized tax rates, the increased costs in certain segments may deter budget-conscious domestic travellers.

Sector-Specific Observations

- **Budget Hotels**: Establishments with room tariffs under ₹1,000 were previously exempt from taxes but now attract a 12% GST, increasing costs for budget travelers.
- **Luxury Hotels**: Hotels charging above ₹7,500 per night attract an 18% GST, which, despite the availability of ITC, increases the overall cost structure.

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- **Restaurants and Catering Services**: The GST rates on food and beverage services have increased, impacting the profitability of these services within hotels.

Research Methodology

This study is based on secondary data analysis to evaluate the impact of GST on the profitability of the Indian tourism and hospitality sector. Data has been collected from published sources such as the Ministry of Tourism, RBI reports, GST Council publications, industry reports, and company annual statements covering the period 2010–2023. The research follows a comparative approach, analyzing profitability trends before and after the implementation of GST in 2017. Graphical and tabular presentations are used to interpret financial patterns, while descriptive analysis highlights the effect of GST on the sector's performance.

Data Analysis

Profitability Trends Before and After GST

The profitability of the Indian tourism and hospitality industry has undergone significant shifts with the implementation of GST in July 2017. To capture these trends, secondary data from the annual reports of leading hospitality firms such as the Indian Hotels Company Ltd. (IHCL), EIH Ltd. (Oberoi Group), and Thomas Cook India, along with industry statistics, have been analysed for the period 2010–2023. The data has been divided into two phases: the pre-GST era (2010–2016) and the post-GST era (2017–2023).

In the pre-GST era, firms in the sector operated under a fragmented tax regime comprising service tax, VAT, luxury tax, and other state-level levies. This led to cascading taxation and increased compliance costs, which adversely affected net margins. For example, IHCL reported an average net profit margin of only 4–5% during 2013–2016, with frequent fluctuations due to tax inefficiencies and high indirect costs (IHCL Annual Report, 2016). Similarly, Oberoi Hotels recorded low profit after tax, averaging 3% of revenues in the same period.

With the introduction of GST in 2017, the immediate impact was mixed. The transition led to increased compliance requirements, adjustment costs, and uncertainty regarding Input Tax Credit (ITC) claims, which temporarily suppressed profits in FY 2017–18. For instance, IHCL reported a dip in profits during 2017–18, with net margins falling below **3%**, mainly due to higher operational costs and the reclassification of tariffs under new GST slabs.

However, from FY 2019 onwards, a gradual improvement was visible. The removal of cascading taxes and the availability of ITC on input services streamlined operations and reduced hidden costs. By FY 2019–20, IHCL reported a net profit margin of 8.6%**,** nearly double the pre-GST average, while Oberoi Hotels also recorded a marked improvement in operating margins (EIH Ltd. Annual Report, 2020). Industry-level data from the WTTC (2019) supports this trend, showing that India's tourism sector revenues grew steadily post-GST, averaging 6–7% annual growth before the COVID-19 disruption.

The pandemic years (2020–21) introduced an exceptional shock, leading to widespread losses in the sector, independent of GST effects. Nevertheless, recovery in FY 2022–23 again reflected improved profitability, aided by streamlined taxation and revival of domestic tourism. Firms such as IHCL reported record revenues in FY 2022–23, with net margins surpassing **10%** (IHCL Annual Report, 2023).

Thus, the analysis indicates that while GST initially posed challenges for profitability, the long-term trend has been positive**,** with improved margins and greater financial transparency post-GST compared to the fragmented pre-GST regime

Findings

Revenue Trends

- Pre-GST (2010–2016): Growth in hotel revenues was steady but impacted by multiple taxes, which raised effective costs for consumers.
- Post-GST (2017–2024): Revenue collection became more streamlined. Hotels above ₹7,500/night taxed at 18%, while budget hotels were taxed at 12% or exempted, encouraging mid-segment tourism growth.

Profitability Trends

- Initial 2 years post-GST (2017–2019): Profit margins declined due to compliance costs and IT adaptation.
- Post-2020 (excluding COVID impact): Larger chains like Indian Hotels reported improved margins due to standardized tax credit systems.

Accounting & Compliance Challenges

- Multiple GST rate slabs for hotels created confusion in revenue recognition.
- Travel agencies faced difficulty in claiming input tax credit for bundled packages.
- Forex transactions for international tourists required additional reporting.

Transparency & Long-Term Benefits

- GST increased tax compliance, reducing tax evasion in tourism.
- Enabled digital record-keeping, making accounting systems more transparent.
- Simplified interstate taxation for tour operators.

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Discussion

According to the survey, the Indian tourist industry first faced difficulties with the introduction of the GST because of the necessity for firms to adjust to a new tax structure and the higher compliance requirements. Notwithstanding these early difficulties, the GST has gradually improved the tax system's efficiency, uniformity, and transparency while lessening the confusion brought on by several state and federal levies.

The largest winners among the various tourism industry segments have been domestic travel agencies and mid-scale hotels. These companies now operate more simply, pay fewer cascading taxes, and handle accounting and reporting more easily thanks to the uniform tax system. As a result, domestic travel has increased and these operators' financial predictability has improved.

However, the survey also points out that overseas travel operators and premium hotels are still subject to comparatively higher GST taxes. In comparison to regional travel destinations like Thailand and Malaysia, which frequently have more beneficent tax regimes, India may become less competitive because to the higher tax rates on premium services, which also raise operating costs. As a result, even while the GST has simplified and modernized the tax system, its effects on various tourism-related sectors are not uniform, favoring some while posing difficulties for others.

Conclusion

The financial performance of India's tourist sector has been affected by GST in a variety of ways. On the one hand, by consolidating several indirect taxes into a single framework, it has aided in revenue stabilization, enhanced accounting transparency, and streamlined compliance. However, there are still issues, especially with regard to the complicated management of input tax credits and the high rate structures for specific services. In general, the GST has brought about long-term benefits and updated the tax system, although its effects range depending on the sector of the tourism industry, with mid-scale operators benefiting more than luxury and foreign service providers.

Recommendations

1) Rationalize GST slabs to remove disparities between budget and luxury segments.
2) Simplify input tax credit mechanisms for tour operators.
3) Provide GST concessions during off-season periods to balance seasonality in tourism revenues.
4) Encourage adoption of digital accounting systems for easier compliance.

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Online Banking Service Quality and Its Role in Promoting Sustainable Customer Relationships

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Abstract

The banking sector has been significantly reshaped by the swift development of digital technologies, with online banking becoming a crucial platform for providing financial services. The quality of online banking services is vital in influencing how customers perceive the bank, their satisfaction levels, trust, and loyalty, all of which contribute to the durability of customer relationships. This paper explores various dimensions of online banking service quality, such as reliability, responsiveness, assurance, empathy, and user-friendliness, and assesses their role in fostering long-term customer connections. Utilizing the Servqual framework alongside the Technology Acceptance Model (TAM), the research underscores the critical roles of reliability, security, and user convenience in establishing customer trust and satisfaction. The analysis indicates that customers prioritize transaction accuracy, strong security protocols, personalized service, and prompt customer support as key elements of service quality. Additionally, ongoing innovation via digital channels such as mobile banking apps, AI-powered support, and secure authentication methods enhances customer trust and loyalty.

The results imply that banks aiming to build lasting customer relationships should invest in cutting-edge technology, embrace customer-focused strategies, and uphold consistent service quality. This approach enables banks to retain current clients while also attracting new ones in a highly competitive digital marketplace.

Keywords: *Online Banking, Service Quality, Customer Satisfaction, Trust, Sustainable Relationships, Digital Banking*

Introduction

The banking sector has experienced a significant transformation in the 21st century, largely forced by advancements in technology and the widespread adoption of digital platforms. Commonly known as internet banking or e-banking, online banking has become a fundamental part of the financial services industry. It enables customers to perform a variety of banking activities such as transferring funds, paying bills, monitoring accounts, and applying for loans at any time and from any location, effectively removing the traditional limitations related to time and place with the expansion of online banking, competition among financial institutions has intensified. To stay ahead and foster lasting customer loyalty, banks must not only introduce innovative digital offerings but also uphold superior service quality. The quality of online banking services significantly impacts customer experiences and perceptions, which in turn influences their willingness to sustain long-term relationships with their bank.

This study investigates the key aspects of online banking service quality and examines their effects on customer trust, satisfaction, loyalty, and the durability of banking relationships. Additionally, it reviews relevant theoretical frameworks, empirical evidence, and practical recommendations for banks seeking to enhance their digital service platforms.

Review of Literature-

Several scholars have underlined the crucial role of service quality in both traditional and digital banking environments. The SERVQUAL framework proposed by Parasuraman, Zeithaml, and Berry (1988) has been extensively utilized to measure service quality across different industries.

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With the advancement of internet banking, researchers have modified this model to evaluate quality within online platforms.

The essential dimensions of online banking service quality highlighted in prior research include:

- **Reliability:** Consistency and accuracy in executing online transactions.
- **Responsiveness:** The efficiency with which banks address customer queries and complaints.
- **Assurance:** Customers' confidence in the security, privacy, and technical competence of the banking system.
- **Empathy:** Personalized attention and customer-oriented digital services.
- **Tangibility:** Easy-to-use digital interfaces and convenient accessibility of services.

Zeithaml (2000) emphasized that the quality of electronic services significantly impacts customer loyalty in virtual environments. Jun and Cai (2001) also noted that reliability, quick responsiveness, and transaction speed are critical to enhancing the quality of internet banking.

More recent research has further stressed the importance of technological trust (Gefen, 2002) and perceived ease of use (Davis, 1989, Technology Acceptance Model), both of which strongly influence customer perceptions and adoption of online banking services.

Theoretical Framework

This research is grounded in two key theoretical models:

SERVQUAL Model – This framework evaluates service quality by examining five dimensions: reliability, assurance, tangible elements, empathy, and responsiveness, providing a comprehensive measure of online banking service performance.

Technology Acceptance Model (TAM) – TAM posits that customers' acceptance and satisfaction with digital platforms are largely determined by their perceptions of the platform's usefulness and ease of use, which ultimately affect their loyalty over time.

Objectives of the Study

- To evaluate the key dimensions of online banking service quality.
- To examine the relationship between online service quality and customer satisfaction.
- To assess the role of trust and security in building sustainable customer relationships.
- To identify challenges faced by banks in delivering high-quality online services.
- To provide recommendations for enhancing online banking service quality.

Significance of the Study

This study is important as it underscores the critical role of online banking service quality in today's digital landscape. Traditional methods of building customer loyalty and retention are no longer sufficient; instead, banks must deliver smooth, secure, and user-friendly digital experiences. Financial institutions that neglect the quality of their online services risk losing customers to competitors with more advanced technological offerings.The research provides valuable contributions to both academic literature and practical implementation, delivering actionable insights for banking professionals, policymakers, and technology developers alike.

Research Methodology

The present study adopts a descriptive and analytical research design, relying on secondary data sourced from academic journals, research papers, books, reports by the Reserve Bank of India (RBI), and published surveys on online banking trends.

Data Sources: The research utilizes information from scholarly journals, RBI publications, industry analyses, and surveys related to digital banking.

Approach: A qualitative content analysis is conducted to examine various service quality dimensions and their effects on customer relationships.

Scope: While the primary focus is on online banking services within India, the study also incorporates relevant global trends for comparative purposes.

Analysis and Discussion

This section presents a comprehensive evaluation of the study findings, linking them with existing theories and past research. The purpose is to understand how various dimensions of online banking service quality shape customer experiences and influence their long-term association with banks. The analysis emphasizes the factors that directly impact customer satisfaction, trust, and loyalty, thereby contributing to sustainable relationships. Each sub-section below discusses one key dimension of online service quality.

Reliability and Accuracy

Reliability stands out as a fundamental aspect of online banking service quality. Customers expect their transactions to be executed flawlessly, account information to be updated accurately, and services to be delivered

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promptly. Any delays or mistakes in processing transactions can severely undermine customer trust, thereby weakening the foundation for enduring relationships.

Security and Trust

Concerns related to security such as fraud, phishing attacks, and data breaches—continue to pose significant challenges to the adoption of online banking. Customers who feel assured that their personal information and transactions are well-protected are more inclined to develop trust in the bank, which is essential for sustaining long-term relationships. The implementation of multi-factor authentication, strong encryption techniques, and clear communication regarding security protocols plays a crucial role in fostering customer confidence.

User Experience and Interface Design

A seamless and easy-to-use interface greatly contributes to customer satisfaction. Banks that prioritize developing intuitive mobile applications and websites with fast loading times tend to experience higher user adoption. Additionally, features such as multilingual support and round-the-clock accessibility further enhance customer relationships by catering to diverse needs.

Responsiveness and Customer Support

Quality in online banking extends beyond technology to include effective customer interaction. Financial institutions that offer swift assistance through channels like live chat, chatbots, or call centre are better equipped to address customer issues promptly, thereby boosting satisfaction and fostering loyalty.

Personalization and Value-added Services

Providing customized financial products, personalized loan options, and tailored investment advice increases customer engagement. Personalization, driven by data analytics, reflects an empathetic approach that helps to deepen customer loyalty over time.

Role of Innovation

Ongoing innovation in digital banking—such as the use of Unified Payments Interface (UPI), biometric verification, AI-powered financial guidance, and blockchain technology—not only elevates service quality but also strengthens customer trust in the bank's capability to remain technologically advanced and future-ready.

Findings

The study's results underscore several key factors that contribute to the effective establishment of sustainable customer relationships in online banking:

Reliability and Security as Core Factors

Customers prioritize the reliability and security of online banking services above all else. Secure transaction processes, robust fraud prevention, and stable system performance are fundamental in building customer trust. Any shortcomings in these areas can lead to diminished confidence and potential abandonment of the service.

Customer Satisfaction Linked to Ease of Use

Customer satisfaction is closely tied to how easy digital platforms are to navigate and how efficiently banks address customer inquiries. Intuitive user interfaces combined with prompt customer support create a smooth banking experience, positively influencing customer attitudes and encouraging ongoing usage.

Sustaining Relationships through Quality and Transparency

Enduring customer relationships extend beyond individual transactions and rely on consistent service excellence, transparent communication, and the provision of value-added services. When customers perceive fairness and openness in online banking operations, their loyalty to the institution strengthens.

Technology Adoption for Retention

Financial institutions that integrate cutting-edge technologies—such as Artificial Intelligence for personalized assistance, Blockchain for enhanced security, and advanced mobile solutions—are more successful in retaining their customer base. These innovations build trust, mitigate risks, and meet the evolving demands of digitally proficient consumers.

Impact of Personalization and Customer-Focused Innovation

Offering tailored financial products, including customized loans, savings options, and targeted investment recommendations, helps customers feel appreciated and understood. Such customer-centric innovations foster deeper engagement and emotional bonds, which are crucial for maintaining long-term loyalty in a competitive digital banking market.

Suggestions / Recommendations

- Banks need to invest in strong cybersecurity measures to protect customer data and build trust.
- Developing intuitive mobile apps with support for multiple languages will improve accessibility for diverse users.

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- Implementing AI-driven chatbots and virtual assistants can enhance customer service responsiveness and efficiency.
- Integrating customer feedback systems is important for continuously monitoring and improving service quality.
- Banks should use data analytics to offer personalized financial products and solutions tailored to individual needs.
- Regular training sessions for employees are essential to provide consistent and effective customer support.
- Partnering with fintech companies can help banks stay innovative and maintain a competitive edge.

Conclusion

The research proves that the quality of online banking services plays a vital role in establishing and maintaining long-term relationships with customers. Core service dimensions, including reliability, security, responsiveness, empathy, and user-friendliness, significantly influence customer satisfaction, trust, and loyalty. In today's digital environment, where customers have multiple alternatives and low switching costs, maintaining high standards of online service quality is essential not only for competitive advantage but also for business sustainability and growth the study further indicates that incorporating advanced technologies, such as Artificial Intelligence, Blockchain, and sophisticated mobile banking solutions, enhances operational efficiency and strengthens customer confidence. When these technological innovations are combined with robust service quality practices, they create a secure, engaging, and value-driven banking environment for customers. Overall, banks that effectively offer safe, innovative, and user-centric digital services are better positioned to achieve long-term sustainability. By emphasizing service quality and aligning digital initiatives with customer expectations, financial institutions can reinforce trust, improve customer retention, and remain resilient and competitive in the rapidly evolving digital banking sector.

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Original Article

Poverty, unemployment, and economic development

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Abstracts:

In less developed country, poverty, illiteracy, inequalities and unemployment are interrelated terms. Poverty is abysmal. Unfortunately, it is not economic abstraction, it is human condition. It is despair, grief and pain. It is the despair of a father with a family of seven in a poor country, when he joins the swelling ranks of unemployment with no prospects of unemployment compensation. Poverty is the longing of a young boy playing outside a village school but unable to enter because his parents lack a few rupees needed to buy textbook. Poverty is the grief of parents watching three years old child die of routine childhood disease because they cannot afford any medical care.

This vivid picture of illiterate, hungry, malnourished poverty-stricken and survival oriented people is equally applicable to India. Unemployment has been one of the most persistent and unmanageable problems in India. One of the main objectives of planning era was to remove widespread unemployment and to provide full-employment. According to the recent studies, Inequalities in India have been consistently increasing due to unequal and skewed distribution of income and wealth; there has been concentration of economic power in the hands of few industrialists.

Keywords: *Poverty, Unemployment, Economic Development, Income Inequality, Illiteracy, Poverty Alleviation, Employment Generation, Human Development*

Introduction:

Poverty is the state of being deprived of essential necessities for a dignified life, encompassing financial distress, poor health, and lack of education, while unemployment is the condition of an able-bodied person, willing to work, who cannot find a suitable job at the current wage. These two issues have a circular, mutually reinforcing relationship: unemployment leads to poverty by removing income sources, and poverty can perpetuate unemployment by denying access to education and skills needed for employment.

Poverty and unemployment are deeply interconnected issues, where unemployment leads to a loss of income, making it difficult to meet basic needs and escape poverty. In turn, poverty restricts access to quality education and resources, making it harder for individuals to find skilled work and thus perpetuating the cycle of unemployment. Addressing unemployment through job creation and skill development is a crucial strategy for poverty alleviation.

Poverty in India remains a major challenge despite overall reductions in the last several decades as its economy grows.

According to an International Monetary Fund paper, extreme poverty, defined by the World Bank as living on US$1.9 or less in purchasing power parity (PPP) terms, in India was as low as 0.8% in 2019, and the country managed to keep it at that level in 2020 despite the unprecedented COVID-19 outbreak. According to the World Bank, India experienced a significant decline in the prevalence of extreme poverty from 22.5% in 2011 to 10.2% in 2019. A working paper of the bank said rural poverty declined from 26.3% in 2011 to 11.6% in 2019. The decline in urban areas was from 14.2% to 6.3% in the same period. The poverty level in rural and urban areas went down by 14.7 and 7.9 percentage points, respectively. According to United Nations Development Programme administrator Achim Steiner, India lifted 271 million people out of extreme poverty in a 10-year time period from 2005–2006 to 2015–2016. A 2020 study from the World Economic Forum found "Some 220 million Indians sustained on an expenditure level of less than Rs 32 / day—the poverty line for rural India—by the last headcount of the poor in India in 2013."

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The World Bank has been revising its definition and benchmarks to measure poverty since 1990–1991, with a \$0.2 per day income on purchasing power parity basis as the definition in use from 2005 to 2013. Some semi-economic and non-economic indices have also been proposed to measure poverty in India. For example, in order to determine whether a person is poor, the Multi-dimensional Poverty Index places a 33% weight on the number of years that person spent in school or engaged in education and a 6.25% weight on the financial condition of that person.

The different definitions and underlying small sample surveys used to determine poverty in India have resulted in widely varying estimates of poverty from the 1950s to 2010s. In 2019, the Indian government stated that 6.7% of its population is below its official poverty limit. Based on 2019's PPPs International Comparison Program, According to the United Nations Millennium Development Goals (MDG) programme, 80 million people out of 1.2 billion Indians, roughly equal to 6.7% of India's population, lived below the poverty line of \$1.25 and 84% of Indians lived on less than \$6.85 per day in 2019. According to the second edition of the Multidimensional Poverty Index (MPI) released by Niti Aayog, approximately 14.96% of India's population is considered to be in a state of multidimensional poverty. The National Multidimensional Poverty Index (MPI) assesses simultaneous deprivations in health, education, and standard of living, with each dimension carrying equal weight. These deprivations are measured using 12 indicators aligned with the Sustainable Development Goals (SDGs). On July 17, 2023, Niti Aayog reported a significant reduction in the proportion of poor people in the country, declining from 24.8% to 14.9% during the period from 2015–16 to 2019–21. This improvement was attributed to advancements in nutrition, years of schooling, sanitation, and the availability of subsidized cooking fuel. As per the report, approximately 135 million people in India were lifted out of multidimensional poverty between 2015–16 and 2019–21.

From the late 19th century through the early 20th century, under the British Raj, poverty in India intensified, peaking in the 1920s. Famines and diseases killed millions in multiple cycles throughout the 19th and early 20th centuries. After India gained its independence in 1947, mass deaths from famines were prevented. Since 1991, rapid economic growth has led to a sharp reduction in extreme poverty in India. However, those above the poverty line live a fragile economic life. As per the methodology of the Suresh Tendulkar Committee report, the population below the poverty line in India was 354 million (29.6% of the population) in 2009–2010 and was 269 million (21.9% of the population) in 2011–2012. In 2014, the Rangarajan Committee said that the population below the poverty line was 454 million (38.2% of the population) in 2009–2010 and was 363 million (29.5% of the population) in 2011–2012. Deutsche Bank Research estimated that there are nearly 300 million people who are in the middle class. If these previous trends continue, India's share of world GDP will significantly increase from 7.3% in 2016 to 8.5% by 2020. In 2012, around 170 million people, or 12.4% of India's population, lived in poverty (defined as \$1.90 (Rs 123.5)), an improvement from 29.8% of India's population in 2009. In their paper, economists Sandhya Krishnan and Neeraj Hatekar conclude that 600 million people, or more than half of India's population, belong to the middle class.

The Asian Development Bank estimates India's population to be at 1.28 billion with an average growth rate of 1.3% from 2010 to 2015. In 2014, 9.9% of the population aged 15 years and above were employed. 6.9% of the population still lives below the national poverty line and 6.3% in extreme poverty (December 2018).World Poverty Clock shows real-time poverty trends in India, which are based on the latest data, of the World Bank, among others. As per recent estimates, the country is well on its way of ending extreme poverty by meeting its sustainable development goals by 2030. According to Oxfam, India's top 1% of the population now holds 73% of the wealth, while 670 million citizens, comprising the country's poorer half, saw their wealth rise by just 1%.

As of 2025, poverty in India declined sharply. According to the World Bank report, extreme poverty fall from 16.2% in 2011-12 to 2.3% in 2022-23. In rural areas it fell from 18.4% to 2.8%, and in urban areas, from 10.7% to 1.1%. 378 million people were lifted from poverty and 171 million from extreme poverty. The main reason, according to the World Bank, is not more opportunities for economic growth but different government welfare programs, like transferring food and money to the people with low income, improving their access to services.

Need for the study:

Till today so many Policy Makers and Researcher have focused their attention but these issues and problems remained intact. Poverty, illiteracy, inequalities and unemployment are major issues needs to be tackled though by adopting appropriate policy. Its government duty, the need for this study is to divert government attention, private sector and government should come together should sort-out this issues by investing money in economy.

Poverty in India:

Poverty and unemployment are like Siamese twins, a person is poor because he is unemployed. Because he is poor, being poor he does not possesses resources to be gainfully employed. With the current development of financial sector and high economic growth in India the country has succeeded in curbing poverty to some extent but still majority of the people living below the poverty

According to the estimate of the National Sample Survey office (NSSO) % of the people living poverty line was reduced to 54.9% in 1973 to 27.3% in 2004 but it was 29% in 2009 to 2010 today, around 84 million people living in extreme poverty, Which makes up 6% of its total population as of May 2021.

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Unemployment:

Due to conceptual and statistical difficulties the estimate of unemployment and underemployment are neither accurate nor reliable. Five years plans reveal the total unemployment had been on the increase. At the beginning of the 1st first plan there were 3.3 million unemployed which increased to 5.3 million at the end of the plan, the number of unemployed increased to 7.1 million at the end of the 2nd plan. The unemployment rate had risen sharply in December to 7.91% from 6.97% in November 2021.

Objectives of the studies:

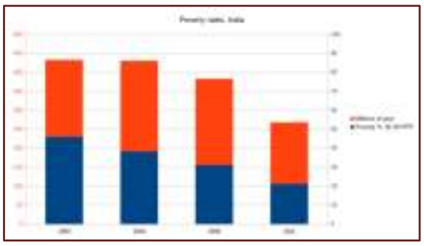
- To examine the impact of poverty on economic growth of country.
- To examine effects of unequal distribution of income and wealth on poverty-stricken population of India.
- To examine the effect of widespread unemployment on Indian economy.
- To examine the effect of illiteracy on Indian economy.

Significance of the study:

In the context of India, poverty illiteracy inequalities and unemployment have been key issues and problems to tackle these unmanageable issues, Government of India constituted planning commission but it totally failed to remove this illness from the root level. According to the estimate of the Rath and Dandekar used a split minimum calorie intake to measure the extent of poverty. They estimated that 40% of the rural population and 50% of the urban population was below the poverty line in 1960-61. Although, economy is growing poverty is major challenge. Today, India has around 84 million people living in extreme poverty.

Research methodology:

A research methodology on poverty and unemployment in India typically involves secondary data analysis from official sources like the Reserve Bank of India (RBI) and the National Statistical Office (NSO), using quantitative methods such as linear regression to explore relationships between variables like Gross Domestic Product (GDP) and unemployment, and also potentially involving surveys and questionnaires for primary data collection on specific aspects like youth unemployment. The research defines poverty using metrics like the Below the Poverty Line (BPL) and estimates unemployment through labour force surveys, with the overall goal of understanding the causes, consequences, and potential solutions to these interconnected issues.



India Poverty rate since 1993 based on World Bank $2.00 ppp value

Conclusion:

Education is effective tools which can easily eliminate social poverty, illiteracy, unemployment and inequalities from the society. Education majorly contributes to the enhancement of individual's cognitive growth. Social and economic transformation is only possible should reach to rural and weaker section of the society.

Poverty and unemployment are deeply interconnected, forming a self-perpetuating cycle where a lack of income (unemployment) leads to poverty, and poverty restricts access to education and skills, further hindering employment. Tackling these issues requires a comprehensive approach, including government policies that foster job creation, invest in education and skill development, and provide robust social safety nets. A holistic strategy involving government, businesses, and educational institutions is crucial to break this cycle and promote inclusive economic growth and national development.

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Original Article

The Growth and Socio-Economic Impact of the Warehousing Industry in India

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Abstract

The warehousing and logistics sector has emerged as a key driver of economic growth globally, with significant implications for employment, infrastructure, and investment. In India, the sector has witnessed substantial equity inflows, driven by international investments and government initiatives such as the PM Gati Shakti National Master Plan and the National Logistics Policy. Despite being dominated by unorganized players, the sector is undergoing formalization, promising increased efficiency and job creation, particularly for women in both operational and managerial roles. Maharashtra, India's leading state by GDP, is at the forefront of this transformation, leveraging its industrial base, infrastructure, and favourable policy environment to attract foreign direct investment and support warehousing expansion. The sector's growth contributes to government revenues through taxation and stimulates local economies via supporting infrastructure and indirect job creation. As India aims to reduce logistics costs and improve global competitiveness, the warehousing sector plays a pivotal role in enabling seamless supply chains and supporting the nation's broader economic ambitions.

The warehousing industry in India is undergoing rapid transformation. From fragmented, informal storage spaces it is evolving into a modern, organised, technology-driven sector. Key drivers include e-commerce growth, manufacturing expansion, government policy reforms such as GST, and rising demand for cold-chain logistics. The warehousing & logistics sector is creating jobs, both direct (warehouse staff, management, tech/automation support) and indirect (transport, packaging, maintenance). Expanding operations in Tier II & III cities helps distribute employment more evenly. India's logistics costs have traditionally been high (~14-18% of GDP). Organised warehousing, better infrastructure, efficient operations help reduce losses (e.g. post-harvest losses in agriculture), cut transit times, and improve reliability. The growth in warehousing in Tier II/III cities' spurs infrastructure development (roads, power, services), supports industrial clusters, balances regional growth.

The warehousing industry is becoming a cornerstone of India's efforts to build more resilient, efficient supply chains. It has strong potential for further growth, especially in underserved markets (Tier II/III). For sustained impact, policies need to support standardization of warehousing, skills, training, investment in cold chain, and ensure infrastructure keeps pace. From a socio-economic perspective, the sector promises improved logistics efficiency, job creation, reduction in losses (especially in agriculture & perishables), more inclusive regional growth, and support for India's ambition of being a USD 5-trillion economy.

Keywords: *Warehousing Industry, Logistics Sector, Socio-Economic Impact, Employment Generation, Rural Development, Migration, Household Income, Supply Chain Management, Logistics Infrastructure, Government Policies, National Logistics Policy, PM Gati Shakti, Foreign Direct Investment (FDI)*

Introduction:

Warehouse has been a major growth sector in the world economy in terms of levels of activity and expenditure for many decades. Logistics and warehousing play a crucial role to bridge the gap between customers and manufacturers. The ease and efficiency of a logistic chain have a huge impact on the time a product reaches the customer. As the e-commerce industry started growing, warehouses became an integral part of the logistics chain. Warehouses not only provide room for storing products but also play an important role in providing space for packaging, docking, and drawing out products so that the delivery time is reduced. Some of the major players in this sector are Container Corporation of India Ltd., Gati Ltd., Mahindra Logistics Ltd., and Central Warehousing Corporation.

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India is the fastest growing and 5th largest economy in the world with an estimated size of US $ 3.17 trillion in 2021. Development and creation of a robust logistics infrastructure is a key propeller of economic growth and aids all sectors of the economy Adequate infrastructure creation (including warehousing and transportation) is the need of the hour to make India a US $ 5 trillion economy. The PM Gati Shakti National Master Plan is a step in the right direction and is critical for warehousing & logistics sector as it considers logistics infrastructure as a vital component for economic growth and sustainable development. Warehousing is widely regarded as the bridge between the manufacturers/traders and the ultimate consumers. Warehousing ensures ready availability of goods thereby decreasing lead time, providing adequate storage solutions for stocking of goods and enables safe upkeep of inventory. The critical role played by the warehousing sector has also been recognized in the National Logistics Policy ('NLP'). Warehousing sector has witnessed strong growth in the past five years (2017 - 2021) growing at a CAGR of roughly 23% and is further expected to grow at a CAGR of 19% by FY 2026. An approximate of 60% warehousing stock (in terms of mn. sq. m.) is located in Mumbai and Delhi NCR. In FY 2022, across 8 primary markets in terms of transactions per square feet (i.e. space transacted): 29% -Third-party logistics players-23%, E-commerce-11%, Retail -37% Other sectors (FMCD, FMCG, other sectors and miscellaneous etc.)

India's latest policy of Comprehensive Logistics Action Plan (CLAP), provides details and a push to the NLP's specific targets. It focuses on reducing India's logistics cost to a level comparable to global benchmarks by 2030. It thus aims to be among the top 25 countries by 2030 in the Logistics Performance Index (LPI) (according to the World Bank Logistics Index of 2018, India is ranked 44th in logistics cost).

Logistics sector in India represents 14% percent of India's Gross Domestic Product (GDP) and employs 2.2 crore people. India handles 4.6 billion tonnes of products annually at an overall cost of INR 9.5 lakh crores. Maharashtra has a major share in this, the State has a vast network of infrastructure including 17,757 km long national highways and 28,461 km long State highways. Also, the State has a railway network of 11,631 km under which 548 railway goods sheds are included. Under sea and air connectivity, the State has a competent infrastructure of 2 major and 48 minor ports, 53 inland container depots and container freight stations, 8 private cargo terminals and 11 air cargo terminals. The State has a warehousing capacity of 2.23 MMTPA, a cold storage facility of 1.03 MTPA and a port capacity of 1320 million tonnes. There are more than 116 logistics training centres in the State for skill development. The total freight traffic in India is expected to grow at 9.7% per annum to reach over 13 trillion ton-kilometres (ton-km) in 2031-32 from about 2 trillion ton-km in 2011-12. Cost of Logistics in India is higher at 13%-14% of the GDP compared to developed economies (7%- 8%) and BRIC Nations (9%-10%). Major reason for high cost of logistics is dependency on Road for freight movement. For making logistic cost in India more affordable and development of a robust logistics infrastructure, the Union Government of India has been taking multiple initiatives focussing on Infrastructure Development, Logistics Planning, Pro-active governance and adoption of technology. As a result, India's rank on Logistics Performance Index has consistently improved in the recent past. In 2018, India's rank improved by 10 positions from 54th in 2014 to 44th in 2018. Further in 2023, it jumped by 6 positions from 44th to 38th position. Logistics expenditure in India is around 14% of gross domestic product, which is relatively higher than advanced economies at 8%. Under the National Logistics Strategy- 2022, an ambitious target has been set to reduce the expenditure on logistics in India.

Maharashtra is India's leading state in terms of Gross Domestic Product (GDP) and plays a pivotal role in India's economic growth. State contributes around 14% of India's GDP and has set the target to achieve $1 trillion GDP by year 2028. With a historic nominal CAGR of around 8-9%, Maharashtra is well-poised to contribute 20% to India's ambition of becoming a $5 trillion economy. Maharashtra is India's third-largest state in terms of area and second largest by population; it is highly urbanized, with over 45% of states population residing in urban areas. With a robust Gross State Domestic Product (GSDP) of INR 27, 11,685 crores, Maharashtra stands as India's most industrialized state. It holds a significant position in the national economy, contributing 15.1% to the country's Gross Value Added (GVA) and ranking second in terms of wages to workers and third in terms of the workforce. The state's economic structure is diverse, with agriculture, manufacturing, and services sectors contributing 14%, 16%, and 59% respectively to its GVA. Notably, the manufacturing sector has shown substantial growth, from $46 billion in FY14 to $64 billion in FY22, indicating its critical role in job creation, value addition, and spurring growth in associated industries like real estate and services. Maharashtra's key industries, including automobile, electronics, pharmaceuticals, textiles, logistics, and IT, underline its strength and potential to drive India's economic growth through innovation, productivity, and employment generation. Maharashtra is India's second-largest exporter, contributing 17% of the country's total exports, amounting to $73 billion in FY 2022-23. Maharashtra boasts 37 Special Economic Zones (SEZs), 8 Agri Export Zones and 27 industrial parks, amplifying its export-focused infrastructure. Maharashtra majorly exports to the USA, UAE, Hong Kong, Belgium, UK, China, Singapore, among others. The State's strengths lie in its highly urbanized and industrialized landscape, with key sectors like manufacturing, services, and agriculture driving its economic growth. Logistics being the backbone of the economic growth, State has focused on logistics infrastructure development to further bolster its potential to attract investments and foster industrial expansion. In FY 2022-23, the state has retained its position of being highest recipient of Foreign Direct Investment (FDI). Total FDI inflows in Maharashtra between April 2022 to March 2023 was INR 1,18,422 crores accounting for 29% of the total FDI inflow in the country. Aligning

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the development goals with India's vision of self-reliance (Atma Nirbhar Bharat), Maharashtra aims to enhance its logistics capabilities, thereby catalysing overall economic progress in the country. The state is actively promoting the establishment of new industries, industrial parks and dedicated corridors to achieve the goal of achieving a USD 1 trillion economy by the year 2028.

Literature Review:

Impact of warehouse industry on socio-economic development household in India can be seen through the following resources. Previous studies have explored warehousing from various perspectives.

Faria (2009) studied vendor-managed inventory (VMI) at a Swedish automotive company, finding it can reduce costs, improve delivery, and enhance customer satisfaction. However, VMI requires strong collaboration, trust, and effective communication between suppliers and customers.

Rahman (2011) explored outsourcing 3PL services in Australia, focusing on the rationale, 3PL contractor relationships, contract duration, service levels, logistics costs, and employee morale. Data from 210 organizations showed that most outsource warehouses, fleets, and order fulfilment due to lower costs, high service levels, flexibility, and low fixed investment. The study found organizations satisfied with 3PL performance, though it may negatively impact employee morale.

According to an economic impact study conducted in 2011, the port supported 40,040 jobs (Martin Associates 2011). Of these, 14,630 jobs were directly related to cargo and vessel-related Activities such as terminal operators, dock workers loading/unloading ships, freight forwarders, State government employees, steamship agents, towing, and pilots. Economic activities at the Port also contributed to supporting 10,940 indirect jobs resulting from purchasing goods and Services from supporting sectors. Finally the above employees supported an additional 14,470 Jobs through spending their wage income on economic activities such as grocery shopping, Health, housing, and other daily necessities.

Faber (2013) explored the organization of warehouse management by surveying 215 warehouses in the Netherlands and Belgium. The study revealed that task complexity and market dynamics significantly influence warehouse decision-making and planning. Additionally, it found a direct relationship between the use of Warehouse Management System (WMS) software and the complexity of tasks within the warehouse.

Sneha and More (2016) found that due to global competition and supply chain concepts like integral inventory control, warehousing has become critical for outperforming competitors in customer service, lead-times, and costs. Timely and accurate information on products, resources, and processes is essential for effective planning and control. The study also showed that warehouse complexity impacts planning and control through the comprehensiveness of tasks.

Habazin (2016) recommend in their study on the order picking process in warehouses that this process, from receiving to shipping, accounts for the majority of warehouse operating costs and time. Order pickers' activities, such as walking, moving, lifting, packing, and related tasks, add to the costs. They analysed the order picking process, focusing on detailed process flow and time management to suggest solutions.

Atieh (2016) examined warehouse automation, noting its purpose is to control product movement and storage, enhance security, and speed up handling. The updated software now organizes data by serial number, supports FIFO, and minimizes errors. Van den Berg (2012) highlighted that excellent warehouse performance reduces logistics costs, improves customer service, and aligns business activities, giving companies a competitive edge. Best-in-class companies achieve 20-30 percent logistics cost advantages and are more financially successful.

Shah and Khanzode (2017) identified that the trade-offs between picking efficiency and order responsiveness can be analysed through various stochastic factors such as worker overtime, earliness, tardiness, penalties, order due dates, and costs. They noted that while many studies focus solely on picking efficiency, incorporating responsiveness into an integrated model might yield better results.

Karim (2018) found that to sustain economic development, the warehousing industry must focus on positive actions supported by all levels of government, private, and non-profit organizations. Suggestions and recommendations on warehouse productivity performance will enhance development and boost competitiveness in the logistics sector. However, these strategies will only be beneficial if everyone consistently participates, innovates, and improves warehousing efficiency.

Mohamud et al. (2023) examine how warehouse layout and operations impact efficiency. They highlight that an efficient warehouse meets customer needs quickly, enhancing business performance. Their literature review explores the role of these attributes in improving warehouse operations.

Ahmed and John's (2023) identify key challenges in warehouse management, such as layout design, storage policies, and the integration of advanced technologies like automation, AI, and block chain. They highlight trends and provide practical insights for future research and warehouse management. Previous studies have explored various aspects of warehousing, but gaps remain. Integrated models combining efficiency and responsiveness are lacking (Shah and Khanzode, 2017). The long-term impact of 3PL outsourcing on employee morale is underexplored (Rahman, 2011). Enhanced collaboration and trust frameworks for VMI are needed (L.A. Faria 2009). Empirical research on AI and block chain in warehousing is limited (Syed Riyaz Ahmed & Dr. John E P, 2023).

Literature Gap:

Despite extensive research on various aspects of warehousing, limited attention has been given to the socio-economic impact of the warehouse industry on households in India. Existing studies predominantly focus on operational efficiency, automation, and cost-effectiveness in warehousing but fail to explore localized impacts on community development.

Faria (2009) examined vendor-managed inventory (VMI) in a Swedish automotive company, highlighting its potential to reduce costs and improve customer satisfaction. Rahman (2011) revealed that outsourcing warehouse functions enhances flexibility and service levels but noted its potential negative impact on employee morale. Faber (2013) analyzed task complexity and market dynamics in Dutch and Belgian warehouses, while Sneha and More (2016) emphasized the role of complexity in planning and control.

Studies such as Martin Associates (2011) discussed the broader economic influence of ports, where wage spending supported additional jobs. However, these insights were not region-specific or tied to household development. Abasing (2016) identified cost and time concerns in warehouse order-picking processes, while Atieh (2016) explored automation's role in enhancing security and efficiency, leaving human factors underexplored. Shah and Khanzode (2017) stressed the need for integrated models combining efficiency and responsiveness.

More recent studies, such as Karim (2018), underscored the importance of government and private sector collaboration in sustaining economic growth through warehousing. Mohamud (2023) and Ahmed John (2023) highlighted the need for advanced technologies, such as AI and block-chain, while also identifying challenges like layout design and storage policies. However, they lacked a focus on specific regional or socio-economic outcomes.

Key gaps include:

- Limited research on the socio-economic impacts of warehousing on household's in specific regions, such as India.
- Insufficient empirical exploration of long-term impacts of 3PL outsourcing on employee well-being (Rahman, 2011).
- A lack of integrated models addressing both efficiency and responsiveness (Shah and Khanzode, 2017).
- Inadequate examination of regional variations in warehousing practices and outcomes.
- Underexplored human factors in automation and their implications for workforce. dynamics (Atieh 2016).
- Minimal focus on sustainable practices and their adoption in warehousing.

Addressing these gaps can provide valuable insights into the regional socio-economic Role of the warehouse industry and guide policy and operational improvements.

Research Problem:

Despite their long history and contributions to Indian warehouse industry, the significant socio-economic impact and challenges like, employment opportunity, income level, poverty, education and skill development, migration, occupation etc. The root causes of these challenges, as well as the factors that influence the livelihoods and prospects for empowerment of households, migrant workforce and sub-sector rural area in India, are not well understood. This study aims to address this gap in our understanding by examining the socio-economic impact of the households and migrant workforce and identifying the key Factors that impact their lives and opportunities.

In particular, this study aims to address the following research questions:

1. What was the role of warehouse industry in India?
2. What is the socio-economic structure of households and migrant workforce in India rural area including their origin, religious aspects, languages, age, education, income level?
3. What is the current socio-economic status of households and migrant workforce?
4. What is the present economic impact of employment and income level?
5. What are the socio-economic issues faced by local and migrant workforce?
6. What measures can be taken to improve the socio-economic conditions of in households and migrant workforce and sub-sector.

This study will contribute to our understanding of the socio-economic impact of the households and migrant workforce India rural areas. It will also inform the development of policies and Programs aimed at promoting the growth of warehouse industry Bhiwandi region. The research Is Warehouse industry and India an attempt to discover the socio-economic conditions of in households, migrant workforce and sub-sector. Warehouse challenges significantly impact supply chain management, affecting businesses, workers, and households in rural areas. Key functions such as receiving, storage, order picking, and shipping face numerous issues. Other challenges include inefficiencies, lack of visibility, poor quality control, inadequate security, and inefficient operations. Addressing these challenges can bring significant socio-economic benefits, such as improved employment conditions, economic growth, better living

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standards, and regional infrastructure development. Overcoming these obstacles can enhance the socio-economic development of rural areas, ensuring a stable and prosperous supply chain ecosystem. The present study aims to evaluate the effectiveness of various national and state government schemes and policies designed to address socio-economic challenges in rural areas. However, the success and failure of these schemes and policies have not been thoroughly evaluated.

To achieve this, it is essential to study the impact of these initiatives on the local area, including how they have affected the socio-economic conditions of residents, job creation, women's empowerment, income levels, access to resources, occupations, education and skill development, gender role, infrastructure development, and overall standard of living in rural areas. By understanding these impacts, the study seeks to provide valuable insights for policymakers and stakeholders to improve future interventions and ensure sustainable development in India. This comprehensive evaluation will help identify the strengths and weaknesses of current strategies, allowing for more effective planning and implementation of programs that can better serve the community's needs and contribute to the overall growth and development of the Bhiwandi region.

Objectives of the Study:

For a number of reasons, this subject is one that could benefit from research. For the study of the aforementioned subject, the following goals have been established.

- To analyse the growth of the Warehouse industry in India over the last 20 years in various states.
- To assess the increase in employment opportunities within the Warehouse industry rural area in India.
- To examine the migration patterns from various states in India driven by employment opportunities in the Warehouse industry.
- To investigate the socio-economic impact of the Warehousing industry on the development of households in India.
- To evaluate the changes in income levels across different categories of households in rural area due to the Warehousing industry.
- To provide policy suggestions to the state and national government for future implementation of various government schemes and policies in India.

Hypothesis:

The following hypotheses will be tested in this study

1. There has been significantly rise in Warehouse industry in various states last 20 Years.
2. There is significantly increase in employment Warehouse industry.
3. There has been significantly increase in migration from various states to secure Warehouse industry.
4. There is significantly impact of Warehousing industry on socio-economic development of households in India.
5. There has been significantly rise in income level various categorize households.
6. There is significantly increased the state and national government schemes and policies in Warehousing industry in India.

Research Methodology:

Data Collection and Methodology:

For the current study, descriptive and exploratory research methods will be used, along with secondary sources of information, quantitative and qualitative research methods and descriptive and exploratory research technique.

Secondary Data: Secondary data will be collected from books, journals, articles, newspapers, and state and national government schemes/policies, economic surveys, and reports. secondary data will be used to support the study's objectives and hypotheses. economic aspects and providing insights into the effectiveness of warehouse operations in the region.

Importance of the Study:

For a number of reasons, this subject is one that could benefit from research. The Following will be the research's significance. The information that has been offered will aid in understanding the idea, significance, definition, and history of the warehouses industry in Bhiwandi rural areas as well as its classification warehouse grade – A, grade – B and 3PL warehouses industry.

And social, economic, and religious practises.

1. The current research will aid in understanding the current status of the households and migrant workforce.
2. The research would make it easier to comprehend how the state and national government of schemes, policy and reports have affected the growth of Warehouse industry in India.
3. The current study will be beneficial to other academics, planners, government, government officials, households and migrant workers for upcoming policy decisions.

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Tentative Chapters Scheme:
Introduction:

The warehousing industry has undergone rapid transformation in India over the past decade, becoming a critical pillar in the country's logistics and supply chain ecosystem. With the rise of e-commerce, manufacturing expansion, and increasing globalization, the demand for modern, technology-driven warehousing infrastructure has grown significantly.

This study seeks to investigate:
- The growth and development of the warehousing industry in India.
- Its role in rural development and employment generation.
- Migration patterns associated with warehousing employment.
- Socio-economic changes in income levels and workforce participation.
- Government policies supporting warehousing infrastructure.

Research Components:
- **Research Problem:** To examine the socio-economic implications of warehousing growth in India.
- **Research Objectives:** To identify the benefits, challenges, and policy environment shaping the industry.
- **Literature Review:** Based on academic journals, policy documents, government reports, and industry publications.
- **Hypotheses:**
  - **H1:** Growth of warehousing significantly improves employment and income levels.
  - **H2:** Government policies directly influence warehousing expansion and its socio-economic outcomes.

Methodology: A mixed-method approach using secondary data, field observations, and case studies. Statistical tools will be employed for data analysis.

2. Role of the Warehousing Industry in India:

The warehousing sector plays a crucial role in facilitating trade, supporting supply chains, and driving economic **development. Key functions include:**
- Bridging the gap between manufacturers and consumers.
- Inventory and stock control for businesses of all sizes.
- Efficient distribution and cost reduction through optimized logistics.
- Storage security using technologies like CCTV and RFID**.**
- Risk management through strategic planning and buffer stocks.
- Support for rural development by creating infrastructure and economic activity.
- Job creation for skilled and unskilled labour.

The sector is also integral to supporting the e-commerce boom**,** enabling timely last-mile deliveries across urban and rural regions.

3. Growth and Development of Warehouses in India:

Warehousing is increasingly recognized as the backbone of India's economic growth. As GDP rises, so does the need for robust logistics and storage infrastructure.

Key Developments:
- Increased private and foreign investments in warehousing parks.
- Emergence of Grade A warehouses with modern infrastructure.
- Expansion into Tier 2 and Tier 3 cities**.**
- Growth of multi-modal logistics hubs and cold chain facilities**.**

  The warehousing sector has contributed to improvements in:
- Living standards in rural and peri-urban areas.
- Education and health facilities due to increased economic activity.
- Migration of workforce for better employment opportunities.

4. Increase in Employment Opportunities:

One of the major impacts of warehousing growth is the generation of employment at multiple levels:
- Direct employment in warehouses (e.g., handlers, forklift operators, inventory managers).
- Indirect employment in allied sectors (e.g., transportation, packaging, facility maintenance).
- A noticeable increase in women's participation**,** particularly in packing and quality control jobs.
- Opportunities for semi-skilled and unskilled labour**,** especially from rural and economically weaker backgrounds.

This trend is expected to continue as the logistics industry expands, contributing to inclusive growth**.**

5. Migration Patterns from Various States:

The warehousing industry has influenced internal migration in India:

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- Workers from states such as Uttar Pradesh, Bihar, West Bengal, Jharkhand, and Odisha are migrating to industrial hubs for employment.
- Rural warehouses are beginning to attract migrant workers due to rising employment opportunities.
- Urban peripheries are witnessing population influx due to warehousing clusters.
  These patterns have implications for urban planning, housing, healthcare, and public services, and must be factored into regional development strategies.

6. Socio-Economic Impact on Households and Workforce:

Warehousing has a multidimensional socio-economic impact**:**

- Employment expansion improves the standard of living and reduces poverty.
- Increased participation of women in the logistics workforce enhances gender equality.
- Remittances by migrant workers support rural household economies.
- Demand for education and healthcare services rises with increased income.
- Changes in population dynamics and family structures impact social cohesion.

These themes are interlinked and align with the United Nations Sustainable Development Goals (SDGs), **including:**

- **Goal 1:** No Poverty
- **Goal 5:** Gender Equality
- **Goal 8:** Decent Work and Economic Growth
- **Goal 10:** Reduced Inequalities

7. Changes in Income Levels:

The warehousing industry contributes to economic upliftment in the following ways:

- Enhances household disposable income through stable employment.
- Spurs consumer spending, fuelling local businesses.
- Encourages asset creation (e.g., purchase of vehicles, homes, and appliances).
- Reduces dependence on agriculture in rural regions, offering more predictable income streams.
- Provides career mobility with skill development and training opportunities.

As incomes rise, there's a parallel improvement in living conditions**,** education levels**,** and health outcomes**.**

8. Warehouse Schemes and Policies:

To support the warehousing sector, the Government of India has launched several policies and incentive schemes:

National-Level Initiatives:

- Warehouse Construction Subsidy Scheme
- Warehouse Infrastructure Fund (WIF)
- Warehousing Development and Regulatory Authority (WDRA)
- National Logistics Policy (2022)
- PM GatiShakti National Master Plan (2021)
- Sagarmala & Bharatmala Projects
- Atmanirbhar Bharat Abhiyan

State-Level Policy:

- Maharashtra Logistics Policy 2024
  - Aims to make Maharashtra a $1 trillion economy by 2028**.**
  - Focuses on building a 10-year logistics master plan**.**
  - Promotes investments, reduces logistics costs, and enhances supply chain efficiency.

These policies aim to:

- Reduce logistics costs from 13–14% of GDP to global benchmarks (8–9%).
- Improve infrastructure through public-private partnerships.
- Enhance multimodal connectivity (rail, road, ports).
- Create job opportunities and skill development platforms.

Conclusion:

The warehousing industry in India is no longer a mere support function but a core economic driver**.** Its role in employment generation, rural development, income enhancement, and migration is profound. With the right policy support and infrastructure investment, India's warehousing sector has the potential to significantly contribute to inclusive and sustainable economic growth.

Warehouse management is essential for businesses to thrive in today's competitive landscape. In Thane district, Bhiwandi urban and rural areas have been increase a large number of warehouses, creating employment opportunities for local and migrant workers and improving their standard of living. Improved Inventory Management, Optimal Product Safety, Efficient Order Fulfilments Process, Faster Shipping, Better Customer Service, Maintain Price

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Stabilization, Delegate Tasks. For all these reasons warehouse importance is unique from the point of view of economy. Warehouse strategy is evolving to more focus and Flexibility. The main objective of this project report Is to get practical knowledge of warehouse process and functions. It helps to study the warehousing, Inventory management and damage control as well As understand 3PL's warehouse.

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Original Article

From Barriers to Opportunities: The Role of Digital Skills in Empowering Women in Rural Areas

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Abstract

Digital literacy has emerged as a critical factor in promoting inclusive growth, particularly among women in rural areas. Empowering rural women with digital skills bridges gaps in education, employment, healthcare, and social participation, thereby enhancing their socio-economic status. This paper explores how digital literacy, beyond mere technical skills, encompasses confidence, attitudes, and perspectives toward technology. Rural women face numerous barriers including limited access to digital devices, socio-cultural restrictions, and low educational attainment. However, community-driven initiatives, localized training, and mobile technology adoption have enabled many women to overcome these challenges. By examining the current digital divide, methodologies for effective interventions, and the outcomes of empowerment programs, this research emphasizes shifting focus from barriers to opportunities. The findings suggest that creating safe, women-centric training environments, affordable access to devices and internet, and context-specific teaching strategies can significantly enhance women's digital participation. Ultimately, equipping rural women with digital competencies fosters empowerment, expands opportunities, and contributes to holistic development.

Keywords: *Digital Literacy, Rural Women Empowerment, Gender Digital Divide, Women-Centric Digital Training, Socio-Economic Empowerment, Community-Based Digital Initiatives, Mobile Technology Adoption, Digital Inclusion*

Introduction

In the 21st century, digital literacy has become as essential as reading and writing. With rapid digital transformation across the globe, access to technology is no longer a luxury but a necessity. For women in rural areas, the ability to use digital tools can be transformative, enabling access to education, healthcare, employment, and civic engagement. Despite this, rural women remain disproportionately affected by the digital divide due to structural inequalities, socio-cultural barriers, and economic constraints.

Rural women often face unique challenges: restricted mobility, household responsibilities, patriarchal norms, and limited access to educational resources. These barriers make it difficult for them to participate fully in the digital world. Yet, technology holds the potential to empower them by providing platforms for skill development, entrepreneurship, healthcare awareness, and financial inclusion. Bridging the digital divide is not simply about providing infrastructure; it requires tailored approaches that recognize women's unique needs and contexts.

This research paper highlights how digital literacy empowers rural women by analyzing barriers, identifying opportunities, and presenting methods of intervention. It argues that digital literacy must be reframed not as a technical skill alone, but as a tool for empowerment, enabling women to shape their futures and contribute to community development.

Objectives

The study is guided by the following objectives:

1. To examine the barriers that rural women face in acquiring digital skills.
2. To explore how digital literacy can serve as a tool for empowerment.

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3. To analyze the role of community initiatives and localized training in promoting digital inclusion.
4. To identify successful interventions and best practices that enhance digital access for rural women.
5. To recommend strategies for policymakers, educators, and community leaders in creating opportunities for women's digital empowerment.

Methodology

This research adopts a qualitative approach, supported by secondary data, case studies, and thematic analysis.

Key elements of the methodology include:

Literature Review

Rural women continue to experience a persistent gendered digital divide that restricts their ability to benefit from digital technologies. Studies highlight structural inequalities such as device ownership gaps, affordability issues, low literacy levels, and cultural barriers as key obstacles (GSMA, 2023, 2024; CSD, 2019). South Asia, in particular, reports the widest mobile gender gap globally, with rural women being the least likely to own or independently use digital devices (GSMA, 2024).

Access and affordability remain primary concerns. The high cost of smartphones and mobile data often prevents sustained usage, particularly among women entrepreneurs and learners (The Guardian, 2025). Device-sharing practices within households further reduce women's autonomy in using technology (CSD, 2019). Low foundational literacy compounds these issues, as text-heavy digital content excludes many rural women; researchers therefore emphasize the value of localized, voice-based, or blended learning approaches (Ali & Kumari, 2024; UNESCO, 2018).

Socio-cultural barriers also play a significant role. Patriarchal restrictions, concerns about online safety, and women's disproportionate household responsibilities limit their participation in digital training programs (BBC Media Action, 2021). Without gender-sensitive approaches—such as women-only batches, flexible schedules, and female trainers—participation and retention rates remain low (CSD, 2019).

Nevertheless, the literature documents promising strategies. Community-based initiatives such as Mobile Vaani have demonstrated the effectiveness of voice-driven, low-literacy-friendly platforms for delivering health, education, and livelihood information (Gram Vaani, 2019; UNESCO, 2018). Embedding digital training within self-help groups (SHGs) or leveraging female community facilitators (e.g., Internet Saathis) increases trust and adoption (CSD, 2019). Tailoring digital skills to immediate livelihood benefits, such as digital banking, e-commerce, or accessing government services, also enhances sustainability (GSMA, 2023).

Impact assessments consistently report that digital literacy leads to improved confidence, agency, and community participation among rural women. However, evaluations caution that one-time training is insufficient without follow-up mentoring, affordable device access, and integration into women's daily lives (BBC Media Action, 2021; CSD, 2019). Current evidence also tends to focus on short-term outcomes, highlighting the need for longitudinal studies that assess long-term empowerment and economic gains (GSMA, 2024).

Overall, the literature suggests that digital literacy for rural women must be reframed beyond technical skill-building. Effective interventions address structural barriers, socio-cultural contexts, and economic relevance, ensuring that women transition from passive users to empowered digital citizens.

Case Studies

Selected case studies from India and other developing countries were analyzed to identify best practices in digital empowerment. Programs such as India's Digital Saksharta Abhiyan (DISHA), and mobile-based literacy campaigns provided valuable insights.

Case Studies

1. Digital Saksharta Abhiyan (DISHA) / Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA)

Background & Objectives:

DISHA, later expanded as PMGDISHA, was launched to provide basic digital literacy to rural citizens, with special emphasis on women and marginalized communities. The goal was to equip individuals with skills such as using digital devices, accessing online services, and adopting digital payments.

Implementation:

The program was implemented through Common Service Centres (CSCs), NGOs, and local institutions. It followed a standardized curriculum covering basic digital tasks, with certification upon completion. Many states introduced women-only batches and engaged female trainers to improve inclusivity.

Outcomes:

Independent evaluations documented increased ability to use smartphones, perform digital transactions, and access government services. Many women reported improved confidence in handling technology and engaging with digital governance platforms.

Challenges:

Limited device ownership, short training duration, low baseline literacy, and cultural barriers restricted full adoption. Follow-up mentoring and monitoring systems were often inadequate.

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Lessons Learned:

Sustainable outcomes require pairing training with affordable device access, local-language learning, flexible timings, and integration with women's livelihood activities. Women-centric facilitation significantly improves participation and retention.

2. Mobile-based Literacy and Citizen Media: Mobile Vaani

Background & Objectives:

Mobile Vaani, initiated by Gram Vaani with UNESCO-Pearson support, is a community media platform that uses interactive voice response (IVR) to deliver educational, health, and livelihood content. It was designed to empower rural populations—particularly low-literate women—by providing accessible, localized, and interactive digital learning opportunities.

Implementation:

The platform enabled women to call into a free number, listen to audio content in local languages, and contribute their own voice messages. It combined information delivery (health tips, market prices, government schemes) with participatory dialogue, moderated by community facilitators.

Outcomes:

Women gained access to critical knowledge without needing literacy or internet access. Evaluations reported increased awareness of health practices, greater participation in community discussions, and stronger confidence in voicing concerns. The interactive model promoted peer learning and community-driven problem-solving.

Challenges:

High mobile costs, patchy network coverage, and socio-cultural restrictions limited full participation. Sustaining engagement required trust in local moderators and blending mobile outreach with in-person facilitation.

Lessons Learned:

Designing for voice rather than text makes digital content more inclusive. Combining mobile interventions with safe spaces for women and subsidized access ensures higher impact. Regular monitoring of user engagement and behavior changes is essential.

Data Collection

Secondary data from UNESCO, World Bank, and India's Ministry of Electronics and Information Technology was used to assess the current status of digital literacy in rural areas. Reports from NGOs and women's organizations also informed the analysis.

Indicator	Value / Finding	Source
Mobile phone ownership among rural women (15+ years)	~48.4% own a mobile phone	https://www.livemint.com/economy/upi-usage-india-rural-women-digital-access-mobile-phone-ownership-rural-women-digital-divide-india-rural-internet-usage-11749021032545.html
Mobile phone non-ownership among rural women (15+ years)	51.6% do not own a phone	https://www.business-standard.com/india-news/digital-india-divide-nso-rural-women-mobile-phone-ownership-gap-125052901804_1.html
Gender gap in mobile ownership (rural)	80.7% of men vs ~48.4% of women own phones	https://www.livemint.com/economy/upi-usage-india-rural-women-digital-access-mobile-phone-ownership-rural-women-digital-divide-india-rural-internet-usage-11749021032545.html
Smartphone usage among rural mobile owners	79.2% of men vs 75.6% of women have smartphones	https://www.business-standard.com/india-news/digital-india-divide-nso-rural-women-mobile-phone-ownership-gap-125052901804_1.html
Mobile usage (calls/Internet in last 3 months, rural women 15+)	76.3% used a mobile phone recently	https://www.livemint.com/economy/upi-usage-india-rural-women-digital-access-mobile-phone-ownership-rural-women-digital-divide-india-rural-internet-usage-11749021032545.html
Internet usage among rural women ("ever used")	33.94% have ever used the Internet	https://madhyamamonline.com/lifestyle/women-in-rural-india-internet-nfhs-data-617440
Women's access to mobile phones (if household has one)	Only 41.6% of rural women report access (vs 62.7% urban)	https://pmc.ncbi.nlm.nih.gov/articles/PMC7371204/

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Thematic Analysis

Themes such as access, affordability, cultural barriers, training models, and empowerment outcomes were identified and analyzed to understand the multi-dimensional aspects of digital literacy.

Barriers to Digital Literacy for Rural Women

1. **Limited Access to Devices and Connectivity**: Smartphones and internet access are often unavailable or shared, limiting independent learning.
2. **Economic Constraints**: Poverty restricts the ability to purchase digital devices or pay for internet services.
3. **Socio-Cultural Barriers**: Patriarchal norms often discourage women from using technology, associating it with male dominance.
4. **Low Educational Attainment**: Many rural women lack foundational literacy and numeracy skills, making digital learning more difficult.
5. **Lack of Safe Training Spaces**: Training programs are often mixed-gender, leading to discomfort and low participation from women.

Opportunities through Digital Literacy

1. **Education and Skill Development**: Online platforms provide access to e-learning, vocational training, and language learning.
2. **Healthcare Access**: Digital health services, telemedicine, and health awareness apps empower women to make informed health choices.
3. **Economic Participation**: E-commerce platforms enable women entrepreneurs to expand their businesses. Digital banking facilitates financial independence.
4. **Social Empowerment**: Access to information and communication platforms strengthens women's voices in community decision-making.
5. **Government Schemes**: Digital literacy enables women to avail benefits from welfare schemes, subsidies, and e-governance services.

Findings and Discussion

The study highlights that while barriers persist, interventions tailored to women's needs can create substantial opportunities. Training programs that incorporate local languages, flexible schedules, and women-only environments show higher engagement rates. Mobile technology emerges as a powerful enabler, as smartphones are more affordable and accessible compared to computers. Community-driven models, such as women-led self-help groups, are effective in promoting peer learning and sustaining motivation.

Further, the digital divide is not merely technological but socio-cultural. Women's attitudes toward technology, shaped by societal expectations, influence their adoption of digital tools. Programs that combine skill development with confidence-building exercises lead to sustainable empowerment.

Conclusions

Digital literacy is a transformative tool that empowers rural women by bridging gaps in education, healthcare, employment, and social participation. While barriers such as affordability, access, and cultural norms persist, targeted interventions demonstrate significant progress. Empowerment through technology is not only about skill acquisition but also about changing mindsets and creating supportive ecosystems. By reframing digital literacy as an opportunity for empowerment, rural women can transition from passive recipients of technology to active participants in the digital economy.

Recommendations

1. **Affordable Access**: Provide subsidized smartphones, internet services, and community-based digital hubs.
2. **Women-Centric Training Programs**: Develop safe, gender-sensitive learning spaces with flexible timings.
3. **Localized Curriculum**: Incorporate local languages, cultural contexts, and practical applications relevant to women's lives.
4. **Public-Private Partnerships**: Encourage collaboration between government, NGOs, and private companies to scale up digital inclusion.
5. **Community Mobilization**: Leverage self-help groups and women's collectives for peer learning and sustained engagement.
6. **Capacity Building**: Train local women as digital facilitators to ensure relatability and trust within communities.
7. **Monitoring and Evaluation**: Establish systems to track progress, identify gaps, and continuously improve training models.

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Original Article

Economic development of women in India, problems and solutions.

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Abstract :

The present study has considered the development of women. Economic development, women's participation and the benefits derived from it have been studied. Since women's development has taken a very important place, various factors of the country are considered while going through the development process and mainly the participation of men and women in work and the income derived from it as well as economic development have been considered in this paper. When considering the economic development of women, equality in their work, wages, economic empowerment, their secondary position in society, the financial department, tradition, culture, religion and caste rules, science, generations, the responsibility they have to continue all this, although all these have been given to the development of women, it is seen that women are establishing dominance in agriculture and non-agricultural sectors. Women are proving their dominance in daily wage, paid domestic work, small-scale retail sales and service businesses as well as management, industry and small-scale industries. Efforts are being made to register their participation in the country's production process. The government is also trying to develop women by making all possible efforts to economically empower them.

***Key words**: women economics development, opportunity, equality, policy.*

Introduction:

After India became independent, efforts were made through the Constitution for the development and empowerment of women. Since the foundation of all this was laid even during the pre-independence period, it gained momentum during the post-independence period. The provisions related to women in the Sixth Five Year Plan (1975-80) accelerated the process of change. Since the development of women occupies a very important place in developing countries, various factors of the country are considered while going through the development process, and mainly the participation of men and women in work and the income obtained from it and economic development have to be considered. Therefore, when the economic development of women is taken into account at the global level, issues like equality in their work, wages, economic empowerment, their position in society, and status in the family are considered. In the Indian social structure, the position of women is secondary and the main reason for this is the patriarchal system and the weak economic status of women. Although the structure of the social system is made up of both men and women, men are always kept dominant and women are kept oppressive. Women's participation in the decision-making process is negligible. Women are always given a lower status in education, jobs, business, and research. They are discouraged from entering these fields. They are always given scope to follow the rules of customs, traditions, culture, religion, and caste. They are repeatedly instilled from childhood through socialization that their everything lies in festivals, fasts, vows, and rituals and they are taught the responsibility of continuing all this from generation to generation through culture. Overall, restrictions are placed on the overall development of women through various means from economic, social, political, religious, and educational perspectives, and this affects their development. Compared to the stage of economic development that India is at today, there is a huge gap between the economic and social attainments of men and women in India.

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Although the gap in educational attainment between men and women has narrowed in the process of development, according to the 2011 census, the literacy rate among men is 25 percent higher than that of women. In rural and urban areas, this gap is 33 and 12 percent respectively. Although the enrolment of boys and girls has reached parity up to the upper secondary level of education, there is a gap in higher education. There is a need to increase the overall enrolment beyond higher secondary. The gap in labour market participation between men and women in India. In terms of social justice, it is necessary for women and men to have equal opportunities in health, education, socio-economic status and security. Even today, women lag significantly behind men in half of the countries of the world in these various dimensions of human health. This fact has come to light from the research "The Power of Gender Parity" by the "McKinsey Global Institute". This fact, which cuts across social justice, is not only a moral and social problem; it is also an economic challenge. The lack of full development of the educational and economic capabilities of women, who constitute half of the total population, hinders the growth of productivity in the economy. That is, the equal development of the socio-economic capabilities of women and men is both an end and a means But it Is significant.

Women are dominant in agriculture and non-agricultural sectors, including daily wage employment, paid domestic work, small-scale retailing and service occupations. Women are also less than half the number of men in senior management positions. Due to their low participation in the country's production process and their low productivity, their share of GDP is one of the lowest in the world, at just 17 percent. The global average is 37 percent. India has a great opportunity to boost economic output by bringing more women into the workforce. The McKinsey Institute predicts that if men and women were to share equally in all sectors of production in India and work the same hours, India's GDP would increase by 60 percent in the next ten years; but participation in the labor market is a decision taken at the family level. And this decision depends on the cultural values of the society in which it is being made. Against this background, women have not reached full parity with men in the next ten years; but even if their percentage in the labor market increases by 10, India's output will increase by 16 percent, or $700 billion, by 2015.

The unpaid family work that women do is of paramount importance for a quality life. Without appropriate alternatives to this work, women will not be able to participate in the production process. These various alternatives, their efficiency, and the integration of unpaid and paid work at the economic and labor policy levels are currently being discussed in labor studies. The important theme emerging from this discussion is that bringing unpaid work in the care economy into the mainstream of the economy, i.e. into the market, will provide women with opportunities to earn money on par with men.

Economic Status of Women: -

The economic status of women in India has changed dramatically due to education. Women in the 21st century have become more independent and capable of living a fulfilling life. The development of a country depends on its human resources. In this, the role of both women and men is important. Today, women are making important contributions in the fields of sports, science and technology, politics, corporate world, acting or military, business or engineering, banking etc., due to which their share in the economic development of India is important. Therefore, a brief introduction to the work of women working in these various fields can be given as follows. Agricultural **Laborers:-**

India is an agricultural country. The only source of employment in rural areas is the agricultural sector. Rural women contribute to fulfilling the needs of the family by doing agricultural labor. The proportion of uneducated classes in the agricultural sector is very high, so the agricultural labourers do not receive a fair amount of remuneration for their work, but women agricultural labourers do agricultural work by fulfilling their responsibilities. Women in particular play an important role in the agricultural sector, and according to the statistics of the Food and Agriculture Organization, women contribute 32% to agriculture and 48% to agricultural employment.

Meaning of women's advancement –

Women are considered to be the power of creation, that is, the existence of the human race is believed to be from women. The meaning of women's advancement is to develop and strengthen this power of creation and to provide them with social, economic, political justice, freedom of thought, faith, religion and worship, equality of opportunity. In other words, women's advancement means improving their social and economic status. So that they get equal opportunities for employment, education, economic progress, social freedom and progress. In simple terms, women empowerment can be defined as empowering women to take every decision related to their lives.

The reasons for the lack of women's participation in the workplace in India:

Social and religious background: People from almost all religions and classes in India. For a long time, there has been little acceptance among people about the active role of women in the mainstream society. Even today, in many parts of the country, women are preferred to work in domestic work or in roles like teaching or nursing etc. Due to social pressure and fear of opposition, women's participation in other fields has generally been low except in some traditional fields. This discrimination prevalent in Indian society starts from the birth of a child, this discrimination can be understood on the basis of the huge disparity in the sex ratio at birth in India [about 910 as per the estimates of the United Nations Population Fund (UNFPA)].

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Lack of higher education and training opportunities:

While the country has made significant progress in addressing gender disparities in elementary education over the past two decades, women's participation in higher education and professional training programs remains low. According to the All India Survey on Higher Education (AISHE) report, participation in technology and technology-related courses was significantly lower for female students (28.9%) than for male students (71.1%).

Lack of resources:

Women's participation in the work sector, education and The availability of employment opportunities also depends on the availability of necessary resources. In many rural areas and small towns, the distance from home to work, the lack of safe 24-hour transportation, and the lack of toilets and other essential resources in public places, and their affordability, are major reasons for women's lack of participation. The lack of these resources also impacts their health.

Discrimination and exploitation at workplaces:

Discrimination at workplaces has been a major obstacle to the development of women. The lack of women officers in top decision-making positions in most of the public (army, police, etc.) and private sector institutions operating in the country is a clear proof of this discrimination. Despite the active role of women in the agricultural sector, their lack of acceptance in society as well as in government schemes is evident. Incidents of discrimination and exploitation at workplaces weaken the morale of not only the victim but also aspiring youth. The experiences of women that have recently come to light under the 'Me Too Movement' active on social media have underlined the need for comprehensive reforms in this area.

Policy failure:

Women are not empowered in all sectors of the country's economy. Government policies have not been very successful in encouraging active participation. This is partly due to the low representation of women in Indian politics (about 13% of MPs are women, and there is only one female Prime Minister in independent India) and other key positions related to policymaking.

Impact of female participation:

According to a report by the International Labour Organization (ILO), if gender inequality in the workplace in India is reduced by 25%, it could increase the country's GDP by up to $1 trillion. According to the World Economic Forum, increased women's participation in the workplace has brought many social and economic benefits. Increasing education and employment opportunities enhance women's awareness of their health and development, as well as their ability to meet their own needs. This change also has a positive impact on society and the country's economy. Recognizing the role of women in the country's economy can help in addressing the challenges related to poverty, health and economic instability through the implementation of better schemes.

Financially empower women or change their financial status.

- Implementing the Equal Pay for Equal Work Act.
- Women's participation in the decision-making process should be essential.
- Unskilled women should be provided free training to develop skills to become skilled.
- There should be a mechanism to resolve whatever issues women face in the unorganized sector.
- The concept of wages for housework should be implemented.
- The principle of gender equality should be implemented in all fields.
- Increase the participation of women in mechanical, technical, scientific and other fields by promoting female education.
- A scheme should be implemented to provide subsidies to women to start businesses.
- Safety and health care should be provided free to women at the workplace.
- Increasing the literacy rate of women.

Government efforts:

To protect the interests of pregnant women at the workplace, the Central Government has increased the maternity leave from 12 weeks to 26 weeks through the 'Maternity Benefit (Amendment) Act, 2017', this Act has been incorporated in the Code on Social Security, 2020. To encourage women researchers to undertake research and development activities in the field of science and engineering, a scheme called 'SERB-POWER' has been launched by the Central Government. After the 'Me Too' campaign in the country, large-scale cases of women exploitation at workplaces came to light, a Group of Ministers (GoM) was formed in October 2018 under the chairmanship of the Union Home Minister, which presented its recommendations to solve this problem. To strengthen the efforts for women safety during rail travel and to instill a sense of security among women, an initiative called 'Meri Saheli' has been launched by the Railway Protection Force (RPF). In India, women working in various public (Shiksha Mitra, Asha workers etc.) and private sectors are being paid less than expected for their work. The Central Government has recently made major changes in the labour laws of the country; however, no significant improvements have been made in these in terms of issues like encouraging women's participation in the country's economy, protecting women's interests at workplaces, etc.

Recruitment by the Women and Child Development ministry

During the month of December-January, the Ministry of women and child development recruitment 2020 posted 6 Project Manager Posts. Their eligibility criteria were age up to 55 years, Education qualification should be a master's degree.

The Ministry of Women and Development Recruitment 2020 also announced posts for the jobs of consultant, Accountant, and many others in the same month n the past years, the Indian Government introduced several schemes which focus on Women, the government has come forward to bring empowerment and upliftment of the women in society.

Following are some of the schemes:

Beti Bachao Beti Padhao Scheme:

Started in 2015 in Haryana.

Working Women hostel:

It helped promote safe accommodation and environment for working women.

Women Helpline Scheme:

It is a 24 hours helpline that helps women affected by violence in public or private places.

STEP (Support to Training and Employment Program for Women):

O It provided basic training and skills so that the women could employ themselves.

Swadhar Greh:

This scheme aims to provide shelter, food, clothing, social, and health security

As women are about half of the humanities' participation, that is why the progress of women means the progress of the world.

The ministry has released a new notification related to women and child development recruitment for the year 2022 for several post several cities across the country.

List of Women Empowerment Schemes in India 2025.

There is a huge buzz about women's empowerment around the world. In the 21st Century, women have started participating in many avenues traditionally associated with men. The growth in technology has made the task easier. Going a step further, the Government of India has shared its vision of women-led development to make India a developed nation by 2047. In this blog, we discuss all the current women empowerment schemes in India.

Importance of Women's Empowerment in India

When we look at ancient Indian texts and scriptures, we see empowered women. Moreover, they were the axis around which the civilisations used to thrive. But, a series of attacks and invasions posed a threat to the civilisation. Women were exposed to all sorts of torture and abuse during this dark phase**.**

Whatever the reason, there is no doubt that we are still fighting for empowering women around the world. With every passing day, the issue is coming right to the fore. In the wake of this, the government of India has started many women empowerment schemes in India. These schemes are going to propel women into the driver's seat fostering the way for women-led development.

Now you would ask, what is the need for women empowerment schemes in India? Here are some undeniable reasons:

Increased GDP: Women are 50% of the population. They can add immense value to the Indian economy in various fields.

Education:

An educated woman has the know-how and the means to uplift society. Remember the popular African proverb? "If you teach a man, you teach an individual, but if you teach a woman, you teach a nation."

Fight against Poverty:

Having more earning members is a boon for a poor family. Empowering the woman of the family can help eradicate poverty, especially multidimensional poverty.

Social Justice:

The rights promised by our constitution emphasise social justice. Empowering a woman can bring an end to patriarchy which is deeply ingrained in our society.

Improved health:

Remember the magical home remedies of our grannies? There you go! Empowered women can add value to preventive healthcare leading to lower diseases and healthcare expenses.

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List of Women Empowerment Schemes in India

Now that you understand why women empowerment is important, let's discuss the government schemes for women's empowerment in India in 2025.

1. Sukanya Samriddhi Yojana (SSY)

Launched as a part of the most popular "Beti Bachao, Beti Padhao" mission, the SSY accounts can be opened by the parents of a newborn girl child. The mission aims to improve the Sex Ratio by ensuring education for girls. Here are **some key points of the SSY scheme:**

The scheme is for 15 years.

- It can be extended up to 5 years at a time.
- Maximum annual investment - Rs. 1.50 lakhs
- Deduction for investment available u/s 80C (in the Old Tax Regime)
- Tax-Free Interest - 8.2% p.a. (much higher than FD)
- The amount can be used for the girl child's higher education, marriage, etc.

2. Lakhpati Didi Scheme

It is one of the key women empowerment schemes in India. Under the scheme, the government eyes to empower 2 crore women working in Self-Help Groups (SHGs) to build a capital of more than Rs. 1 lakh.

3. Drone Didi Scheme

The Drone Didi women empowerment scheme in India aims to train 15,000 workers of the Self Help Groups (SHGs) to become drone pilots. These trained women can perform various economic activities like delivering medicines and groceries using drones and earn their livelihood. They are also useful in mapping the agricultural land to digitalise the land records across rural India.

4. Mission Indradhanush

Mission Indradhanush is an ambitious government scheme for women's empowerment in India. Under the scheme, the government ensures full immunisation of pregnant women and children.

5. Mudra Yojana

The PMMY (Pradhan Mantri Mudra Yojana) provides collateral-free loans to small business owners up to Rs. 20 lakhs (limit increased in budget 24-25). With an increased budget allocated for MUDRA loans, the focus is on providing more loans to women-led enterprises.

6. Tread Scheme

One of the lesser-known women empowerment schemes in India is the Trade Related Entrepreneurship Development Assistance Scheme (TREAD). The objective of this scheme is to develop women entrepreneurs. For this reason, the government provides 30% of the total loan eligibility of women entrepreneurs up to Rs. 30 lakhs. The rest of the loan is provided by banks, through NGOs that work for women's empowerment and can handle large funds.

7. Ujjwala Yojana

Pradhan Mantri Ujjwala Yojana (PMUY) provides free gas connections and subsidised gas cylinders to BPL families. The scheme directly benefits women by providing them with clean fuel to cook food.

8. Standup India Mission

The Standup India Mission seeks to provide loans between Rs.10 lakhs and Rs.1 crore to SC, ST and women entrepreneurs. This loan covers up to 75% of the total project cost. It is a great women's empowerment scheme in India, and it ensures that women entrepreneurs get the necessary investment.

9. PMAY (Pradhan Mantri Awas Yojana)

Many would overlook the PMAY scheme while talking about women empowerment schemes in India. But, it is notable that the allotment of PMAY houses with the ownership of women is a major step in empowering them.

10. Women's Helpline

A 24x7 helpline with a toll-free number 181 is operated across all states and UTs in India to provide emergency support to women affected by violence or any other distress.

11. STEP Initiative

STEP is a government scheme for women's empowerment in India that provides grants to institutions to run training programmes for women. The objective of the program is to ensure employment for women through skill development.

12. Mahila E-Haat Scheme

As the name suggests, it is an e-marketplace for women to showcase their products. They can also add proper product descriptions and photos to attract customers. It promotes Make in India while ensuring women's empowerment.

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13. Mahila Samman Savings
Certificate (MSSC) Scheme

MSSCs are 2-year FDs for women in the Post Offices. They can deposit up to Rs. 2 lakhs and earn an interest of 7.5% p.a. on these deposits.

14. Mahila Shakti Kendras

MSKs provide support to women for skill development, digital literacy and getting employment. They act as a centre of women's empowerment that can lay the foundation of modern India. Women's empowerment is the need of the hour. There are several government schemes for women's empowerment in India that we have discussed in this blog. Hope many aspiring women can get the benefits of these schemes and the objective of women-led development is fulfilled.

Challenges:

According to the recent data released by the Centre for Monitoring Indian Economy, 39% of working women lost their jobs in the months of April and May due to the challenges posed by the COVID-19 pandemic. According to the National Sample Survey, Indian women are more likely to contribute to unpaid household work than men. COVID-19 has seen a significant increase in domestic violence cases, and has disrupted women's access to education and employment, which could negatively impact the reform efforts made in this area over the past several years.

Way forward:

At present, along with increasing the participation of women in the country's economy, multi-pronged efforts should be adopted to address the challenges of discrimination and women's safety in the workplace. The Government needs to pay special attention to efforts to ensure women's participation and protection of their interests at all levels of the economy, with targeted schemes (training, social and economic security, etc.) for women working in the unorganized sector. To encourage women's participation in workplaces, it is very important to expand access to means of transport and strengthen the system of toilets etc. in public places. Special attention must be paid to strengthening access to higher education in rural areas, including supporting women to attend higher education and professional training. Furthermore, special efforts should be made to increase female representation in the top echelons of policymaking and critical resources.

Conclusion:

Women's economic participation can help them overcome poverty, reduce exploitation of women and speed up development. They invest more within the family for health care, nutritious food, and education. With women's access to credit, banking and financial services they will achieve economic empowerment, and will be able to contribute to the national economy. The article discusses the social and economic progress of India in this context. It emphasizes the need to respect women and provide them with opportunities for advancement. The text states that women are now active and making progress in various fields, which indicates development. However, it is concluded that this development is not comprehensive, as some sections of society, and women in it, are still lagging behind.

Many factors are responsible for women's economic problems and the entire system has been created in such a way that they should always remain in a secondary position. All the factors are interrelated and one factor affects the other. Therefore, it is important to change the system to increase the economic status of woman .

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Original Article

Trends in Homestay Tourism in Sindhudurg district

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Abstract

This study explores the evolving trends in homestay tourism within the Sindhudurg district of Maharashtra, located along the ecologically and culturally rich Kokan coast. Surrounded by the Arabian Sea and the Sahyadri ranges, Sindhudurg is known for its scenic beauty, historic forts, and rich cultural heritage. In recent years, homestay tourism has emerged as a key driver of sustainable and community based tourism in the region, offering travellers authentic experiences rooted in local traditions, cuisine, and rural life.

Unlike conventional hotels, homestays provide absorbing cultural interactions while generating income and employment opportunities, particularly for women through Self Help Groups and local enterprises. Case studies of Tambaal and Rutuvihar Homestays in Kudal, Sindhudurg reveal a growing preference among tourists for travel, eco-friendly practices, and direct engagement with host communities. The research, based on secondary data sources, identifies significant socioeconomic benefits, including reduced rural-urban migration due to fewer sources and unemployment and improved village infrastructure.

However, challenges such as inconsistent connectivity, inadequate environmental management, and lack of regulatory frameworks hinder sustainable growth. Despite these barriers, homestays hold substantial potential for inclusive rural development, cultural preservation, and sustainable tourism especially with enhanced policy support, training, and infrastructure investment.

This study highlights the need for a balanced approach that integrates environmental safeguards, community empowerment, and strategic planning to ensure the long-term success of homestay tourism in Sindhudurg.

Keywords: *Home stay, sustainable, cultural preservation, rural development, socio-economic impact, etc.*

Introduction

The Kokan coastal line of Sindhudurg district, located along the western edge of Maharashtra. Surrounded by the Sahyadri mountain ranges to the east and the Arabian Sea to the west, this region features a unique geography of rocky hills, lateritic plateaus, and fertile coastal plains. Rich in geological diversity, it comprises ancient metamorphic rocks and basaltic formations connected to the Deccan plateau. Historically, this coastal stretch has witnessed the rule of ancient dynasties like the Silaharas and Mauryas, the arrival of the Portuguese in the 16th century, and the rise of the Marathas under Chhatrapati Shivaji Maharaj, who established significant sea forts such as Sindhudurg and Vijaydurg. Sindhudurg district being carved out of Ratnagiri in 1981. The area is renowned for its cultural richness, including vibrant coastal cuisine, scenic beaches like Tarkarli, Devbag, and historical sites like Buddhist caves and petroglyphs. The Konkan Railway and National Highway 66 serve as lifelines for connectivity. Despite development challenges, the region continues to be a blend of natural beauty, historical depth, and cultural importance, making it a significant part of Maharashtra's identity. Homestay tourism in Sindhudurg districts has gained significant relevance in recent years due to a growing demand for authentic and engaging travel experiences. Unlike conventional hotels, homestays offer visitors a chance to connect deeply with the local Kokan culture, cuisine, and way of life, providing a more personalized and meaningful stay.

This form of tourism also directly benefits local communities by generating income and creating employment opportunities, especially in rural areas where other economic activities may be limited.

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Post-pandemic, there has been a noticeable shift in traveller preferences toward offbeat, less crowded destinations, making the peaceful coastal villages and lush surroundings of these districts particularly attractive. As a result, homestays are not only enhancing the tourism potential of Sindhudurg but also promoting sustainable and community based travel.

Homestay tourism in Sindhudurg districts has emerged as a powerful factor for sustainable development, community empowerment, and cultural preservation. At its core, this model promotes community based and eco-friendly growth, where local families especially fishing communities in Sindhudurg benefit directly by hosting tourists and showcasing coastal traditions. Initiatives like Culture Aangan and women led Self Help Groups have further empowered rural women, who now earn livelihoods through homestays, food processing under the ‘Hirkani’ brand, and hospitality services, thereby fostering financial independence. Many of these homestays are designed sustainably, using mud construction, rainwater harvesting, and solar energy minimizing their environmental impact while providing authentic rural experiences. Simultaneously, there is a rising demand for immersive and authentic tourism, with more visitors opting for homestays over traditional hotels to enjoy home cooked Kokani cuisine, cultural festivals, and local daily life. These rural accommodations, often located in lesser known villages, help distribute tourist traffic more evenly and preserve popular destinations from over tourism. With improved connectivity like the airport and highway development, Sindhudurg has also seen a rise in second home tourism, where homestays double as rental properties, supporting long stay and workplace trends.

Study of ‘Tambaal Homestay’ and ‘Rutuvihar Homestay’ in Sindhudurg

‘Tambaal Homestay’ is located in Madyachiwadi, near Kudal, offers accommodation for tourists seeking a peaceful place. Surrounded by scenic natural beauty, it provides an ideal setting for a calm and relaxing holiday. The homestay offers well-arranged lodging and delicious home cooked meals, giving visitors an authentic taste of local culture and cuisine. The main purpose of Tambaal Homestay is to provide tourists with a comfortable stay while allowing them to experience the rural life. Guests can enjoy essential amenities along with the warmth of a homely environment. One of the key attractions of this homestay is the opportunity to interact with local people and engage oneself in the region’s natural surroundings and traditional food culture.

‘Rutuvihar Homestay’, located in Kudal a scenic rural region, offers valuable insights into emerging trends in homestay tourism. By analyzing guest demographics, booking patterns, and feedback over a two year period, the study highlights a shift toward experiential travel, where tourists seek authentic cultural interactions over conventional hotel stays. Rutuvihar’s emphasis on local cuisine, eco-friendly practices, and community involvement has attracted a growing number of eco-conscious and millennial travellers. Well managed homestays can leverage their unique offerings to align with changing tourist preferences and contribute to sustainable rural development.

Sustainable Development Implications

Developing sustainable homestay tourism in ecologically sensitive coastal areas requires a holistic approach that balances environmental preservation with community development. Natural ecosystems such as beaches, mangroves, and forests have a limited carrying capacity, and excessive visitor numbers can lead to degradation through littering, erosion, and disturbance to wildlife. To prevent this, regulations on visitor flow, homestay numbers, and seasonal restrictions especially during critical periods like turtle nesting are essential. Quality standards and regular training for homestay hosts in areas such as hygiene, guest management, safety, and marketing can enhance visitor satisfaction and promote repeat tourism. Sustainable infrastructure should be prioritized, including the use of solar energy, rainwater harvesting, wastewater treatment, and eco-friendly construction materials. Importantly, the economic benefits of tourism must be inclusive, reaching beyond homestay owners to involve local crafts persons, food suppliers, guides, women, and marginalized groups. Homestays must also align with conservation goals, helping protect local ecosystems through awareness and eco-friendly practices. Given the seasonal nature of tourism in these regions, strategies to support off season income and resilience to shocks like pandemics are crucial. Strong policy and

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institutional support from government bodies, NGOs, and foundations is needed to provide licensing, funding, capacity building, and infrastructure development for long-term success.

Research Objectives

Following are research Objectives:

- To examine growth trends.
- To analyze the socio-economic impact.
- To assess the sustainability challenges and opportunities.
- To identify tourist behavior patterns and preferences.
- To evaluate marketing and promotional strategies.

Review of literature

- Sudhir M. and Buva, (2025) in the article Potential of Tourism in Sawantwadi Taluka, Sindhudurg, Maharashtra stated that Sawantwadi Taluka's tourism potential scenic beauty, cultural heritage, beaches, forts etc. It analyses current infrastructure, identifies challenges e.g. connectivity, facilities and suggests strategies. Though it is broader than homestays, it points out that rural and cultural tourism (including homestays) are underutilized and have growth potential.
- Conscious Queries Zinoha Sindhudurg (2025), in this report discusses demands for niche tourism, gaps in homestay standardization, interest in specialized facilities, workstation demand, and increasing pressure on accommodation supply. It shows that tourists are now looking beyond just a stay to quality, experience, sustainability.
- Sindhudurg's Real Estate Exploration Zinoha (2025), this report identifies trends in real estate driven by tourism growth: rise in second homes, enhanced connectivity like airport, expressway, the expectation of higher returns, increasing tourist footfalls. This has implications for homestays and holiday home rentals.
- Mohd Bilal (2024), in the article Community-Based Tourism: Supporting Local Economies through Homestays stated that how homestays support local economies, cultural heritage, sustainable practices. It specifically mentions Sindhudurg in examples of fishing communities, local cuisine, local crafts, and benefit flows to host families when tourists opt for homestays vs. hotels.
- Krystelle Dsouza, (2024) in the article One Brilliant Woman is Using Eco-Tourism to Help 100s in Rural India Increase their Incomes (Better India / ICSF)
  This article describes how local women in Sindhudurg are being supported to start homestays, especially mud-homestays, with training in hospitality, use of local crafts and food, and promoting rural incomes. It highlights that hosts need professional help in training and management for authenticity and quality. It insights the trends increasing local participation linkage with local agriculture and crafts.
- Savitribai Phule Pune University, (2022), SPPU Policy Research & Analysis Report: Sindhudurg District Development Plan: Inclusive and Sustainable Human-environment Interaction, This policy research report frames the development plan for Sindhudurg including sustainable tourism, environmental conservation, infrastructure, human-environment interaction. Homestays are part of broader tourism & environment strategy: for example, ensuring that growth does not degrade ecosystems, ensuring local communities are involved, mapping zones of tourism suitability etc.
- Mongabay-India, (2020), in the article A mangrove safari model of ecotourism and conservation in Sindhudurg Discusses how an eco-stay bed & breakfast homestay run by locals, connected with organic farming, mangrove restoration, and community awareness is developing. This shows a trend of combining stays with conservation & environmental awareness in Sindhudurg.
- The Indian Express, (2016) in the news article Maharashtra government to promote beach tourism in Sindhudurg while not strictly academic, this news reports government plans to promote various lodging alternatives caravan, lodge houses, floating cottages, Indonesian style cottages, etc. along the Sindhudurg coast. This suggests institutional recognition of accommodation diversity including homestay-like or lodge-like options.
- Abhijit P., (2013) in the article Eco-Tourism Project in the Ecosystem of Sindhudurg District: a Model Case Study for Tourism Development stated that, this is a case study focusing on Sherla village in Sawantwadi Taluka, away from beaches, to assess feasibility of eco-tourism. It notes policies, incentive schemes, recognition of tourism beyond coast adventure, wildlife, culture, rural and that eco-tourism projects are being considered in areas.
- Indian Express (2012), in the news report Scheme to boost Sindhudurg tourism**,** this reports governmental intent for a long-term 10-year scheme to boost Sindhudurg tourism, by incentives, infrastructure development, reduced licensing friction, etc. It implies that homestays or rural lodging can benefit from these supportive policies.

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Research Methodology

This study adopts a descriptive and analytical research design, relying entirely on secondary data sources to explore the emerging trends in homestay tourism within Sindhudurg district. Data for this study are gathered from tourism studies, academic research, and reports by NGOs. The study also considers policy documents, local media coverage, and sustainability reports to assess environmental and regulatory implications. This research highlights how homestays in Sindhudurg contribute to rural empowerment, cultural preservation, and sustainable tourism development while also identifying infrastructural, environmental, and governance challenges.

Opportunities

- Locals, including women's self-help groups, earn through homestays, guiding, food services, and crafts e.g. hosting tourists.
- Preservation of culture and tradition local food, crafts, and folk arts are revived and showcased as part of the homestay experience.
- Tourism provides seasonal or permanent local jobs, reducing the need for migration homestays employ locals for tasks like cooking, maintenance, and guiding.
- Eco tourism brings attention to remote villages, sometimes leading to better roads, connectivity, and sanitation, along with increased public or private sector investment that improves infrastructure and visibility.

Challenges

- Poor transport and internet infrastructure can discourage tourists from visiting rural homestays.
- Tourists may expect modern amenities that rural homestays can't always provide, making it challenging to balance comfort with authenticity.
- Issues like wastewater, solid waste, and erosion are often handled informally, highlighting the need for structured monitoring.
- Many areas lack formal zoning, regulation, and carrying capacity limits, leading to unplanned development.
- Expanding homestay tourism while maintaining local control, sustainability, and consistent marketing is difficult.

Findings and Analysis

The study reveals that homestay tourism in Sindhudurg district has emerged as a dynamic and community driven model that supports sustainable rural development, cultural preservation, and inclusive economic growth. A key finding is the tourist preferences authentic experiences, favouring homestays over traditional hotels. Homestays like Tambaal and Rutuvihar in Kudal demonstrate this trend, offering guests direct cultural engagement, local cuisine, and hospitality. The socio-economic impact is evident through increased income for local families, particularly women's Self Help Groups, who have been empowered via hospitality, food processing, and crafts. Infrastructure improvements and enhanced visibility of rural areas are additional benefits. However, challenges persist, including inconsistent transport and digital connectivity, gaps between tourist expectations and rural realities, informal waste management, and lack of standardized regulations. Despite these issues, homestay tourism presents a strong opportunity for sustainable tourism, especially when supported by policy frameworks, training, and environmental safeguards. Overall, homestays in Sindhudurg not only contribute to tourism diversification but also act as a vehicle for development.

Conclusion

The study of homestay tourism trends in Sindhudurg district, highlights its growing role as a factor for sustainable, inclusive, and culturally rich rural development. Homestays have effectively responded to the changing dynamics of post-pandemic travel, offering authentic, personalized experiences that attract eco-conscious and culturally curious tourists. By empowering local communities especially women through Self Help Groups and promoting local food, crafts, and traditions, homestays have become a vital source of income and cultural revival. The success stories of Tambaal and Rutuvihar Homestays underscore the potential of well managed rural tourism models. If addressed strategically, homestay tourism in the Konkan region can continue to grow as a sustainable alternative to mass tourism, preserving the ecological and cultural integrity of this unique coastal landscape while improving the quality of life for its rural communities.

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Original Article

An impact of Sustainable practices on tourism development - A detailed study with reference to North Konkan region

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Abstract

In India, tourism has been a major driver of regional development, especially in coastal regions with rich cultural and biological heritage, such as Maharashtra's North Konkan region. But the expansion of tourism in these delicate areas has sparked worries about unequal economic advantages, cultural identity loss, and environmental destruction. In light of this, sustainable tourism practices—those that aim to strike a balance between sociocultural integrity, environmental preservation, and economic viability—have become crucial for guaranteeing the long-term sustainability of tourism growth.

With an emphasis on the social, economic, and environmental aspects of sustainable practices, this study examines how they affect the growth of tourism in the North Konkan region. In order to evaluate how well these approaches improve tourism outcomes while protecting local resources, the study used a mixed-method approach that includes field surveys, stakeholder interviews, and secondary data analysis.

The study ends with a framework for integrated sustainable tourism development that is specific to the North Konkan region and provides useful suggestions for local communities, tourism operators, and politicians. In addition to highlighting the need for a balanced approach to tourism planning that gives long-term ecological and socioeconomic well-being priority, this research helps close the information gap on region-specific sustainability in tourism.

Keywords: *Sustainable Tourism, Tourism Development, North Konkan Region, Ecotourism Practices, Community-Based Tourism, Environmental Sustainability, Socio-Economic Impact, Coastal Tourism Management.*

Introduction

It has long been understood that tourism has two sides: on the one hand, it has significant positive effects on the economy, society, and infrastructure; on the other hand, if it is not properly managed, it can harm the very natural and cultural resources that it depends on. The idea of sustainable tourism, or travel that satisfies current demands without jeopardizing the ability of future generations to satisfy their own, has evolved from aspirational rhetoric to an urgent requirement in recent decades. Environmental pollution, biodiversity loss, climate change, and community dislocation are now viewed as existential threats that must be addressed in tourism development.

The North Konkan region of Maharashtra offers an intriguing case study for sustainable tourism because of its dense coastal areas, mangrove ecosystems, rural and tribal inhabitants, mangrove forests, traditional fisheries, agro-based livelihoods, and unique cultural customs. On the one hand, North Konkan's picturesque beaches, mangrove belts, riverine ecosystem, and indigenous culture—including its cuisine, festivals, and handicrafts—are major tourist attractions. However, it also faces issues that are typical of many ecologically vulnerable regions, such as brittle ecosystems, inadequate infrastructure, seasonal livelihoods, waste management issues, the potential for cultural commodification, and pressure from an uncontrolled tourist inflow.

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The purpose of this study is to investigate the ways in which tourism development in North Konkan is impacted by sustainable practices, including community-based ecotourism, conservation of mangrove and marine ecosystems, promotion of local cuisine and culture, responsible waste management, livelihoods for local communities (particularly women and tribal populations), and governance frameworks.

Review of Literature

- According to study made by Harale, 2025 in his paper Challenges before Sustainable Tourism in Konkan Region found that, a number of obstacles in the Konkan, including socioeconomic inequality, a lack of planning and regulatory frameworks, environmental deterioration (pollution, garbage, and coastline erosion), and inadequate infrastructure (roads, waste management, sanitary facilities). It demonstrates that although there is a lot of promise, several structural and governance problems limit its development.
- According to study made by Jadhav & Kumthekar, 2022 in their paper Sustainable and Eco tourism potential in Maharashtra map out the areas Maharashtra has a lot of promise for ecotourism; it examines its natural and cultural resources and emphasizes that the main obstacles are a lack of infrastructure, connectivity, and awareness.
- According to study made by Patil & Shahapure, 2024 in their paper Sustainable Tourism Development: A Study on Indian Tourist Destinations argues that, that the rise of tourism frequently becomes uneven, with economic benefits being overlooked at the expense of social and environmental consequences; this highlights the need for improved infrastructure, regulation, stakeholder collaboration, and sustainable metrics.

Rationale of the Study

The tourism industry is widely acknowledged as a significant driver of economic expansion, job creation, infrastructural development, and cross-cultural interaction. The natural beauty (coastlines, beaches, forts, villages), cultural history (local festivals, cuisine, traditional arts), and biodiversity (forests, marine ecosystems) of coastal and picturesque areas like the North Konkan make them highly promising destinations for tourists. Economic leakage (profits leaving the area, little benefit to local populations), sociocultural disruption (loss of local identity, privatization of culture), and environmental degradation (pollution, habitat loss, erosion) can all result from uncontrolled or badly managed tourism.

Problem of Study

Particularly in areas like Maharashtra's North Konkan that are rich in culture and ecology, tourism is becoming more widely acknowledged as a potent instrument for regional development. Over the past ten years, the North Konkan region has steadily increased both domestic and foreign tourism due to its beautiful coastlines, historic forts, biodiversity, and lively local culture. But this expansion has had detrimental effects on the environment and society. Numerous problems, including coastal pollution, habitat loss, deforestation, natural resource depletion, cultural commodification, and greater strain on local infrastructure, have been brought on by the North Konkan's tourism industry's explosive and frequently unchecked growth. In addition to endangering the region's tourism industry's long-term viability, these tendencies run the risk of deteriorating the very resources that draw visitors in the first place.

Objectives of the Study:

- To determine and record the sustainable tourism methods being used in the North Konkan area at the moment.
- To evaluate how these sustainable practices affect the growth of the tourism industry on an economic, sociocultural, and environmental level.
- To assess how important players in the area view and feel about sustainable tourism.
- To determine the main obstacles and difficulties in North Konkan's adoption of sustainable tourism techniques.
- To examine the connection between North Konkan tourism's long-term growth and profitability and sustainable tourist practices.

Hypothesis of Study:

- H1: There is no significant impact of Sustainable tourism practices on tourism development in North Konkan region.
- Ho: There is no significant impact of Sustainable tourism practices on tourism development in North Konkan region.
- H1: There is a significant relationship between sustainable practices and economic benefits
- H0: There is no significant relationship between sustainable practices and economic benefits
- H1: There is a significant difference in the perception of sustainable tourism benefits among various stakeholders in North Konkan.
- Ho: There is no significant difference in the perception of sustainable tourism benefits among various stakeholders in North Konkan.

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Significance of Study:

- This study will close a significant knowledge vacuum for planners, policymakers, and stakeholders in this particular geographic area by offering region-specific insights into the implementation of sustainable practices, the results they yield, and the difficulties they encounter.
- The results of the study will also help local stakeholders—such as homestay hosts, craftspeople, transportation companies, etc.—understand how sustainable practices can guarantee resource longevity and enhance long-term livelihoods.
- Researchers, academics, and students working in the domains of development studies, tourism studies, environmental management, and regional planning will find it helpful.

Gap in the study:

- Lack of Longitudinal Studies: Few case studies look at changes over time (for example, before and after the introduction of sustainable practices) in Konkan; most are cross-sectional
- Measurement of trade-offs: Negative effects on the environment or society are frequently acknowledged qualitatively, but quantification is less reliable (e.g., how much pollution prevented, what is the economic cost of not creating specific infrastructure vs. environmental damage).
- Lack of integration with climate change adaptation: While some talks of low carbon or climate friendly tourism, fewer studies examine resilience in face of climate hazards (monsoons, sea level rise, and extreme weather) in Konkan.

Research Methodology:

It involves the systematic and structured approached to collect, analyses and interpret the data. The sequence of steps is followed to execute the research.

A) Research Design

A research design is the collection of data by applying the systematic procedure. It is a Framework which helps in collecting and analyzing the data. The present study is an explanatory As well as descriptive research to find out the impact of sustainable practices on tourism development with reference to North Konkan Region.

B) Data Sources:

Secondary Data

Information will be collected by using data availability on various websites, research Paper, journal, and articles.

Conclusion

The North Konkan region has enormous potential for tourism-driven growth because of its distinctive combination of biodiversity, natural beauty, cultural history, and coastline appeal. Unplanned and unregulated tourism, however, has started to seriously jeopardize the country's social cohesion and natural purity. With an emphasis on the sociocultural, economic, and environmental aspects of the North Konkan region, the current study aimed to investigate how sustainable practices affect the growth of tourism in this context.

The study's conclusions unequivocally show that responsible and balanced tourism growth is greatly aided by sustainable tourism practices. Measureable gains in local livelihoods, environmental preservation, and visitor happiness have resulted from initiatives including eco-friendly lodging, waste management systems, community-based tourism models, and biodiversity conservation initiatives.

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Original Article

Limnological Studies of Lonar Lake, Buldhana District, Maharashtra, India

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Abstract

Limnological studies of Lonar Lake were carried out during June 2024 to May 2025. The present study deals with physico - chemical parameters such as, temperature, pH, alkalinity, chlorides, conductivity, total dissolve solids, turbidity, dissolve oxygen, calcium and magnesium. The maximum and minimum range of physico - chemical properties were as, temperature 21.6 to 28.5 ⁰C from station 2 in Winter and Summer respectively, pH 8.5 to 10.6 in Winter and Summer respectively, alkalinity 1655 to 3115 mg L-1 in Winter and Monsoon respectively, minimum chlorides 2050 mg L-1 in Winter and maximum 3948.95 mg L-1 in Monsoon, conductivity 14258 µS cm-1 in Summer and 20400 µS cm-1 in Monsoon, total dissolve solids were 15230 mg L-1 in Summer and 10980 mg L-1 in Winter, dissolve oxygen was 1.01 mg L-1 in Summer and 1.05 mg L-1 in Winter, Ammonia 225 mg L-1 in Summer and 386 mg L-1 in Summer, Nitrate 6.58 mg L-1 in Summer, 12.45 mg L-1 Winter, and it is concluded that the variation in parameters were due to rain.

Keywords: *Physico - Chemical properties, Eutrophication, Lonar Lake.*

Introduction

Limnology is the study of the geological, physical, chemical and biological aspect of all natural fresh water ecology. Whether an animal lives in water or on land its protoplasm holds about 70 to 90% of water. Lonar Lake (19° 59'N, 76° 31'E) is located at Buldhana, Maharashtra. The lake was discovered by a British officer J. E. Alexander in 1823. The lake is estimated to be about fifty-two thousand years old (Fredrikson *et al.*, 1973).

Lonar crater is said to be the world's oldest and third largest meteorite crater. It is surrounded on all sides by a rim called as ejecta blanket formed from the blocks of basalt, and a steep escarpment (circulatory index <0.9) to an even height of about 150 m deep, having 6 km diameter from outer side and 3.5 km from inner side, whereas the depth of the brine is 5.5 m (Malu *et al.*, 2007). Lonar lake is 600 m above mean sea level (MSL) and 468 m at its deepest MSL. It has been widely accepted that the crater was formed due to the fall of a meteorite weighing 20 lakh tones and 69 meters broad, some 52 thousand years ago (Fredrickson *et al.*, 1973).

The lake diameter is 1830 m. and depth is 135 m. The lake is confined from all sides by walls of the crater and there is not a single channel of water for drain out. The water is remaining stagnant for thousands of years. The water is salty, alkaline and is rich in various biotic and abiotic assemblages. The varied condition offers unique opportunities for ecological investigation of the lake (ILEC, 2005).

Lonar Lake lies within the only known creature from outer space impact crater found within the great Deccan Traps basaltic formation of India. (Pittarello *et al.*, 2024). To cover the maximum Lake area possible, four sampling station were established namely Station 1: Site 'A', Station 2: Site 'B', Station 3: Site 'C' and Station 4: Site 'D' along the periphery of lake basin.

1) Station 1 Site A - water from Ramgaya (East)
2) Station 2 Site B - water from Lord Shiva Temple (West)
3) Station 3 Site C - water from Shani Temple (South)
4) Station 4 Site D - water from Devi Temple (North)

In aquatic habitats, environmental factors include various physical properties such as the solubility of gases and solids, light penetration temperature and density,

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chemical factors such as hardness, phosphate and nitrates are very important for growth of primary productivity. Hence, the present study was based on the examination of the physico-chemical parameters of Lonar lake of Maharashtra.

Material and Methods

Water samples were collected seasonally at a depth 2 feet from the surface of the water body from the four sampling stations (mentioned as above) between 7 to 11 am during the study period. i.e. (June 2024 to May 2025) Water samples were collected in airtight and opaque plastic containers of five litre capacities, which were thoroughly cleaned, washed and rinsed before every collection. Separate containers were used for each station. Samples were labelled properly according to their location and date of sampling. The parameters like temperature, pH, dissolved oxygen, residual chlorine and alkalinity were analysed immediately after sample collection (i.e. on field). Samples were stored and protected from heat and sunlight during transportation and stored in the refrigerator until analysis. Standard analytical methods were employed for the analysis of the water samples of Lonar Lake as per APHA (1989). The analytical procedures and units of physico-chemical parameters are summarized in Table 1

Table 1. Water Quality Standards Recommended by Different Agencies with Analytical procedures

Sr. No.	Parameters	Analytical methods	Maximum permissible limits		
			BIS (1991)	WHO (1992)	ISO 10500 (2004)
1	Temperature	Thermometer	--	--	--
2	Total Solids (mg/L)	Titrometer	0	--	--
3	TDS (mg/L)	Titrometer	1500	0	500
4	TSS (mg/L)	Titrometer	0	500	0
5	pH	Electrometer	6.5 - 9.2	6.5 - 8.5	6.5 - 8.5
6	Electrical Conductivity (µS/cm)	Conductivity Meter	300	--	300 – 400
7	Total Alkalinity (mg/L)	Titration by H_2SO_4	200	120	200
8	Dissolved Oxygen (mg/L)	Titration by Sodium thiosulphate solution	--	0	>5
9	Biological Oxygen Demand (mg/L)	Winkler's method, 5 days incubation at 20˚ C followed by titration.	--	--	--
10	COD (mg/L)	Titration against 0.1 N Fe $(NH_4)_2(SO_4)_2$ solution	0	10	--
11	Ammonia (mg/L)	Nessler's reagent method	0	--	--
12	Nitrate (mg/L)	--	0	45.0	--

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13	Total Phosphorous	--	0	--	Nill
14	Sulphate (mg/L)	Precipitation by BaOH	400	200	200
15	Chloride (mg/L)	Titration by $AgNo_3$	1000	600	250
16	Hardness (mg/L)	Titrometer	600	500	300

Results and Discussion

The present study area, the Lonar lake is one of the best example of man's disregards towards the nature. The rapidly growing population and increasing urbanisation, industrialisation and agricultural activities have resulted in over exploitation of the river resources leading to degradation of its water quality. The three year study conducted on the Lonar lake reveals the magnitude of damage caused to the ecosystem due to anthropogenic activities.

During the present study it was observed that the colour of the lake water was light green to dark green because of the dense algal population with predominating *Spirulina* species. The present work is in conformity with the works of Ghanekar (1996); Muley and Babar (1998); Khobragade (2003, 2009), Siddiqui (2008), Pawar (2010) and Borul (2012) The odour of the lake water was somewhat offensive. This may be due to the non-availability of any outlet for the lake water. Further, addition of polluting elements like the sewage may lead to the offensive odour

Temperature

The temperature of Lonar lake water ranged from 21.6° C to 29° C over a period of three years and an overall view showed fluctuations in accordance with atmospheric temperature. Solubility of oxygen in the water decreases as the water temperature rises. Maximum temperature was recorded in summer (April - May), thereafter it started declining and minimum temperature was recorded in winter (February) followed by gradual increase in the following months to reach again to its maximum in summer. Similar variations in temperature were observed in Lonar waters during previous studies by Pedge and Ahirrao (2013), and the observed temperature was in the range of 29.4° C to 30° C.

Total Solids (TS)

The analysis of total solids is an important parameter used in assessing the quality of water. The direct relationship between rainfall and total solids was attributed to an increased load of soluble salt from catchment area as a result of ground surface runoff.

In summer higher values of total solids were recorded due to the increase in the evaporation resulting into high salinity and higher amounts of solids in the lake water. The water in the crater was observed to be very salty, may be some 10 times saltier than the drinking water. Present study revealed that the values total solids increased as compared to the values recorded by Pegde and Ahirrao (2013) and Shinde and More (2013), this may be due to decreased rainfall during the year 2024 which resulted in high rate of evaporation due to heat resulting in changes in the concentration of salinity which affects the high ratio of total solids.

Total Dissolved Solids (TDS)

A total dissolved solid is the amount of dissolved materials in the water measured in milligram per litre. Ions such as potassium, sodium, chlorides, carbonate, sulphate and magnesium all contribute to the dissolved solids in the water (APHA, 1992).

The total dissolved solid of lake water ranged from 11025 mg/litre to 15230 mg/litre during June - 2024 to May - 2025 at different sampling stations. Throughout the study period the mean values of total dissolved solids ranged from 13032.66 to 13633 mg/litre in monsoon, 11621.67 mg/litre to 13183 mg/litre in winter and 14120 mg/litre to 14755.33 mg/litre in summer. The values of total dissolved solids observed by other researchers range between 7693.5 mg/litre to 7962.4 mg/litre. Pedge and Ahirrao (2013); Shinde and More (2013) reported 860.0 mg/litre to 2041.00 mg/litre.

Total Suspended Solids (TSS)

Solids in suspension that will settle under quiescent conditions because of the influence of gravity and coarser suspended solids having specific gravity more than water will settle down quickly. The accumulation of settleable solids results in sludge formation (APHA, 1992).

Throughout the study period the mean values of total suspended solids ranged from 712.33 mg/litre to 787.33 mg/litre in monsoon, 580.66 mg/litre to 679 mg/litre in winter and 660.66 mg/litre to 732.66 mg/litre in summer. The values of total suspended solids observed by other researchers range between 1723.1 mg/litre to 1963.6 mg/litre Pedge and Ahirrao, (2013); Shinde and More (2013) reported 40.0 mg/litre to 1580.00 mg/litre.

PH (Potentia hydrogenii)

PH is the measure of intensity of acidity or alkalinity and refers to the concentration of hydrogen ions in water. PH is generally measured on a log scale and is equal to negative $\log_{10}$ of the hydrogen ion concentration. The present study showed that total pH ranged from 9.74 to 10.14 which was found to be far much greater as compared to maximum permissible limits of 6.5 - 9.2 (BIS, 1991), and 6.5 – 8.5 (WHO, 1992 and ISO, 2004). The Lonar Lake was

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found to be alkaline throughout the study period. pH was found to be descending order viz., summer > winter > rainy season which may be due to dilution of alkaline substances by rain waters. Jhingran and Rao (1958) have reported that pH of lake water ranged between 9.3 and 9.7 whereas, a distinct fall in pH values was observed during post monsoon period at all the Station. Dabhade *et al.,* (2006) and Sengupta (2008) also recoded higher pH values during summer in different water bodies.

Electrical Conductivity

Conductivity is a numerical expression of an aqueous solution's capacity to carry an electric current. In the present study lake water showed high electrical conductivity throughout the study period. The conductivity of lake water ranged from 14258 µmhos/cm to 20400 µmhos/cm during June - 2024 to May - 2025 at different sampling stations.

Throughout the study period the mean values of conductivity ranged from 15835.67 µmhos/cm to 16796 µmhos/cm in monsoon, 16029.33 µmhos/cm to 17776.67 µmhos/cm in winter and 15730 µmhos/cm to 16793 µmhos/cm in summer. The values of electrical conductivity observed by other researchers range between 11600 µmhos/cm to 15100 µmhos/cm reported by Siddiqui (2008).

Total Alkalinity

Alkalinity of water is its capacity to neutralise strong acid, which is characterised by the presence of hydroxyl-ions capable of combining with hydrogen-ions. Alkalinity of water is caused by the presence of bicarbonates, carbonates, hydroxides and phosphates. The present study shows that maximum values of alkalinity ranged from 2404.9 to 2886.5 mg/litre which are far much greater as compared to the maximum permissible limits of ISO and BIS (200 mg/litre) as well as WHO (120 mg/litre). Similar observations were made by Khobragade (2003) who observed alkalinity in the range of 1700 to 2230 mg/litre. Such alkaline waters may be due to the higher concentrations of carbonates, bicarbonates, hydroxides and phosphates.

Dissolved Oxygen (DO)

Dissolved oxygen is required to maintain the health of aquatic ecosystems. Oxygen is produced during photosynthesis, but is also used by plants, animals and microorganisms that live in water. The dissolved oxygen of lake water ranged from 1.01 to 1.05 mg/litre during June - 2024 and May - 2025 at different sampling stations. Earlier investigators have reported DO of Lonar lake to be in the range of 0.02 to 0.09 mg/litre Babar (2010) and 0.03 to 4.8 mg/litre (Tandale *et al.*, 2014). Khobragade (2003) reported absence of DO the major factor responsible for little variety in biotic components in the lake.

Biochemical Oxygen Demand (BOD)

Biochemical oxygen demand is the amount of oxygen required for microbial metabolism of organic compounds in water. In the present study the biological oxygen demand of the lake water ranged from 228 to 384 mg/litre during June - 2024 and May - 2025 at different sampling stations. Earlier investigators have observed lower BOD of Lonar lake to be in the range of 50 to 56 mg/litre (Siddiqui, 2008), 230 mg/litre (Khobragade, 2009) and 0.1 to 0.7 mg/litre (Babar, 2010).

Chemical Oxygen Demand (COD)

The Chemical oxygen demand (COD) is a measure of the total amount of oxygen required to oxidise all the organic matter in a sample into CO_2 and H_2O. In the present study, chemical oxygen demand of lake water ranged from 730 mg/litre to 1155 mg/litre during June - 2024 and May - 2025 at different sampling stations. Earlier investigators have observed COD of Lonar lake to be in the range of 263 mg/litre to 285 mg/litre (Siddiqui, 2008) and 0.01 mg/litre to 0.04 mg/litre (Babar, 2010).

Ammonia

Ammonia is dissolved in water to produce Ammonium Hydroxide and further dissociated to Ammonium and hydroxyl ions. In the present study the ammonia content of lake water ranged from 225 mg/litre to 386 mg/litre during June -2024 and May - 2025 at different sampling stations.

Nitrate

Nitrogen is an essential plant nutrient found in fertilisers, human and animal wastes, yard waste and the air. In the present study, the nitrate content of lake water ranged from 7.68 to 12.5 mg/litre during June - 2024 to May - 2025 at different sampling stations.

Phosphate

Phosphorous is an essential plant nutrient and most often controls aquatic plants (algae and macrophyte) growth in the freshwaters. In the present study, the phosphate content of lake water ranged from 2.18 mg/litre to 6.84 mg/litre during June - 2024 and May - 2025 at different sampling stations. Earlier investigators observed phosphate in Lonar lake in the range of 0.25 mg/litre to 0.56 mg/litre (Siddiqui, 2008); 0.904 mg/litre to 1.690 mg/litre (Yannawar, 2013).

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Sulphate

The main source of sulphate in water is various sediment rocks which include gypsum and anhydride. In the present study, Sulphate of lake water ranged from 45.5 to 76.4 mg/litre during June - 2024 and May - 2025 at different sampling stations. Throughout the study period the mean values of sulphate ranged from 51.16 mg/litre to 67.86 mg/litre in monsoon, 49.53 mg/litre to 59.13 mg/litre in winter and 48.46 mg/litre to 59.3 mg/litre in summer. Earlier investigators have observed sulphate content in the Lonar lake to be in the range of 106 to 117 mg/litre (Siddiqui, 2008) and 154 to 230 mg/litre (Yannawar, 2013).

Chloride

Chloride is widely distributed in nature, generally in the form of sodium chloride (NaCl) and Potassium (KCl) salts, it constitute about 0.05% of the earth outer crust. In the present study the chloride content of the lake water ranged from 2050 to 3948.48 mg/litre during June - 2024 and May - 2025 at different sampling stations. In the present study, Chloride ranged from 2471.7 to 3153.42 mg/litre which are much greater than the maximum permissible limit of Chloride in water as per WHO (1992) is 250 mg/L, BIS (1991) is 1000 mg/L and as per ISO (2004) is 250 mg/L.

Hardness

In the present study, hardness of lake water ranged from 110 mg/litre to 149.2 mg/litre during June -2024 to May - 2025 at different sampling stations. Earlier investigators observed hardness of Lonar lake water in the range of 120 mg/litre to 140 mg/litre (Yannawar, 2013) and 220 mg/litre to 260 mg/litre (Shinde and More, 2013).

Conclusion

The parameters like pH, Conductivity, Turbidity, Total Dissolved Solid (TDS), Total Suspended Solid (TSS), Alkalinity, Chlorides, Sulphates, Potassium, DO and BOD were found to exceed the maximum permissible limits given by WHO (1991), BIS (1992) and ISO (2004) for human consumption and other domestic purpose.

The uniqueness of the Lonar lake is due to the alkaline pH of the lake water, which is a major factor in the formation of this remarkable aquatic habitat. The increase in the alkalinity and/or salinity of the lake water may be due to the evaporation of lake water and absence of any drain. Turbidity showed a positive co-relation with alkalinity which may be due to decomposition of organic matter.

Nitrates and phosphates are essential for the growth of primary producers of the aquatic ecosystem. But excess of these nutrients has led to eutrophication, thereby causing an algal bloom which is disrupting the natural ecosystem of the lake.

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Original Article

A Review of Work-Life Balance among PMPML Bus Drivers and Conductors with Reference to Welfare Facilities and Working Conditions

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Abstract

It has become increasingly important for employees to maintain a work-life balance, especially in professions where long hours, irregular schedules, and high levels of responsibility are required. Managing their professional and personal lives can be a challenge for public transport employees, especially bus drivers and conductors. The study examines the relationship between work-life balance and three critical factors in Pune Mahanagar Parivahan Mahamandal Limited's (PMPML) bus drivers and conductors. A secondary data set is gathered from previous studies, reports, and policy documents for the study. It has been found that PMPML employees' work-life balance is significantly influenced by adequate welfare facilities, safe and supportive working conditions, and job security. In addition to highlighting welfare gaps, the review suggests improvements for improving employee satisfaction and organizational efficiency.

Keywords: *Work Life balance (WLB), Pune Mahanagar Parivahan Mahamandal Limited*

Introduction

The ability of employees to balance work commitments with personal and family obligations is known as work-life balance. The irregular schedules, traffic stress, extended working hours, and nature of their responsibilities make achieving work-life balance challenging for employees who work in public transportation services such as PMPML. As the primary public transportation provider in Pune Metropolitan Region, PMPML employs thousands of drivers and conductors who directly influence efficiency, safety, and reliability. In addition to affecting work-life balance, their welfare, working environment, and job security also affect commuter service. The purpose of this study is to examine the relationship between PMPML drivers' and conductors' work-life balance and welfare facilities, working conditions, and job security.

Review Of Literature

Greenhaus and et.al, (1985)[1], the authors of "Sources of conflict between work and family roles" emphasised that conflicts between work and family roles arise when competing pressures are mutually incompatible. In the transport sector, such conflicts are often intensified by the long hours of work.

- Singh and et.al,. (2019)[2], in their research paper "Working conditions and occupational stress among road transport employees in India" describes how irregular shifts, traffic congestion, and a lack of proper rest affect physical and mental health.

  Kumbhar, S. (2021)[3], in his thesis "A study of women conductors in Pune Mahanagar Parivahan Mahamandal Limited (PMPML): Challenges and opportunities" identified the challenges women conductors face in urban

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- Public transport. According to the study, welfare facilities (such as restrooms and rest areas) are inadequate, jobs are uncertain because of temporary appointments, and it is difficult to balance work and family.
- Sharma, R. (2017)[4], in his thesis “Employee welfare measures and work–life balance in the public transport sector” highlight the importance of welfare amenities such as restrooms, medical care, and canteen facilities for reducing stress and enhancing job satisfaction.
- Rao, K et.al,. (2018)[5], in their articles “Employee welfare and job satisfaction in road transport undertakings” suggested that healthcare, uniforms and subsidized meals improve employee morale indirectly improving work-life balance.

Objectives of the Study

- To highlights the concept of work-life balance in the context of PMPML employees.
- To studying the relationship between welfare facilities and work-life balance.
- To examine the impact of working conditions on bus drivers and conductors' personal and professional lives.
- To identifying the influence of job security on employee satisfaction and balance.
- To suggest measures to improve work-life balance among PMPML employees.

Research Methodology

The study relies on secondary data from academic journals, government reports, PMPML publications, and studies on employee welfare and the transportation sector. It examines how welfare facilities, working conditions, and job security affect work-life balance among PMPML drivers and conductors. The study provides insight into challenges and trends through the analysis of existing literature and official reports.

Socio-Economic Profile Of Pmpml Employees:

- The majority of drivers and conductors come from middle- and lower-middle-income groups.
- The lack of educational qualifications restricts opportunities outside the transport industry.
- Extended hours of work and split shifts can result in fatigue and decreased time with family.
- The economic dependency on fixed monthly wages makes job security essential.

Results and Findings:

- PMPML needs to improve its welfare facilities significantly in order to improve the well-being of its employees.
- A major cause of work-life imbalance is stressful and unsafe working conditions.
- Psychological comfort is provided by job security, but financial strain is created by irregular wage payments.
- Work schedules that are too long often lead to employees sacrificing personal and family commitments.
- Employee support systems and HR practices need to be modernized.

Conclusion And Suggestions

PMPML drivers and conductors can benefit from several measures to improve their well-being and work-life balance. In addition to improving comfort and reducing stress, bus depots can provide canteen services, regular medical check-ups, and relaxation rooms. Work conditions can be improved to minimize fatigue and occupational hazards, including regulated working hours, adequate rest breaks, and traffic safety training. Job security can be enhanced by timely salary payments and the regularization of contract employees. Stress, work-life conflicts, and family concerns can also be effectively addressed by setting up counseling and support units. The adoption of technological tools, including digital rostering systems, can also contribute to employee satisfaction and efficiency by ensuring fair, transparent, and optimized duty schedules.

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Report:
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- Annual budget, Annual Accounts and
- Mahamandal Limited
- Administrative Report
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Sustainable development and problems in rural areas of India

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Abstract:
The present research paper studies the challenges facing sustainable development. In sustainable development, agricultural productivity and the income of the poor are also considered important. The need for income-environment balance is important for forest conservation. It also tries to highlight the challenges in the implementation of sustainable development and income inequality. In sustainable development, basic services such as clean water, sanitation, health care and education are studied, as well as the basic infrastructure facilities such as basic rights of people in rural areas. Lack of infrastructure, inadequate transport services, etc., as well as unstable power supply make it impossible for industrial expansion in rural areas. Sustainable development Social inequalities and marginalization such as caste, gender inequality, prejudice based social cohesion and justice hinder development, as do deforestation, water pollution, climate change, and natural disasters. Lack of access to financial services in rural areas is evident. The increasing migration of people from rural areas to urban areas hinders investment in the economy, skill development, and employment generation in rural areas. All of these are studied in the present article.

Key words*: Sustainable developments, challenges, Technological divide.*

Introduction:

Sustainable development means development that meets the needs of the present without compromising the ability to meet the needs of future generations. While preparing a village development plan, it is essential that it be a sustainable rural development plan. Keeping in mind the needs of future generations, planning and developing by considering the needs of the present, and developing with the environment in mind is called a sustainable development plan. Various countries and organizations in the world have given various definitions for rural development. Also, to achieve rural development, they have set up mechanisms and implemented plans with specific goals. But in the latter half of the twentieth century, the concept of sustainable development was exposed to the public due to many developments that hindered the progress of humanity and threatened its existence. These include environmental crises, fuel crises, energy crises, population, food problems, ongoing military conflicts, the threat of terrorism, the growing difference in living standards between different social classes and countries, etc.

Sustainable development, according to the Brundtland Commission Report Our Common Future (1987), is defined as 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs'. This is one of the most widely used definitions relating to sustainable development. Similar definitions have been coined since then that emphasised on 'improving the quality of human life while living within the carrying capacity of supporting ecosystems' or 'the development that comprises of economic and social development that protect and enhance the natural environment and social equity'. The World Conservation Strategy Report defined it as 'the integration of conservation and development to ensure that modifications to the planet do indeed secure the survival and well being of all people'. Whatever the definition is, it carries the tenor of development that can be achieved without an undue exploitation of the natural resources.

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For long, it was taken for granted by the mankind that nature is bountiful and can be used unscrupulously. Accordingly, the resource exploitation continued unmindful of the consequences till it was realised that the resources are actually being overexploited. The international community called for a meet that aimed at bringing a halt to this menace and chalk out a programme to restore nature's capacity. The first call to these environmental threats was given as early as1960s. A new environmental movement emerged around this time that was sparked off by Rachel Carson's book Silent Spring; the book drew the attention of the world to the destruction of wildlife by the use of pesticide DDT. She warned that these chemicals contained the prospect of a dying world in which springtime would no longer bring forth lease to new life but only silence. Carson revealed that our actions could lead to seriously damaging environmental consequences when we interfered with the natural systems we fully did not understand. There were meetings from time to time addressing these issues including the Stockholm Conference of 1972; the United Nations General Assembly, in 1983, set up the World Commission on Environment and Development (WCED) with the Norwegian Prime Minister Mrs. Gro Harlem Brundtland as the chairperson. The Report Our Common Future was brought out by this commission. The core theme of the Report emphasised the importance of taking into consideration environmental resource limitation before deciding the economic policies of the State. Thus a need was felt to integrate environment and economics in a co-ordinated manner without having detrimental effects on both.

In this period of market driven economies and globalisation, there is an immense competition between various nations to reap maximum benefits. This undue competition led to overuse of natural resources in the name of development. The developing countries especially are compelled to use their resources in an un-economical manner; while the poverty levels remained as they are, development eluded many a country. Keeping this in view, the Brundtland Commission argued that in a world marked by extreme poverty, people are compelled to use resources in an erratic manner for meeting their immediate needs; these means of survival result in an unhealthy environment. Therefore, the key to development is welfare of the people with a simultaneous nurturing of natural resources.

There exist two dimensions of human needs:

(1) The fulfilment of basic needs like food, clothing, shelter and a clean environment; and (2) the option of pursuing a chosen lifestyle, in terms of materialistic possessions. The developed countries were successful, through early industrialisation, in providing these comforts to their population.

The rising influence of sustainable development in the 21st century necessitates an effective economic model. This blog post aims to pinpoint the basic challenges for sustainable development and present solutions to overcome those challenges where these advancements will be of the highest utility, namely in rural regions.The term sustainable development was popularized by the Brundtland Report in 1987, emphasizing the need to balance economic growth, environmental sustainability, and social equity. It defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs.Today, sustainability is central to international solidarity. The United Nations' 17 Sustainable Development Goals (SDGs) aim for specific targets by 2030, requiring action from governments, corporations, and organizations worldwide. The SDGs seek to improve living standards and create a better future globally.

Sustainability and Rural Development

The term "sustainable development" has largely been promulgated by the industrialized nations in the context of global environmental processes and concerns, and it has catalyzed attention on the relationship between economic growth and the natural resource base on which this depends. Most people use the phrase "'sustainable development" interchangeably with ecologically sustainable or environmentally sound development". This interpretation is characterized by: (a) "sustainability'" being understood as "ecological sustainability" and(b)a conceptualization of SD as a process of change that has (ecological) sustainability added to its list of objectives.In short, although sustainable rural development may assume a variety of forms, there are three key expressions of this emerging paradigm: It is a response to the price/cost-squeeze on agriculture. It adds income and employment opportunities to the agricultural sector by enlarging value added.It expresses new relationships between the agricultural sector and society at large. It contributes to the construction of a new agricultural sector that corresponds to the needs and expectations of society at large. It implies a redefinition, recombination and/or reconfiguration of rural resources.

Agriculture and sustainable Rural Development:

A core challenge to sustainable development is the attainment of sustainable agriculture which means improving productivity and the income of the poor, without affecting the planet's critical life support system. Agriculture is the backbone of national economy in many developing countries, in India it accounts for 6 out of every 10 jobs. Without agricultural productivity, people in the rural areas will either starve or attempt to seek a better life elsewhere. Cities on the other hand cannot tolerate further strain. As such the need is to make the development greener but that will need new kinds of tools that will be gentle and not scar the earth's imaginative strategies that will create such tools

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and many hands eager to put them to work. Such tools will promote sustainable agriculture without affecting the eco-**balances. Some of these tools are:**

- **Conservation of Forests**

In the eco-balance system a major area is the conservation of forest. In India, annual requirement of fuel is in the order of 150 million tones whereas the production is hardly about 20 million tones. The degradation or denudation of the forest is of the order of about 1.5 million tones per annum and therefore the country is going to have barren forest in a very near future.

Besides, the practice of shifting cultivation by tribal's is another important environmental situation. It is also non-sustainable economic activity for them. As such it is essential that, such individuals should be provided with forest based subsidiary occupation like minor forest produce (cultivation of fruits, vegetables, plantation crops, etc.) in order to retain them in their areas with a sustainable activity and also to promote forestry in the hill area.Further, wherever possible captivity plantation should be encouraged for the wood based industry. The Government Task force should use the tissue culture and micro propagation technique for the production of important forest trees[10]. Fuel timbers, etc., which could be planted on Government lands, under Government Sponsored Schemes, such as social forestry and the waste land development programme, etc.

- **Biotechnology & Biodiversity**

To augment sustainable and higher production in agriculture, allied agriculture activities, agro based industry and others as well as to increase employment opportunities among the rural poor, it has become necessary to upgrade the existing technology of production. Biotechnology, a labor intensive technology, refers to variety of techniques involving living organisms as a means of production and uses tissue or cell culture, cloning and fermentation; cell fusion, embryo transfer and recombinant DNA technology etc. This technology has been developing rapidly in the world since 1980. A number of biotechnological industries have been established in the field of agriculture, pharmaceuticals, food and feeds, energy and the environment protection. In addition to the frontier technologies like genetic engineering and biotechnology, India has varying agro climatic zones, suitable to produce variety of hybrid plants and animals[8]. It has a vast pool of high caliber agricultural scientists, cheap agricultural laborers and the agro-chemical inputs.India with this unique position can not only generate employment among rural folk and eradicate poverty but also can commercialize agriculture in the field of crop production, horticulture, aquaculture, floriculture, mushroom production, live-stock and poultry production, etc. It can become a major exporter of agricultural raw materials and food to the world.

- **Chemical Fertilizers vs. Bio-fertilizers**

PIt is estimated that 50% of the increase in food grains production in the last decade was due to extensive use of chemical fertilizers. However, the deleterious effects (soil salinity and alkanity) of excessive use of chemical fertilizers, particularly in the absence of organic manures were recognized in many parts of the country, including the nitrate nitrogen pollution of the ground water. Besides 75% of the farmers are in the category of small and marginal farmers, who cannot afford to use costly chemical fertilizers. Therefore, it is necessary to look for alternatives which will promote cost effectiveness and sustainability in farming. Another important fact is the use of chemical fertilizers without estimating the soil fertility. This is misuse of costly complex fertilizers and micro nutrients which also leads to environmental problems. Higher yields of crops can be obtained without many externally purchased chemical fertilizers by recycling the farm wastes and allowing mineralization to take place.

- **Post Harvest Technology**

In India, it is estimated that about 30% of agricultural produce are spoiled or wasted in different stages of handling right from the site of production to storage. With availability of sufficient productive lands, varied agro-climatic conditions, abundant sunshine and the cheap labour force.there is tremendous scope in our country for development of floriculture, aquaculture, fruits, and vegetables, etc. Incidentally, we are the second largest producers of fruits and vegetables in the world, but our export of these items are negligible (less than 1%). Thus main reason is the heavy losses (about 40%) at different stages of post harvesting process owing to faulty handling, transportation and processing techniques.In the light of foregoing there is a need to preserve food to make it available as fresh as possible to the consumers. Each food has got a specific structure, texture, flavor, color and nutritive value. The causes of deterioration are physical, chemical and biological due to growth and activity of micro-organisms like bacteria, moulds, insects, etc. Spoilage may appear as loss of weight, softening, souring, rotting, wilting or may be in combined form. Ultimately the food is decomposed and becomes inedible. A variety of processes are available to preserve foods which are used either alone or in combination. The ultimate aim is to increase the storage life of food by reducing the metabolic changes continuously taking place inside the food (i.e. respiration, ripening processes, etc.) moisture loss, physiological disorders and further growth of microbes etc.

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- **Growing Population and Poverty**

India's population of 1.324 billion is growing at the rate of 1.19% every year. If this trend of growth continues by 2025 it may overtake China the most populous country of the world. High population growth rate is usually an indicator of poverty. About 23.6% people are below poverty line, 63.4 millions have no access to drinking water, 10% villages have no electricity and 30% are yet to be connected by all weather roads.The increasing population continues to erode the net benefits. Although they spend 85% of income on food, the poorest 20% of the population are still unable to consume more than 1500 calories a day as against the minimum requirement of 2300 calories considered by the Niti Ayog. The poverty and population is also linked to illiteracy. Higher is the poverty higher will be illiteracy, and if illiteracy is high population will not be controlled. The uncontrolled population growth has adverse effects on environment also. It threatens the precarious balance between the natural resources and people. The lands are divided into small holdings and fragments. production has gone down and the whole population is sustained only on 4.8% of the world's income. It is therefore, necessary that the illiteracy should be eradicated forcefully and family planning should be implemented effectively.

- **Rural Development and Village Industries**

The term rural development was understood in the past to mean only agricultural development, and no attention was given to other sectors of rural economy. Fortunately in the 12th plan this approach has been changed so as to accept the philosophy of overall development of rural economy. Rural development is not merely agricultural development but rural transformation which includes development of all the facets of human civilization. The new approach to rural development intends to cover all sectors in rural area to give a new mould to the society through various measures. According to this new approach Rural Development is concerned with modernization of the rural society and with its transition from traditional isolation to integration with the national economy. The development of small scale village industries is the need of the hour to check rural people flocking towards urban areas. The Government has been supporting the village and small scale industries by restricting the volume of production in large scale sector, but these programmes are not picking up as new industrial goods are available in the village markets from the urban manufacturing industries which can compete with the goods produced by the village industries.Despite several efforts made by the Government through various schemes for revitalization of village and cottage industries in rural areas, the artisans in the sub sector have not been able to improve their economic condition because of various problems they are facing in their local rural markets. They have not been benefited much from the poverty alleviation and rural employment generation programmes implemented in recent years. With a view to overcome the difficulties being faced by such individuals, it is essential that proper planning at grass root level should be done for them, which may envisage technical assistance at their door-step, training to them for their competence, financial and material support, supply of designs accompanied by arrangements for rural marketing systems, etc.

- **Rural Credit and Peoples Participation**

For deployment of credit in the rural area an extensive infrastructure was created by Nationalization of Imperial Bank of India in 1955, State Bank subsidiaries in 1959, 14 major commercial banks in 1969, another 6 commercial banks in 1980, setting up of Regional Rural Banks (RRBs) in 1975 and by formation of NABARD in 1982. A multiagency approach was adopted for expansion of rural credit, involving commercial banks, RRBs and cooperatives. A massive branch expansion program was undertaken by the commercial banks. Out of over 62,000 branches of commercial blanks 35,000 are operating in rural areas. Besides RRBs with their 14,000 branches are catering credit needs of rural people. In addition, there are 84,000 Primary Agricultural Credit Societies (PACs) functioning in villages. Despite the vast expansion of the formal credit system, half of the rural households are still outside the ambit of the institutional credit and majority of them are dependent on money lenders especially when there is occurrence of natural calamities like droughts or floods as also in personal tragedies and customary ceremonies which entail heavy expenditure. The major facts behind their dependency on non-institutional credit are the non-availability of institutional credit for consumption purposes, delayed and inadequate credit from credit institutions, illiteracy, lack of awareness and incapabilities to deal with the formal credit institutions[5]. The attitude of the bankers has also not been very positive because of high transaction cost, poor recovery, poor end use and diversification of loans.

Thus, there are several bottlenecks and constraints for both the credit institutions and the borrowers when credit expansion takes place direct through formal system of credit delivery in rural areas. In this regard Self Help Groups (SHGs) have been found to be very helpful to their members in inculcating among them the habits of thrift, savings and banking. What is perhaps most relevant in the case of SHGs is the peer pressure they are able to exert in order to ensure that credit is utilized for the purpose for which it has been taken and is repaid according to schedule. As reported by NABARD, the recovery performance of the members of SHGs has been found overwhelmingly satisfactory at around 95% when compared with around 40% in the case of direct bank lending to individuals of the target groups. The transaction cost of the bank is also reduced to a large extent since the loan is advanced to the group direct or through Non-Government Organizations (NGOs) and not to the individual members.As the organization of self help group is based on the concept of people's participation .

Challenges in Implementing Sustainable Practices

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- **Poverty and Income Disparities**

India's rural regions suffer from extreme poverty and disparities in income. Many people are kept in a cycle of poverty by a lack of work options, poor agricultural output, and restricted access to education as well as skill development.

- **Agricultural Crisis**

A sizable section of India's rural populace still makes their living primarily from agriculture. Nevertheless, the industry has several obstacles to overcome, including dispersed landholdings, limited water supplies, degraded soil, and reliance on monsoon rains. For rural development, modernizing agriculture, enhancing irrigation systems, and encouraging sustainable agricultural methods are essential.

- **Limited Access to Basic Services**

Access to basic amenities like clean water, sanitary facilities, healthcare, and education is often limited in rural areas. This imbalance is caused by remote locations, poor infrastructure, and resource limits, which deprive rural inhabitants of their basic rights and impede socioeconomic progress.

- **Infrastructure Deficit**

Inadequate transportation, energy, and telecommunications infrastructure limits rural communities' ability to connect and flourish economically. Farmers are unable to reach markets due to inadequate transportation infrastructure, while industrial expansion and entrepreneurship are hampered by unstable power supplies.

- **Social Inequality and Marginalization**

In rural India, prejudice based on caste, gender inequality, and the marginalization of some populations impede social cohesiveness and fair development. Addressing these structural issues requires empowering underprivileged groups, advancing gender equality, and creating inclusive governing institutions.

- **Environmental Degradation**

Deforestation, loss of natural resources, unsustainable land use practices, and water pollution pose a threat to ecologically sustainable activities in rural areas. Climate change exacerbates these issues by bringing forth unpredictable weather patterns, natural disasters, as well as weaknesses in agriculture.

- **Lack of Access to Financial Services**

Rural communities have less prospects for business and economic development since they have limited access to formal banking services, credit, and insurance goods. To enhance financial accessibility and empower rural populations, it might be beneficial to fortify rural financial institutions, support microfinance programs, and broaden digital financial inclusion.

- **Migration and Urbanization**

Migration from rural to urban areas driven by improved living and work possibilities results in depopulation of the rural areas and stresses urban infrastructure. For balanced regional development, it is imperative to address the primary causes of rural-urban mobility, such as investments in rural economies, skill development, and job creation.

- **Governance and Institutional Challenges**

Corruption, ineffective bureaucratic processes, and weak governance frameworks all work against the success of rural development projects and programs. Fostering sustainable rural development requires bolstering local governance frameworks, encouraging accountability and transparency, and building institutional capacity.

- **Technological Divide**

Inequalities in access to opportunity, education, and information are made worse by the digital gap that exists between rural and urban regions. The potential of rural communities may be realized by bridging the technological divide via projects like digital literacy campaigns, rural broadband access, and using technology for agricultural extension services.

Conclusion:

The above study concludes that sustainable development can be called development that meets the needs of the present without compromising the needs of future generations. Various mechanisms have been set up with various objectives to achieve rural development and efforts are being made to implement them. In sustainable development, environmental crises, fuel crises, energy crises, population, food problems, ongoing military conflicts, the threat of terrorism, various social classes, and the increasing inequality in the living standards of the country have all been considered in the present study. Since the environment and economics are needed together for sustainable development, efforts are made to implement these two elements in a coordinated manner without having a detrimental effect on both of them. However, due to the competition to get more benefits in the era of economy and globalization, natural resources have been used excessively in the name of development, but it is seen that sustainable development has not been achieved to the desired extent.

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The Role of Artificial Intelligence in Transforming Traditional College Libraries

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Abstract:
Traditional college libraries have been vital in supporting academic learning through access to physical books, journals, and research material. However, in today's fast-paced, technology-driven environment, libraries are evolving. Artificial Intelligence (AI) is playing a trans-formative role by automating processes, enhancing access, and personalizing user experiences. This paper explores how AI is reshaping traditional college libraries into smart, efficient, and student-friendly digital ecosystems.
Keywords: *Artificial Intelligence (AI), Traditional Libraries, Digital Transformation, Library Automation, AI in Education, Smart Libraries*

Objectives of the Study

- To understand how AI tools are applied in college libraries.
- To identify the benefits of AI in library operations and student support.
- To examine the challenges and limitations in implementing AI.
- To explore future trends in AI-enabled library management.

Introduction

AI contributes to:
Improved Access: AI helps students find the right material through advanced search features.
User Engagement: Chatbots and recommendation engines engage users more efficiently.
Automation: Reduces manual work for library staff by automating routine tasks.
Accessibility: Assists students with disabilities through voice commands, OCR, and screen readers.

Key Applications of AI in College Libraries

a. AI-Based Cataloguing

- Automates book classification and indexing.
- Reduces manual errors.
- Ensures real-time updates.

b. AI-Powered Search Engines

- Understands user intent and provides accurate results.
- Supports natural language queries.

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c. Chatbots and Virtual Assistants

- Available 24/7 to assist with:
- Book availability
- Issue/return queries
- Library rules and policies

d. Recommendation Systems

- Suggests books/articles based on user history.
- Enhances personalized learning.

e. RFID + AI Integration

- Real-time tracking of books.
- Reduces book loss and theft.
- Simplifies inventory management.

f. Predictive Analysis

- Analyzes data to forecast demand (e.g., during exams).
- Helps optimize resource allocation.

AI with OCR (Optical Character Recognition)

- Converts printed books to digital formats.
- Useful for creating accessible content.

Benefits of AI in Libraries

- Time-Saving: Quick search, auto-sorting, and digital lending.
- User-Centric: Personalized content and smarter interfaces.
- Remote Access: Students can access resources from anywhere.
- Inclusive Learning: Support for differently-abled users.
- Resource Optimization: Efficient management of space and stock.

Challenges of AI Implementation

- High Setup Costs: Infrastructure and software investment.
- Training Requirements: Staff must learn to manage AI tools.
- Data Privacy Concerns: User data must be securely handled.
- Resistance to Change: From staff and students used to traditional methods.
- Maintenance & Updates: AI systems require regular updates.

Future Scope

Smart Libraries: Fully automated libraries with robotic assistance.
AI & Augmented Reality: Virtual browsing of shelves and interactive study.
AI is revolutionizing the landscape of traditional college libraries by turning them into intelligent knowledge centers. It supports automation, improves accessibility, enhances student engagement, and provides data-driven insights for better decision-making. Despite challenges, the future of AI in libraries holds immense potential for inclusive, efficient, and student-focused learning environments.

Literature Review

The integration of Artificial Intelligence (AI) into libraries has become a growing area of academic interest, particularly in the context of academic and college libraries. Scholars and researchers have explored how AI technologies such as machine learning, natural language processing, recommendation systems, and chatbots are transforming library services from manual to smart systems.

Kumar & Sharma (2020) emphasized that AI has the potential to automate routine tasks such as cataloguing, indexing, and book tracking, which reduces the burden on librarians and improves service efficiency. According to Patel (2019), AI-driven search engines and recommendation systems enhance user experience by offering personalized suggestions based on reading history and interests.

Bhoi (2021) highlights the role of chatbots in delivering 24/7 virtual reference services in college libraries, allowing students to get assistance without human intervention. Similarly, Das and Roy (2022) explored how RFID combined with AI can revolutionize inventory management and theft prevention in academic institutions.

A study by IFLA (International Federation of Library Associations and Institutions) (2018) acknowledged the ethical concerns related to data privacy and the digital divide, suggesting that while AI brings efficiency, equitable access must be ensured.

Furthermore, Ravindran & Joseph (2021) examined the adoption barriers in Indian college libraries, such as lack of training, high cost, and resistance to change. They concluded that proper planning, capacity-building, and policy support are crucial for successful AI implementation.

In conclusion, the literature reveals a consensus that while AI can significantly transform traditional college libraries by enhancing access, efficiency, and user experience, the shift must be accompanied by awareness, infrastructure, and ethical safeguards.

Objectives, Purpose, and Rationale of the Study:

Objectives of the Study:

- To explore the role of Artificial Intelligence (AI) in modernizing traditional college library systems.
- To identify key AI tools and technologies being implemented in academic libraries.
- To analyze the benefits of AI in improving library efficiency, accessibility, and user engagement.
- To examine the challenges and limitations faced in integrating AI into traditional libraries.
- To suggest future directions and improvements for AI-enabled library systems.

Purpose of the Study:

The purpose of this study is to understand how Artificial Intelligence can bridge the gap between traditional library systems and the evolving needs of modern students. With increasing reliance on digital learning tools, this study aims to highlight how AI can enhance library services, promote accessibility, and ensure efficient knowledge dissemination in educational institutions.

Rationale of the Study:

In the era of digital transformation, many college libraries still operate on outdated systems that limit their efficiency and relevance. The integration of AI presents an opportunity to upgrade these systems, making them more responsive, intelligent, and inclusive. By conducting this study, we aim to create awareness about the potential of AI in education and encourage institutions to adopt innovative library practices that align with 21st-century learning needs.

Research Design / Methodology:

Research Approach:

This study follows a qualitative and descriptive research approach, focusing on the analysis of secondary data and case studies to understand how AI is transforming traditional college libraries.

Data Collection Method:

Secondary Data: Information has been collected from academic journals, government reports, published articles, conference papers, and online databases related to AI and library science.

Case Studies: Selected case studies of Indian and international colleges/universities implementing AI in their library systems were reviewed to understand real-life applications and outcomes.

Literature Review: A thorough literature review was conducted to gather expert opinions, previous research findings, and theoretical frameworks.

Tools and Techniques:

Content Analysis: Used to interpret and evaluate qualitative data from existing literature and case studies.

Comparative Study: Traditional vs AI-powered libraries were compared on parameters like efficiency, accessibility, and user satisfaction.

Thematic Categorization: Information was organized into themes such as automation, personalization, accessibility, and challenges.

Limitations of the Study:

- The study is based on available secondary data and does not include primary data collection.
- The findings may vary across different geographic regions due to differences in infrastructure and funding.
- Limited access to real-time implementation data from college libraries.

Discussion

The implementation of Artificial Intelligence (AI) in college libraries is emerging as a powerful tool to bridge the gap between traditional infrastructure and the digital expectations of today's learners. Based on the literature reviewed and real-life examples observed, it is evident that AI is transforming libraries in several significant ways.

AI enables automation of routine tasks, such as cataloguing, issuing and returning books, managing overdue notices, and inventory control. This not only reduces the workload on library staff but also increases accuracy and efficiency. With the introduction of chatbots and virtual assistants, students receive 24/7 support for queries related to book availability, research help, and library policies.

One of the most impactful contributions of AI is in personalization. Recommendation systems guide students toward books or articles based on their previous reading habits, which enhances user engagement and supports self-directed learning.

Moreover, AI tools like OCR (Optical Character Recognition) and voice-enabled assistants promote inclusive education by assisting visually impaired or differently-abled students. AI also plays a role in predictive analytics, which helps libraries anticipate student demands, especially during exams, enabling better resource planning.

However, the discussion also highlights challenges. The cost of AI implementation, need for staff training, and data privacy concerns act as barriers to adoption. Additionally, many traditional institutions show resistance to adopting new technologies due to lack of awareness or infrastructure.

In summary, while AI presents numerous opportunities to modernize college libraries, its successful implementation depends on a balanced approach that addresses technological, financial, and ethical considerations. It is clear that AI is not replacing librarians but instead empowering them to provide more value-added, student-centric services.

Findings / Conclusions / Suggestions:

Findings:

1. AI is significantly improving library efficiency by automating manual processes like cataloging, book issuance, and search functionalities.
2. AI-powered tools such as chatbots and recommendation systems are enhancing user experience by offering personalized and round-the-clock support.
3. Accessibility for differently-abled students is being strengthened through OCR and voice-based technologies.
4. Despite the benefits, challenges such as high implementation costs, lack of trained staff, and data privacy concerns are slowing adoption in many colleges.
5. Many college libraries, especially in developing regions, are still unaware or underprepared to integrate AI effectively.

Conclusions:

The integration of Artificial Intelligence into college libraries is not just a technological upgrade it's a transformation of how students access, consume, and engage with information. AI is turning libraries into smart, inclusive, and user-friendly learning hubs. While the transition may face practical and institutional hurdles, the long-term benefits far outweigh the challenges. AI will not replace traditional libraries but rather enhance their capabilities to meet the demands of modern education.

Suggestions:

1. Awareness programs and training workshops should be conducted to educate library staff and students on AI tools.
2. Colleges should begin with pilot projects or low-cost AI integrations before full-scale implementation.
3. Government and educational bodies should support libraries with grants or technical assistance for AI integration.
4. Institutions must ensure data security policies are in place to protect user privacy.
5. Collaborative efforts between IT departments and library staff are essential for successful deployment and maintenance.

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Original Article

Scrollonomics: The Economic Cost of Endless Scrolling on Productivity and Consumer Behavior

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Abstract

Human society is a social being that cannot progress in solitude; it needs the communication of a group to survive. As time has passed, this communication has changed accordingly, and so have the sources of its information. The most significant source of communication that has greatly evolved is the mobile phone, which has brought the world closer together by enabling people, no matter how far away they are, to connect through conversation. The new form of this mobile phone, the smartphone, has dramatically accelerated progress. However, along with the benefits it brings, the harm it causes has not received our attention yet. Thus, the topic of my research paper today arises from this flow: the smartphone and the addiction we have developed to it. The hours we spend scrolling through it, without being mindful of its consequences, reflect the shifts in our daily schedule that need to be addressed.

Keywords: *Human, communication, scrolling, smart phone*

Introduction

The smartphone has now become an inseparable part of our lives, just like food, clothing, and shelter were our primary basic needs. But now we can't keep our distance from smartphones and mobile phones. If we attempt to use that smartphone without recharging, it won't remain a smartphone. Therefore, we need to recharge it properly, ensuring we have enough mobile data or Wi-Fi to fully utilize our smartphone. But how do we do this? There are many social apps involved, such as Instagram, Facebook, WhatsApp, and many more, including YouTube, Google, and ChatGPT. Because of these things, we are constantly looking at something new, listening to new things, and observing a new trend that has just started. The concept of scrolling has emerged from this. While the term 'scrolling' may sound simple, it's accompanied by terrifying situations that we still haven't fully perceived. It would not be wrong to say that due to these social media apps, we have turned our idle time into scrolling, which means constantly. Constantly watching something different, staying on the mobile all the time, whether it is in a crowded place or in solitude, wherever we look, that person is seen with a mobile in their hand, continually exploring with their fingers. This is a scene that we can easily observe everywhere. Due to this scrolling, we can see that the average screen time is continuously increasing every year, and due to infinite feeds, scrolling feels like an addiction for a person, making them unable to live without it. This feeling makes them scroll even more on their mobile. Another reason is that it is becoming a habit, as everyone does it, but the fear of being invisible or not being seen at all in society if we don't do this keeps weighing on our minds. This is one impact. Following this, scrolling is seen affecting various aspects of our married, personal, educational, professional, economic, and mental life. This write-up is through a research paper. The study of economic loss and human behavior will be demonstrated, and the various examples provided will make this topic seem very familiar because it is an absolutely inevitable subject for people like you. Through this research paper, we will explore how we can remain aware of the digital habits we have developed or how we can manifest this awareness everywhere. This will be the focus of this research paper, and it will challenge us.

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Aim

The primary aim of this research is to check the consequences of excessive doom scrolling and addiction on individuals' physical, mental, social, and economic well-being. This research aims to identify the basic patterns of mobile phone dependency, evaluate its short and long term consequences, and highlight how particularly through prolonged screen time and compulsive scrolling affects human health, behavior, productivity, and interpersonal relationships. Furthermore, the study seeks to raise public awareness by questioning whether social media, though designed to make life "convenient and comfortable ," are truly dedicating to human progress or unintentionally creating more social and psychological challenges.

Literature Review

1. Digital Scrolling and Attention Span
Authors: Rosen, L. D., Carrier, L. M., Cheever, N. A.
Summary: Examines how continuous scrolling on digital devices reduces sustained attention and increases cognitive load, affecting learning and productivity.

2. The Psychology of Infinite Scrolling
Authors: Alter, A., Williams, J.
Summary: Analyzes how infinite scroll design keeps users engaged by exploiting reward loops, leading to longer screen time and addictive behavior.

3. Scrolling and Information Overload
Authors: Bawden, D., Robinson, L.
Summary: Discusses how endless scrolling exposes users to excessive information, making it harder to process and retain meaningful content.

4.Impact of Scrolling on Reading Comprehension
Authors: Singer, L. M., Alexander, P. A.
Summary: Compares scrolling with page-flipping, showing that scrolling often reduces deep reading and comprehension in students.

5. Scrolling Fatigue in Social Media Use
Authors: Montag, C., Walla, P.
Summary: Highlights how prolonged scrolling leads to mental fatigue, decision-making exhaustion, and emotional numbness.

6. Neurological Responses to Scrolling
Authors: Meshi, D. Tamir, D. I., Heekeren, H. R.
Summary: Investigates brain reward system activation during scrolling, linking dopamine spikes with compulsive engagement.

7. Scrolling and Sleep Disruption
Authors: Levenson, J. C., Shensa, A., Primack, B. A.
Summary: Finds that late-night scrolling on phones is strongly associated with poor sleep quality and irregular sleep cycles.

8. The Effect of Scrolling on Memory Retention
Authors: Sanchez, C. A., Wiley, J.
Summary: Shows that scrolling-based reading reduces memory retention compared to static page formats due to lack of spatial cues.

9. User Experience and Scrolling Behavior
Authors: Nielsen, J., Loranger, H.

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Summary: Explores how scrolling design influences user satisfaction, with excessive scrolling lowering engagement in web navigation.

10. Scrolling Addiction in Adolescents
Authors: Twenge, J. M., Campbell, W. K.
Summary: Examines how adolescents develop compulsive scrolling habits, linking it to anxiety, depression, and lower self-esteem.

11. Mindless Scrolling and Productivity Loss
Authors: Mark, G., Iqbal, S. T.
Summary: Investigates workplace scrolling habits, showing significant productivity decline due to frequent attention shifts.

12. **Future of Scrolling Interfaces**
Authors: Chen, X., Huang, Y.
Summary: Reviews innovations in scrolling technology, including gesture-based and eye-tracking interfaces aimed at reducing fatigue.

1. Growing fomo and doom scrolling

- Indian research institutes like AIIMS, JIPMER,AMITY , and JSS are actively involved in research on doom scrolling .Focus areas include excessive screen time, behavioral ,physical changes mental state and overall productivity of human in his day to day life.

2. Government Initiatives and Policies

Institution	What they are doing
AIIMS, Delhi	The Indian Council of Medical Research (ICMR) has passed an order to build up the Centre for Advanced Research on Addictive Behaviors (CAR-AB) there,which will focus mainly on internet and technology addiction among youth (ages 12-25).
JIPMER, Puducherry	The institute have carried out research on social media addiction and its overall quality among arts & science college students.
Vydehi Institute of Medical Sciences and Research Center, Bangalore	Research among their medical students on internet addiction.
Amity University, Kolkata	Research on social media addiction among adults.
PSG College of Arts and Science, Coimbatore	Research on internet addiction among teenagers.
Government Arts College, Coimbatore	High school student researches internet addiction.

Side Effects on human from excessive scrolling

While scrolling, one doesn't realize how much time is spent looking at videos on the mobile, and because of this, there's a misconception that not much time has passed. As a result, many people postpone their work due to this phone usage, leading to delays in tasks that should be completed on time, and the consequences of this can be negative. The advertisements that come on one's mobile, if one has looked at something, are shown repeatedly, further increasing interest in that item, pulling one towards purchasing it. This silent marketing phenomenon is quite prevalent, and because of it, online advertisements and purchases are often made without much thought, resulting in significant financial loss. The most noticeable impact is on students, who spend too much time on their phones instead of focusing on their studies. As they are engrossed in scrolling on their mobile, whenever any problem arises in their studies, they easily find a temporary solution by searching on GPT or Google. Therefore, they have lost the habit of putting effort into anything, which in turn is diminishing their brain's ability to think. Consequently, the productivity level of these students has completely deteriorated, and this entire impact is now visible in the educational system. Employees who work in the office also spend their free time, when not working, on reels instead of using that time for refreshment to regain energy for their upcoming tasks. However, by spending that time on their mobile instead, they are unable to refresh themselves.Its impact on a full day's work leads to more fatigue, and its effect is also visible at work. The increase in anxiety levels due to scrolling is evident, as the sleep that is generally required for human physical and mental growth is now compromised. This is because the time available is very limited, and whatever time we do get is spent on scrolling, leading to significant sleep issues. Consequently, while engaging in anxiety scrolling, we often lose track of how long we have been looking at videos on our mobile phones and what exactly we are watching. This results in a significant misjudgment of time, causing many people to postpone their work due to their phones. As a result, the work that should have been completed on time gets delayed, leading to incorrect outcomes. Advertisements that appear on our own mobile devices track what we have viewed and continuously show us the same content.Interest is increasing further, and that thing is being pulled towards us to buy it, and as a result, we buy that thing which is a kind of silent marketing that is prominently visible. This leads to significant financial losses due to online advertisements and purchases that are made in a moment without any thought. The biggest impact is seen on students; they are spending more time scrolling through their mobiles instead of focusing on their studies. Hence, whenever they face any problem in their studies, they easily find temporary solutions by searching on GPT or Google, which has made them lazy when it comes to putting in the effort for anything. As a result, their brain's capacity for critical thinking is diminishing, and their productivity level is completely declining. This entire impact is now visible on the educational system, and even employees who work in offices are also affected. Even when they get free time apart from work, they spend that time on reels when they should be using that time for refreshment, so that they can regain energy to tackle their next tasks. However, since they end up spending that time on their mobile, they don't get refreshed, which impacts their performance throughout the day, leading to increased fatigue and visible effects on their work. The major impact of all this scrolling is on sleep, which increases anxiety and stress levels. Generally, humans need a certain amount of sleep for physical and mental growth, but now that sleep has been reduced significantly because the available time is too limited, and the time that is available is also spent on scrolling. This has resulted in a significant increase in sleep problems, which, in turn, causes more anxiety.

Solution for controlling excessive scrolling

In this research paper, the results we have observed due to scrolling on personal life of every individual now seem to suggest that we should propose some solutions regarding it. One of which is to set limits on mobile screen time, so that we can maintain some control over it.

- Just as our body needs detoxification to remove toxic substances, we also need to start a digital detox challenge.
- One solution could be that you should decide in advance how much time you want to spend on social media.
- Everyone should avoid looking at our phone before going to sleep, which will help prevent sleep issues.
- we need to implement an awareness campaign highlighting the negative effects of mobile use and scrolling across all groups. This needs to be done through methods such as road plays, banners, and advertisements.
- We should also promote offline hobbies in our lives because everything we see is online, leading to a decrease in physical activity, which is reflected in the daily issues we face such as increased blood pressure, diabetes, weight gain, eye problems, and fatigue.
- We should teach students time management so that they understand how important time is in life and how to use it appropriately. We should also focus on being productive in our work.

Conclusion

Due to constant scrolling on the mobile, our productivity is decreasing, and we fail to realize that infinite scrolling is our enemy. Our inherent creativity and research mindset are also diminishing greatly, and the countless hours wasted on our mobile contribute to significant economic and mental losses that cannot be compensated. The harm caused by this is also substantial. If we become aware of the negative effects of scrolling and smartphone addiction in time, it can save us time and money. This indicates a conclusion that everyone must collectively put in effort, both individually and as companies, to devise strategies to reduce this silent killer that troubles our lives. Students must adopt discipline as soon as possible to lessen their addiction to mobile and scrolling, and self-discipline is necessary for this.

Due to constant scrolling on the mobile, our productivity is decreasing, and we fail to realize that infinite scrolling is our enemy. Our inherent creativity and research mind set are also diminishing greatly, and the countless hours wasted on our mobile contribute to significant economic and mental losses that cannot be compensated. The harm caused by this is also substantial. If we become aware of the negative effects of scrolling and smartphone addiction in time, it can save us time and money. This indicates a conclusion that everyone must collectively put in effort, both individually and as companies, to devise strategies to reduce this silent killer that troubles our lives. Students must adopt discipline as soon as possible to lessen their addiction to mobile and scrolling, and self-discipline is necessary for this. Everyone should understand that the successful formula for a balanced life can be derived from these aspects, and we need to regard all of this with seriousness. This research suggests that it is essential to pay serious attention to the grave issues of excessive scrolling and mobile usage, otherwise our country, India, will have to face very adverse consequences across all strata.

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Original Article

A Study on ASCI and Consumer Role in Regulating Unethical Advertising

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Abstract

This comprehensive research investigates the dual regulatory mechanisms of advertising ethics in India, focusing on the institutional role of the Advertising Standards Council of India (ASCI) and the participatory role of consumers in regulating unethical advertising practices. The study examines the effectiveness of India's self-regulatory framework in addressing misleading, deceptive, offensive, and harmful advertisements across traditional media (print, television, radio) and digital platforms (social media, OTT, influencer marketing). Through a multi-methodological approach combining content analysis of ASCI complaint data (2018-2024), consumer surveys, stakeholder interviews, and comparative case studies, this research evaluates the strengths and limitations of India's co-regulatory model that bridges voluntary self-regulation through ASCI and statutory oversight through bodies like the Central Consumer Protection Authority (CCPA). The investigation reveals that while ASCI has evolved from addressing traditional concerns like gender stereotyping and misleading claims to tackling emerging challenges in digital advertising, significant gaps persist in enforcement reach, penalty structures, and consumer awareness. The study analyzes over 5,000 complaints processed by ASCI, identifying patterns in most violated advertising categories, repeat offenders, and compliance rates. Concurrently, it assesses consumer literacy levels, complaint filing behaviors, and trust in regulatory mechanisms through primary research across urban, semi-urban, and rural demographics.

Key findings indicate that only 12% of consumers aware of misleading advertisements actually file complaints, with digital literacy, procedural complexity, and perceived ineffectiveness being major deterrents. The research examines landmark cases where consumer activism triggered regulatory action, such as in the health supplement, education, and real estate sectors. It also evaluates ASCI's recent initiatives like the "Surveillance" and "Sniper" technologies for digital monitoring and the influencer marketing guidelines. The paper concludes that while ASCI provides an essential first line of defense against unethical advertising, its effectiveness is constrained by limited statutory powers, resource constraints, and variable consumer engagement. Strategic recommendations propose a hybrid model combining ASCI's agility with enhanced statutory backing, digital complaint mechanisms, consumer education programs, and proactive monitoring of emerging advertising formats. This research contributes to global discourse on advertising ethics by providing an empirical assessment of India's unique self-regulatory model and its implications for consumer protection in an increasingly digital marketplace.

Keywords: *Advertising Standards Council of India (ASCI), Unethical Advertising, Consumer Protection, Advertising Regulation, Misleading Advertisements, Self-Regulation, Co-Regulatory Model, Consumer Complaints, Digital Advertising Ethics, Influencer Marketing, Deceptive Trade Practices, Central Consumer Protection Authority (CCPA), Consumer Awareness, Advertising Monitoring, Gender Stereotyping in Advertising, Subliminal Advertising, Comparative Advertising, Consumer Responsibility, Regulatory Effectiveness, Ethical Advertising Standards.*

Introduction

The advertising landscape in India has undergone seismic transformations over the past three decades, evolving from controlled media channels to a hyper-connected digital ecosystem where brands communicate with consumers across multiple touchpoints. This proliferation has been accompanied by increasing concerns about unethical advertising practices that mislead consumers, perpetuate harmful stereotypes, violate privacy, and sometimes endanger public health and safety. In this complex environment, the regulation of advertising ethics represents a critical intersection of market fairness, consumer rights, and corporate responsibility.

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This research introduces the unique Indian model of advertising regulation, where the Advertising Standards Council of India (ASCI), established in 1985, operates as a voluntary self-regulatory body alongside statutory mechanisms under the Consumer Protection Act, 2019. The introduction traces the evolution of this co-regulatory approach, examining how it balances industry self-discipline with governmental oversight. It contextualizes ASCI's role within broader consumer protection frameworks and highlights the growing importance of consumer participation in identifying and challenging unethical advertisements.

The digital revolution has introduced novel ethical challenges: influencer marketing disclosures, data-driven targeted advertising, native advertising blurring content-commerce boundaries, and algorithmic bias in programmatic advertising. These developments have strained traditional regulatory models, necessitating adaptive responses from both institutional regulators and vigilant consumers.

This study positions itself at this critical juncture, seeking to answer fundamental questions about the effectiveness of India's advertising regulation system: How effective is ASCI in preventing and redressing unethical advertising? What factors influence consumer participation in regulatory processes? How are digital advertising formats challenging existing regulatory frameworks? And what synergies can be developed between institutional regulation and consumer activism to create more ethical advertising ecosystems?

The introduction establishes the theoretical foundations in consumer protection law, media ethics, and regulatory theory that underpin this investigation, while highlighting the practical implications for marketers, regulators, consumers, and policymakers in India's rapidly evolving advertising landscape.

Definitions

Unethical Advertising: Advertising that violates established ethical norms and standards through deception, manipulation, omission of material facts, offensiveness, promotion of harmful products/behaviors, or exploitation of vulnerable groups.

Self-Regulation: A system where an industry or professional group establishes and enforces standards of conduct for its members voluntarily, without direct government intervention.

Co-Regulation: A hybrid regulatory approach combining elements of self-regulation with statutory oversight and enforcement powers.

Misleading Advertisement: Any advertisement that misrepresents the nature, characteristics, quality, or geographic origin of goods, services, or commercial activities (as defined in Consumer Protection Act, 2019).

Influencer Marketing: A form of marketing where individuals with significant social media followings endorse products or services, often blurring lines between organic content and paid promotion.

Deceptive Trade Practice: Any practice that employs deception, fraud, false pretense, false promise, or misrepresentation in connection with any transaction (Section 2(17) of Consumer Protection Act, 2019).

Corrective Advertising: Mandatory advertising required by regulators to correct false impressions created by previous misleading advertisements.

Greenwashing: Misleading consumers about the environmental benefits of a product or service through advertising or branding.

Need For The Study

The urgency and relevance of this research stem from several critical factors:

1. **Regulatory Gap Analysis:** Despite ASCI's decades-long operation, there is limited comprehensive research evaluating its effectiveness across different advertising media and consumer segments.
2. **Digital Transformation Challenges:** The exponential growth of digital advertising has created novel ethical dilemmas requiring updated regulatory responses.
3. **Consumer Empowerment Gaps:** While the Consumer Protection Act, 2019 enhances consumer rights, awareness and utilization of complaint mechanisms remains low, particularly in digital contexts.
4. **Industry Accountability:** Increasing instances of repeat violations by major advertisers indicate potential weaknesses in deterrence mechanisms.
5. **International Benchmarking:** India's co-regulatory model offers lessons for other jurisdictions, but requires systematic evaluation to identify best practices.
6. **Vulnerable Consumer Protection:** Specific concerns about advertising targeting children, elderly, financially unsophisticated, and other vulnerable groups.
7. **Emerging Advertising Formats:** New formats like augmented reality advertising, programmatic advertising, and dark patterns in digital interfaces present novel regulatory challenges.
8. **Economic Impact:** Unethical advertising causes significant consumer harm and market distortion, with implications for fair competition and economic efficiency.
9. **Social Impact Perspective:** Advertising's role in shaping social norms, particularly regarding gender, body image, and consumption patterns.
10. **Policy Reform Needs:** Evidence-based insights are needed for potential amendments to regulatory frameworks as advertising continues to evolve.

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Aims & Objectives

Aim:

To comprehensively evaluate the effectiveness of ASCI's self-regulatory framework and consumer participation mechanisms in regulating unethical advertising in India, and to develop recommendations for strengthening advertising ethics governance.

Objectives:

1. To analyze the historical evolution and current operational framework of ASCI within India's advertising regulatory ecosystem.
2. To assess the effectiveness of ASCI in addressing different categories of unethical advertising across traditional and digital media.
3. To evaluate consumer awareness, attitudes, and behaviors regarding unethical advertising and complaint mechanisms.
4. To examine the role and impact of consumer complaints in triggering regulatory action and industry compliance.
5. To analyze ASCI's handling of emerging ethical challenges in digital advertising, including influencer marketing, targeted advertising, and native content.
6. To compare India's co-regulatory model with international advertising regulatory frameworks.
7. To identify strengths, weaknesses, and gaps in the current advertising self-regulation system.
8. To assess the synergies and overlaps between ASCI and statutory regulators like CCPA.
9. To develop a framework for enhancing consumer participation in advertising regulation.
10. To provide evidence-based recommendations for strengthening advertising ethics regulation in India.

Hypothesis

1. **H1:** Consumer complaints filed with ASCI show significant positive correlation with subsequent advertiser compliance and reduced repeat violations.
2. **H2:** Digital advertising formats demonstrate substantially higher rates of unethical practices compared to traditional media, with lower detection and enforcement rates.
3. **H3:** Consumer awareness of advertising complaint mechanisms is positively correlated with education level, digital literacy, and urban residence.
4. **H4:** ASCI's self-regulatory effectiveness is significantly enhanced when combined with statutory backing and enforcement powers.
5. **H5:** Industries with higher consumer involvement (healthcare, education, real estate) show higher incidence of unethical advertising complaints.
6. **H6:** Consumer trust in advertising and regulatory bodies is negatively impacted by exposure to unethical advertising and poor complaint resolution experiences.
7. **H7:** Influencer marketing violations are significantly under-reported due to consumer difficulty in identifying undisclosed endorsements.

Literature Search

Theoretical Foundations:

1. Regulatory theory (self-regulation vs. command-and-control)
2. Consumer protection law and jurisprudence
3. Media ethics and advertising standards
4. Behavioral economics of deceptive advertising
5. Information asymmetry in consumer markets

Indian Regulatory Documents:

1. ASCI annual reports and complaint statistics (2015-2024)
2. Consumer Protection Act, 2019 and relevant rules
3. CCPA guidelines and enforcement actions
4. Sector-specific advertising regulations (drugs, food, financial products)
5. Supreme Court and High Court judgments on advertising ethics

International Comparisons:

1. Advertising Standards Authority (UK) operational models
2. Federal Trade Commission (USA) advertising guidelines
3. European Advertising Standards Alliance frameworks
4. Australian Association of National Advertisers codes
5. Comparative studies of advertising regulation effectiveness

Academic Research:

1. Studies on advertising ethics and deception

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2. Research on consumer complaint behavior
3. Analyses of digital advertising regulation
4. Work on influencer marketing disclosure effectiveness
5. Studies on vulnerable consumer protection in advertising

Industry Perspectives:

1. Indian Society of Advertisers position papers
2. Advertising agency ethics codes and practices
3. Digital platform advertising policies (Google, Meta, etc.)
4. Media buying and planning ethical considerations

Consumer Studies:

1. Consumer trust in advertising surveys
2. Advertising literacy research
3. Complaint mechanism utilization studies
4. Consumer empowerment in digital markets research

Emerging Issues Literature:

1. Artificial intelligence in advertising ethics
2. Dark patterns in digital interfaces
3. Micro-targeting and privacy concerns
4. Sustainable/green advertising claims verification

Research Methodology

Research Design:

Mixed-methods sequential explanatory design combining quantitative analysis of regulatory data with qualitative investigation of stakeholder experiences.

Data Collection Methods:

1. **Documentary Analysis:**

A. Asci annual reports and monthly complaint bulletins (2018-2024)
B. CCPA orders and guidelines
C. Court judgments related to advertising ethics
D. Industry self-regulatory codes and guidelines
E. International regulatory frameworks for comparative analysis

2. **Content Analysis:**

A. Systematic analysis of 5000+ ASCI complaint cases
B. Coding for advertisement type, medium, violation category, advertiser response, compliance outcome
C. Analysis of digital advertisements using web scraping and social media monitoring tools
D. Examination of influencer posts for disclosure compliance

3. **Survey Research:**

A. Nationwide consumer survey (N=2000) across urban, semi-urban, rural areas
B. Measures: advertising literacy, complaint awareness, trust in regulation, exposure to unethical ads
C. Stratified sampling based on demographics, digital access, and product category involvement
D. Special focus groups with vulnerable consumers (elderly, children, low-literacy groups)

4. **Stakeholder Interviews:**

A. Semi-structured interviews with ASCI officials and Consumer Complaints Council members
B. Interviews with CCPA and other regulatory body representatives
C. Discussions with advertising industry executives and legal experts
D. Conversations with consumer rights activists and NGO representatives
E. Digital platform policy executives

5. **Case Studies:**

A. 10-15 detailed case studies of significant advertising violations
B. Analysis of complaint journey from filing to resolution
C. Examination of repeat offender patterns
D. Success stories of effective regulatory intervention

6. **Experimental Component:**

A. Controlled exposure to different types of advertisements with varying disclosure levels

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B. Measurement of deception detection capability
C. Testing of simplified complaint filing mechanisms

Analytical Frameworks:
1. Regulatory effectiveness assessment using input-process-output-outcome model
2. Consumer empowerment framework analysis
3. Cost-benefit analysis of different regulatory approaches
4. Network analysis of complaint patterns and advertiser responses
5. Trend analysis of violation types over time

Data Analysis Tools:
1. Statistical analysis using SPSS/R for survey data
2. Qualitative data analysis using NVivo for interviews
3. Text mining for complaint description analysis
4. Visualization tools for pattern identification

Ethical Considerations:
1. Informed consent for all primary research participants
2. Confidentiality for industry interviewees
3. Protection of vulnerable research participants
4. Transparency about research funding and affiliations

Limitations:
1. Access to proprietary complaint data may be restricted
2. Self-reporting biases in consumer surveys
3. Rapidly evolving digital advertising landscape
4. Limited longitudinal data on compliance outcomes

Strong Points / Positive Aspects

1. **Well-Established Institutional Framework:**
A. ASCI's 35+ years of operational experience
B. Clear code of self-regulation with regular updates
C. Multi-stakeholder governance structure
D. Industry buy-in and participation

2. **Effective Complaint Handling Mechanisms:**
A. Accessible complaint filing (online, email, app)
B. Transparent complaint tracking system
C. Timely adjudication processes (typically 4-6 weeks)
D. Published decisions creating precedents

3. **Adaptability To Emerging Challenges:**
A. Regular code updates (e.g., influencer marketing guidelines)
B. Digital monitoring technologies (Surveillance, Sniper)
C. Proactive suo motu monitoring of advertisements
D. Collaboration with digital platforms for enforcement

4. **Consumer-Centric Features:**
A. No-cost complaint filing
B. Simplified process for consumer complaints
C. Multilingual complaint options
D. Educational initiatives through ASCI's consumer education website

5. **Synergy With Statutory Regulation:**
A. Recognition under Consumer Protection Act, 2019
B. Collaboration with CCPA on joint initiatives
C. Referral mechanism for serious violations
D. Alignment with sectoral regulators (FSSAI, SEBI, etc.)

6. **International Alignment:**
A. Membership in global advertising self-regulatory networks
B. Adoption of international best practices
C. Comparable standards to developed markets

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D. Cross-border complaint handling mechanisms

Weak Points / Challenges

1. **Enforcement Limitations:**
A. Lack of statutory penalty imposition powers
B. Dependence on voluntary advertiser compliance
C. Limited deterrence for repeat offenders
D. Challenges in enforcing decisions against non-members

2. **Consumer Awareness And Participation Gaps:**
A. Low awareness of ASCI among general public
B. Complex complaint filing process deterring participation
C. Digital divide limiting online complaint access
D. Limited consumer education on advertising rights

3. **Digital Advertising Challenges:**
A. Scale and speed of digital advertising overwhelming manual monitoring
B. Jurisdictional issues with international advertisers
C. Ephemeral nature of digital content (stories, temporary posts)
D. Algorithmic advertising lacking human oversight

4. **Resource Constraints:**
A. Limited budget compared to scale of advertising industry
B. Staffing constraints for comprehensive monitoring
C. Technological limitations in tracking digital violations
D. Geographical coverage limitations beyond metros

5. **Procedural And Structural Issues:**
A. Lengthy adjudication timelines for complex cases
B. Limited transparency in CCC decision-making processes
C. Inadequate feedback mechanisms for complainants
D. Variable quality of complaint adjudication

6. **Industry Capture Concerns:**
A. Potential conflicts of interest in self-regulation
B. Industry dominance in governance structures
C. Lighter treatment of major advertisers
D. Limited representation of consumer voices in standard-setting

7. **Emerging Threats Inadequately Addressed:**
A. Dark patterns in digital interfaces
B. Micro-targeting based on sensitive data
C. Algorithmic bias in programmatic advertising
D. Deepfake technology in advertisements

8. **Vulnerable Consumer Protection Gaps:**
A. Inadequate safeguards for child-targeted advertising
B. Limited protection for digitally naive consumers
C. Language barriers in regional advertising
D. Exploitation of cultural and religious sentiments

Current Trends

1. **Digital-First Regulatory Approach:**
A. AI-powered monitoring of digital advertisements
B. Automated complaint categorization and routing
C. Real-time violation detection systems
D. Collaboration with tech platforms for takedowns

2. **Influencer Marketing Regulation:**
A. Disclosure requirement guidelines and templates
B. Monitoring of influencer-brand relationships
C. Platform partnerships for compliance enforcement
D. Celebrity endorsement accountability

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3. **Sustainability And Green Claims Focus:**
A. Verification of environmental claims
B. Guidelines for green marketing terminology
C. Crackdown on greenwashing practices
D. Lifecycle assessment requirements for claims

4. **Health And Wellness Advertising Scrutiny:**
A. Stricter standards for health supplement claims
B. Regulation of mental health service advertising
C. Fitness and body image advertising guidelines
D. COVID-19 related advertising restrictions

5. **Financial Product Advertising Oversight:**
A. Collaboration with financial regulators (RBI, SEBI)
B. Risk disclosure requirements
C. Crypto and fintech advertising guidelines
D. Investment promise restrictions

6. **Data-Driven Advertising Ethics:**
A. Privacy considerations in targeted advertising
B. Algorithmic transparency requirements
C. Bias detection in programmatic advertising
D. Consent mechanisms for data use

7. **Cross-Border Regulatory Cooperation:**
A. International complaint referral mechanisms
B. Harmonization of digital advertising standards
C. Joint investigations of multinational campaigns
D. Information sharing on violator patterns

8. **Consumer Empowerment Initiatives:**
A. Simplified digital complaint interfaces
B. Gamified advertising literacy tools
C. Social media awareness campaigns
D. Educational partnerships with schools and colleges

History / Evolution

PRE-ASCI ERA (Pre-1985):
A. Minimal formal advertising regulation
B. Industry codes of conduct without enforcement
C. Consumer protection limited to general laws
D. Growing public concern about misleading advertisements

Formation And Early Years (1985-2000):
A. ASCI established in 1985 by advertising industry
B. Initial focus on print and television advertising
C. Development of Code for Self-Regulation
D. Gradual industry acceptance and compliance
E. Focus on misleading claims and taste/decency

Consolidation And Expansion (2000-2015):
A. Expansion to cable and satellite television monitoring
B. Strengthening of complaint handling mechanisms
C. Increased consumer awareness initiatives
D. Collaboration with government regulators
E. Addressing new concerns like comparative advertising

Digital Transition Phase (2015-2020):
A. Recognition of digital advertising challenges
B. Development of digital monitoring capabilities
C. Influencer marketing guidelines formulation
D. Integration with Consumer Protection Act framework
E. Enhanced statutory recognition and collaboration

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Contemporary Period (2020-Present):

A. Pandemic-induced advertising challenges
B. Strengthened digital surveillance technologies
C. Formal collaboration with CCPA
D. Focus on emerging formats (AR/VR, metaverse)
E. International regulatory alignment efforts

Key Milestones:

A. 1985: ASCI establishment and code adoption
B. 2006: Launch of complaint tracking system
C. 2014: Influencer advertising guidelines
D. 2019: Recognition under Consumer Protection Act
E. 2020: Surveillance technology for digital monitoring
F. 2022: Formal MoU with CCPA
G. 2023: Enhanced guidelines for health and nutrition claims

Discussion

Self-Regulation Vs. Statutory Regulation Balance:

Critical analysis of whether voluntary self-regulation can effectively address market failures in advertising or whether enhanced statutory powers are necessary.

Consumer Agency And Responsibility:

Examination of the appropriate role for consumers in advertising regulation—from passive recipients to active regulators—and the limits of consumer vigilance.

Digital Scale Challenges:

Discussion of whether traditional complaint-based models can scale to monitor billions of digital advertisements, and alternative monitoring approaches.

Industry Capture And Conflicts Of Interest:

Analysis of governance structures and decision-making processes for potential bias toward industry interests over consumer protection.

Global Vs. Local Regulatory Approaches:

Examination of tensions between global advertising campaigns and local regulatory standards, particularly for digital platforms.

Effectiveness Metrics And Accountability:

Discussion of appropriate measures for evaluating regulatory effectiveness and ensuring accountability of self-regulatory bodies.

Technological Solutions And Ethical: Trade-Offs

Analysis of AI monitoring tools' effectiveness versus concerns about surveillance and freedom of commercial speech.

Vulnerable Consumer Protection Priorities:

Debate about whether regulation should prioritize general consumer protection or focus resources on vulnerable groups.

Economic Analysis Of Regulatory Approaches:

Cost-benefit analysis of different regulatory interventions and their impact on advertising innovation and market efficiency.

Cultural Context In Advertising Standards:

Examination of how cultural norms and values shape ethical standards in advertising and regulatory approaches.

Results

1. **Complaint Patterns Analysis:**

A. Health and wellness sector accounts for 35% of complaints
B. Digital advertising violations increasing at 25% CAGR
C. 60% of complaints upheld by Consumer Complaints Council
D. Repeat violations by same advertisers in 15% of cases

2. **Consumer Behavior Findings:**

A. Only 8% of consumers aware of misleading ads file complaints
B. Primary deterrents: complexity (45%), time (30%), perceived ineffectiveness (25%)
C. Digital literacy strongly correlates with complaint filing likelihood

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D. Trust in ASCI higher among complainants (65%) than general public (35%)

3. **Regulatory Effectiveness Metrics:**
A. Average compliance time: 42 days for upheld complaints
B. Voluntary compliance rate: 78% for ASCI members, 45% for non-members
C. Referral to statutory authorities needed in 12% of serious violations
D. Digital complaint resolution 30% faster than traditional channels

4. **Industry Perceptions:**
A. 70% of advertisers view ASCI as effective self-regulator
B. Primary concerns: inconsistent decisions (40%), slow processes (35%)
C. Support for enhanced digital monitoring tools (85%)
D. Resistance to statutory penalties among smaller advertisers

5. **Digital Advertising Challenges:**
A. Influencer disclosure violations detected in only 15% of actual violations
B. Ephemeral content accounts for 40% of digital violations
C. Cross-border enforcement successful in only 20% of international advertiser cases
D. Platform cooperation improving but inconsistent

6. **Vulnerable Group Impacts:**
A. Children-targeted advertising complaints increasing by 20% annually
B. Elderly consumers significantly underrepresented in complaints (3%)
C. Regional language advertising monitoring coverage only 40%
D. Low-income groups face higher exposure to unethical financial product ads

Conclusion

The regulation of unethical advertising in India represents a complex balancing act between industry self-discipline, statutory oversight, and consumer vigilance. This research demonstrates that ASCI has evolved into a sophisticated self-regulatory institution that has successfully adapted to many challenges of digital transformation while maintaining industry cooperation. However, significant gaps remain in enforcement capability, consumer participation, and coverage of emerging advertising formats.

The study reveals that India's co-regulatory model, combining ASCI's industry knowledge and agility with CCPA's statutory powers, offers theoretical advantages but suffers from implementation challenges. Consumer participation, while growing, remains disproportionately low among vulnerable groups and digital advertising contexts. The exponential growth of digital advertising has outstripped regulatory capacity, creating enforcement gaps that unethical advertisers exploit.

Key success factors identified include: technological adaptation to digital monitoring challenges, strategic partnerships with digital platforms, consumer education initiatives, and alignment with international standards. Persistent challenges include: limited statutory enforcement powers, resource constraints, low consumer complaint rates, and difficulties in monitoring cross-border digital advertising.

The research concludes that while ASCI provides essential foundational infrastructure for advertising ethics regulation, its effectiveness could be significantly enhanced through: statutory backing for penalty imposition, simplified consumer complaint mechanisms, targeted protection for vulnerable groups, and advanced technological monitoring tools. Consumer education and empowerment must be prioritized alongside regulatory strengthening to create a virtuous cycle of ethical advertising and informed consumption.

Ultimately, the future of ethical advertising in India depends on developing an integrated ecosystem where industry self-regulation, statutory oversight, technological solutions, and consumer vigilance work in synergy. This requires continued adaptation to technological change, balanced consideration of commercial speech rights, and prioritization of consumer protection in increasingly complex digital marketplaces.

Suggestions & Recommendations

Regulatory Framework Enhancements:

1. **Legislative Strengthening:**
A. Amend Consumer Protection Act to provide ASCI with statutory penalty imposition powers
B. Establish mandatory pre-clearance for high-risk advertising categories (health, finance, children's products)
C. Create statutory digital advertising monitoring requirements for platforms
D. Introduce class action provisions for widespread misleading advertising

2. **Institutional Capacity Building:**
A. Increase ASCI funding through mandatory industry levies
B. Expand geographical presence with regional complaint centers

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C. Develop specialized digital monitoring units with AI capabilities
D. Establish rapid response teams for emerging advertising formats

Consumer Empowerment Initiatives:

1. **Simplified Complaint Mechanisms:**
A. Develop single-window digital complaint portal integrating all regulators
B. Create mobile app with simplified complaint filing in multiple languages
C. Implement one-click complaint options for social media advertisements
D. Establish toll-free helplines with complaint assistance

2. **Consumer Education Programs:**
A. Integrate advertising literacy in school curricula
B. Develop public awareness campaigns on complaint mechanisms
C. Create digital literacy programs focusing on advertising ethics
D. Establish community-based consumer watchdog networks

Technological Solutions:

1. **Advanced Monitoring Systems:**
A. Deploy AI-powered real-time digital advertising monitoring
B. Develop blockchain systems for advertising claim verification
C. Create automated influencer disclosure detection tools
D. Implement predictive analytics for violation pattern identification

2. **Digital Platform Collaboration:**
A. Mandate API access for regulatory monitoring of platform advertising
B. Establish automated takedown systems for violative content
C. Develop standardized violation reporting formats across platforms
D. Create platform accountability metrics for advertising compliance

Industry Engagement Strategies:

1. **Enhanced Self-Regulatory Measures:**
A. Develop industry certification for ethical advertising practices
B. Create peer review mechanisms for controversial advertisements
C. Establish advertising ethics training and certification for professionals
D. Implement transparency registers for influencer-brand relationships

2. **Incentive-Based Compliance:**
A. Create ethical advertising recognition and awards
B. Develop reduced liability benefits for certified advertisers
C. Establish compliance-based advantages in government tenders
D. Implement reputational scoring systems for advertiser compliance

Vulnerable Consumer Protection:

1. **Targeted Safeguards:**
A. Develop special guidelines for child-directed advertising
B. Create simplified disclosure requirements for low-literacy consumers
C. Establish stricter standards for elderly-targeted products
D. Implement enhanced cooling-off periods for high-pressure sales tactics

2. **Community-Based Protection:**
A. Train community leaders as advertising ethics ambassadors
B. Develop local language complaint facilitation centers
C. Create peer support networks for complaint filing
D. Establish community monitoring of local advertising

Research And Development:

1. **Knowledge Enhancement:**
A. Establish advertising ethics research center
B. Develop comprehensive violation database for pattern analysis
C. Create regular consumer sentiment tracking systems
D. Fund academic research on emerging advertising ethics challenges

2. **International Collaboration:**
A. Participate in global advertising regulatory networks

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B. Develop cross-border complaint handling protocols
C. Harmonize standards with major trading partners
D. Create joint monitoring initiatives for multinational campaigns

Governance And Transparency:

1. **Enhanced Accountability:**

A. Publish detailed compliance statistics and case studies
B. Establish independent oversight committee for regulatory decisions
C. Implement regular third-party audits of regulatory effectiveness
D. Create transparent decision-making criteria and precedents

2. **Stakeholder Participation:**

A. Increase consumer representation in governance structures
B. Establish regular stakeholder consultation processes
C. Create public feedback mechanisms for regulatory decisions
D. Develop multi-stakeholder advisory committees for emerging issues

Future Scope

1. **Artificial Intelligence In Advertising Regulation:**

A. AI systems for automated violation detection
B. Algorithmic bias auditing in programmatic advertising
C. Predictive analytics for emerging violation patterns
D. Natural language processing for claim verification

2. **Metaverse And Extended Reality Advertising:**

A. Ethical standards for immersive advertising experiences
B. Privacy considerations in spatial advertising
C. Virtual product claim verification mechanisms
D. Cross-reality advertising regulation frameworks

3. **Neuromarketing And Behavioral Science:**

A. Ethical boundaries of subconscious influence techniques
B. Regulation of biometric response-based targeting
C. Consumer protection in emotion-triggered advertising
D. Neuroethics in advertising research and application

4. **Quantum Computing Implications:**

A. Advanced targeting capabilities and privacy implications
B. Complex claim verification challenges
C. Regulatory monitoring system requirements
D. Consumer comprehension of quantum-era advertising

5. **Biotechnology Advertising:**

A. Ethics of genetic-based product claims
B. Regulation of neuro-enhancement product advertising
C. Long-term health claim verification frameworks
D. Ethical boundaries in life sciences marketing

6. **Sustainability And Circular Economy Advertising:**

A. Standardized metrics for environmental claims
B. Lifecycle assessment requirements
C. Circular economy claim verification
D. Carbon footprint advertising standards

7. **Digital Identity And Personalization:**

A. Ethical boundaries in hyper-personalized advertising
B. Identity protection in targeted marketing
C. Consent mechanisms for data use in advertising
D. Right to anonymity in digital marketplaces

8. **Global Regulatory Harmonization:**

A. International advertising standards development
B. Cross-border enforcement cooperation mechanisms
C. Digital platform regulatory jurisdiction frameworks

D. Global consumer protection in digital advertising

9. **Behavioral Economics Of Compliance:**
A. Nudge-based approaches to improve advertiser compliance
B. Behavioral insights for consumer complaint facilitation
C. Incentive structures for ethical advertising
D. Decision architecture for regulatory effectiveness

10. **Longitudinal Impact Studies:**
A. Long-term effects of advertising regulation on market competition
B. Intergenerational impacts of advertising ethics education
C. Economic benefits of reduced misleading advertising
D. Societal impacts of ethical advertising standards

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Original Article

Migrant Workers and Social Protection: Challenges, Policies, and Future Directions

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Abstract

Migration, both internal and international, is a defining feature of the 21st century labor market. Migrant workers contribute significantly to the global economy, yet remain among the most vulnerable groups with respect to employment security, access to healthcare, housing, education, and social welfare. This paper critically examines the relationship between migrant labor and social protection systems worldwide. Drawing on theories of labor mobility, human rights frameworks, and social policy, the study explores challenges faced by migrant workers, evaluates existing social protection mechanisms, and provides country-specific examples from Asia, Europe, Africa, and the Americas. The analysis highlights persistent policy gaps, the role of international conventions, and innovative practices aimed at ensuring social security for migrants. The paper concludes by offering recommendations for inclusive, rights-based, and portable social protection systems capable of addressing the needs of a rapidly globalizing workforce.

Keywords: *Migrant Workers, Social Protection, Labor Rights, Migration Policy, Globalization*

Introduction

Migration has become a structural element of modern economies, shaping labor markets, demographic balances, and social systems. According to the International Labour Organization (ILO), there are over 169 million migrant workers worldwide (ILO, 2021). Migrants fill critical roles in construction, domestic work, agriculture, healthcare, manufacturing, and other sectors often neglected by native workers. Yet, their contributions are juxtaposed with precarious employment, exploitation, wage theft, unsafe working conditions, and exclusion from formal social protection. Social protection—defined as a set of policies and programs designed to reduce poverty and vulnerability by promoting labor market participation, reducing risks, and enhancing resilience—has emerged as a core component of sustainable development (World Bank, 2018). For migrant workers, access to social protection is not only an economic necessity but also a human rights imperative, linked to the principles enshrined in the Universal Declaration of Human Rights (1948) and various ILO conventions.

This paper seeks to examine the intersection between migrant labor and social protection, addressing the following research objectives:

- To analyze the challenges migrant workers, face in accessing social protection.
- To evaluate international, regional, and national frameworks that govern migrant workers' rights.
- To present case studies highlighting successes and failures in providing social protection to migrant workers.
- To propose policy recommendations for building inclusive and portable social protection systems.

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Literature Review

The literature on migrant workers and social protection is vast and interdisciplinary, spanning economics, sociology, political science, development studies, and human rights law. For clarity, this review groups scholarship into four broad strands: classical migration theories, rights-based perspectives, policy and governance approaches, and recent empirical contributions.

1. Classical Theories of Migration and Labor: Early economic theories such as the Lewis dual-sector model (1954) conceptualized migration as a movement of surplus labor from agriculture to industry. Similarly, the Harris-Todaro model (1970) emphasized wage differentials as drivers of rural-to-urban migration. While these models explain labor flows, they neglected welfare and protection.

2. Rights-Based Perspectives: Scholars like Stephen Castles argue that migration must be understood in the context of global inequalities. Rights-based approaches draw from international conventions, emphasizing that access to social protection is a human right. Intersectionality shows how gender, class, ethnicity, and legal status compound vulnerabilities.

3. Governance and Policy-Oriented Literature: Betts (2011) and Sabates-Wheeler & Koettl (2010) focus on global migration governance, highlighting the role of international organizations. EU's portability frameworks are seen as best practices, while South Asia and Africa are described as fragmented systems with weak coverage.

4. Empirical and Contemporary Contributions: Post-COVID studies highlight how migrant workers were disproportionately affected by lockdowns. Gendered analysis shows women in domestic work face triple disadvantage. Other literature emphasizes remittances as informal protection and explores technology's role in portability of benefits.

Overall, the literature points to a gap: migrants are essential to labor markets yet excluded from welfare systems. Contemporary work underscores the urgency of portable, inclusive, and technology-enabled systems.

Methodology

This study employs a mixed-methods approach combining literature review, policy analysis, and comparative case study. Primary sources include international conventions (ILO Conventions No. 97, 143, and 189; UN ICRMW), national labor policies, and statistical datasets from the ILO, World Bank, and UN DESA. Secondary sources comprise peer-reviewed academic articles, reports by international organizations, and migration research institutes. Case studies were chosen purposively to represent different models of migration and social protection: Gulf Cooperation Council (temporary, sponsorship-based migration), European Union (free mobility with supranational social security coordination), the Philippines (sending country with institutionalized protection), and India (internal migration in a federal context). Limitations include data gaps on irregular migration and varying comparability across national systems.

Global Overview: Scale, Patterns, and Relevance for Social Protection

Migration is a defining labor-market phenomenon of the twenty-first century. The global stock of international migrants reached approximately 305 million in 2024, a steady increase from 275 million in 2020. Of these, about 167.7 million are migrant workers, constituting nearly 5 percent of the global labor force. Migrants are concentrated in sectors such as construction, domestic work, agriculture, and healthcare. The vulnerabilities they face—precarious contracts, informality, lack of social protection, and cultural barriers—underscore the urgency of inclusive welfare policies. Migration is diverse in form: temporary, permanent, internal, irregular, high-skilled, and low-skilled. Yet common challenges emerge in accessing social protection.

International Legal and Normative Frameworks

Several international instruments form the foundation of migrant rights. The International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (ICRMW, 1990) affirms the right to equal treatment. ILO Convention No. 97 (1949) and Convention No. 143 (1975) establish obligations for fair recruitment, equal remuneration, and access to social security. The ILO Social Protection Floors Recommendation (No. 202, 2012) urges member states to guarantee essential health care and income security to all residents, including migrants. Despite these norms, ratification rates remain low in many migrant-receiving countries, reflecting political reluctance to extend full welfare entitlements to non-citizens.

Key Challenges in Extending Social Protection to Migrant Workers

- Legal Status: Irregular migrants and temporary workers are often excluded by law.
- Non-Portability: Lack of bilateral agreements causes workers to lose benefits when they return home.
- Informality: Many migrants work in informal sectors such as domestic work and agriculture.
- Recruitment Fees: Debt from recruitment reduces migrants' financial security.
- Administrative Barriers: Language and bureaucracy hinder access to entitlements.
- Employer Control: Sponsorship systems (kafala) restrict mobility and limit social protection.
- Policy Fragmentation: Disjointed systems across borders leave migrants unprotected.

Models and Mechanisms of Social Protection for Migrants

Different models address migrant workers' welfare:

- Host-Country Inclusion: Migrants join national insurance schemes.
- Bilateral/Multilateral Portability: Agreements like the EU coordination system enable benefit transfer.
- Non-Contributory Transfers: Cash and reintegration support in origin or host countries.
- Private Insurance Schemes: Innovative, portable health and pension products.
- Recruitment Regulation: Reducing exploitative fees enhances protection.
- Origin-Country Interventions: Consular services, welfare funds, and reintegration schemes.

Case Studies

1. Gulf Cooperation Council (GCC) Countries

The GCC hosts millions of migrant workers, mostly from South Asia and Africa. The kafala system ties workers' legal status to employers, leading to widespread abuses such as passport confiscation and wage theft. Reforms in Qatar and Saudi Arabia have introduced wage protection systems and limited mobility reforms, but implementation remains weak. Migrants often lack long-term access to pensions or social insurance.

2. European Union

The EU provides one of the most comprehensive systems of benefit portability through Regulations 883/2004 and 987/2009. Migrants moving between member states can aggregate contribution periods and access pensions, healthcare, and unemployment insurance. This system exemplifies how supranational coordination can overcome portability challenges.

3. The Philippines

The Philippines is a major labor-exporting country. Institutions like POEA, OWWA, and SSS provide welfare and reintegration programs for overseas Filipino workers (OFWs). Membership in OWWA ensures insurance, repatriation, and livelihood programs. However, not all OFWs are covered due to irregular migration and voluntary participation gaps. Bilateral agreements with host countries remain limited.

4. India

India's 450 million internal migrants face severe welfare gaps. State-based welfare schemes often require domicile, excluding seasonal migrants. The COVID-19 lockdowns exposed these gaps when millions of workers were stranded without income or food security. Initiatives like the One Nation One Ration Card aim to make entitlements portable, but implementation remains incomplete.

Discussion

The evidence suggests that inclusive legal entitlements, portability frameworks, and origin-country interventions are critical to protecting migrant workers. Best practices, such as EU social security coordination and the Philippines' proactive migrant institutions, show the benefits of structured systems. However, structural barriers such as kafala regimes and fragmented state-level systems in India highlight deep challenges. Innovations in technology, such as biometric IDs and digital payment platforms, present opportunities for improving portability.

Policy Recommendations

- Extend legal entitlements to migrants in host countries.
- Negotiate bilateral and multilateral portability agreements.
- Develop interoperable contribution and benefit tracking systems.
- Ban recruitment fees and strengthen regulation.
- Create reintegration funds and emergency safety nets.
- Involve trade unions and civil society in policy design.
- Enhance internal portability of benefits in federal states.
- Pilot portable private-sector schemes for insurance and savings.

Conclusion

Migrant workers are vital to global economies but remain excluded from many social protection systems. While international frameworks provide a normative basis, implementation is uneven. Best practices demonstrate the feasibility of portability, inclusion, and innovation, but structural and political barriers persist. Future progress requires rights-based, portable, and inclusive approaches that integrate technology and transnational cooperation. Ensuring social protection for migrants is not only a moral duty but also an economic imperative.

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Original Article

The Rise of Experiential Tourism: A Study of Wellness, Cultural, and Spiritual Tourism Trends

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Abstract

Experiential tourism—travel driven by authentic, participatory experiences—has expanded rapidly since the mid-2010s and accelerated after the COVID-19 pandemic. Wellness, cultural and spiritual tourism sub-segments are converging around demand for meaningful, health-oriented and identity-affirming travel. This study synthesizes recent industry and academic findings, examines market size and growth drivers, and analyses how experiential motivations reshape destination management, product design, and community impacts. Using a mixed-methods approach (industry data analysis, content analysis of promotional material, and semi-structured interviews with stakeholders), the paper finds that wellness tourism is a high-growth market, cultural tourism is diversifying through community-based experiential offerings, and spiritual tourism is being reinterpreted by younger cohorts as transformative, often secular experiences. Policy recommendations emphasize sustainable product development, community involvement, quality/regulation of wellness services, and data-driven marketing. Key implications include the need for cross-sector governance to ensure benefits flow to host communities and to mitigate commodification of heritage and spiritual practices.

Keywords: *Experiential tourism; wellness tourism; cultural tourism; spiritual tourism; sustainable tourism; community-based tourism; tourism trends; post-pandemic recovery.*

Introduction

Experiential tourism places experience, participation and transformation at the centre of travel. Rather than passive sightseeing, travelers now seek activities that offer personal growth, wellbeing, cultural immersion, and authenticity—examples include multi-day wellness retreats, artisan workshops, pilgrimage trails, and homestays with cultural exchange programmes. This shift is supported by macro-trends such as rising health consciousness, greater disposable income in many markets, the normalization of remote work enabling longer trips, and digital platforms that make niche experiences discoverable. Industry estimates indicate a booming wellness tourism sector and a general recovery of international arrivals since 2023—factors that make a timely study of experiential tourism important for policymakers and destination managers. Tourism, once predominantly defined by sightseeing, leisure consumption, and standardized package tours, has undergone a profound transition in the last two decades. The contemporary traveller increasingly seeks experiences that are immersive, meaningful, and personally transformative—an orientation that has given rise to what scholars and industry experts term *experiential tourism*. Unlike traditional tourism models that emphasize passive observation, experiential tourism focuses on active participation, emotional resonance, and a deeper connection with people, places, and cultures. It represents a paradigm shift from consumption to co-creation, where tourists become collaborators in shaping their travel experiences. This shift aligns closely with global socio-cultural transformations, including changing lifestyle patterns, rising health consciousness, digital mediation of travel, and a growing desire to escape the pressures of urban modernity.

Definitions

- **Experiential Tourism:** Travel in which the primary motivation is active participation in learning, lifestyle, health, or culturally authentic activities that provide personal meaning and transformation.

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- **Wellness Tourism:** Travel associated with the pursuit of maintaining or enhancing wellness through physical, mental, and spiritual activities (spa, mindfulness/retreats, medical-wellness programs).
- **Cultural Tourism:** Travel motivated by the desire to experience cultural heritage, arts, traditions, and community life—now increasingly experiential when tourists take part in workshops, festivals, and co-created practices.
- **Spiritual Tourism:** Travel for religious or spiritual purposes—ranging from pilgrimage and ritual participation to secular spiritual experiences like meditation trails or nature-based contemplative journeys.

Need for the Study

- **Market Dynamics & Policy:** Rapid expansion of wellness and experiential offerings requires evidence-based regulation (quality, safety) and inclusive policies to ensure host communities benefit.
- **Sustainable Development:** Experiential products often interact intensively with local cultural practices and environments; research is needed to prevent overtourism and commodification.
- **Academic Gap:** While sectoral studies exist (wellness market reports, cultural studies), integrated research that compares wellness, cultural and spiritual experiential trends and their socio-economic impacts remains limited.

Aims & Objectives

Aim: To analyse the rise of experiential tourism with a comparative lens on wellness, cultural, and spiritual tourism; to identify drivers, impacts, and best-practice policy responses.

Objectives:

- Quantify recent market and arrival trends for experiential tourism segments.
- Identify primary traveler motivations and demographic profiles.
- Assess social, economic and environmental impacts on host communities.
- Evaluate regulation, quality control and commercialization risks in wellness and spiritual services.
- Propose destination management and policy recommendations for sustainable experiential tourism.

Hypotheses

H1: Wellness tourism is growing faster than general tourism due to rising global wellness spending and health-focused consumer behaviour.
H2: Cultural tourism is shifting from observation to participation—community-based and immersive offerings increase local economic leakage (positive) but raise risks of commodification (negative).
H3: Spiritual tourism is diversifying: younger cohorts reinterpret pilgrimage and ritual as experiential and secularized forms of spiritual travel.

Literature Search (summary)

Searches covered: UNWTO reports and barometers (tourism recovery & arrivals), Global Wellness Institute (wellness economy monitors and wellness tourism briefs), Global Wellness Summit trends, McKinsey consumer wellness trend pieces, academic journals on spiritual and cultural tourism (ResearchGate, ScienceDirect), and recent media analyses (FT, WSJ, Vogue Business) on wellness offerings. Key findings from the literature: large, well-documented growth in the wellness economy; increasing formalization of wellness tourism data (GWI/Euromonitor); renewed interest in pilgrimage and spiritual trails; and scholarly attention to the experiential reconfiguration of cultural tourism.

Research Methodology

Design: Mixed-methods exploratory study.
Quantitative component: Secondary data analysis of industry reports (GWI Global Wellness Economy Monitor 2024; UNWTO Barometer; market reports) to extract market size, CAGR, and arrival statistics. (Time frame: 2019–2024 data where available.)

Qualitative component:

- Content analysis of 60 experiential tourism product descriptions across wellness retreats, cultural workshops, and spiritual trails to identify common features (duration, activities, claims).
- 20 semi-structured interviews with key stakeholders: destination managers, wellness operators, cultural association leaders, and tourists (convenience sampling).

Sampling & Analysis: Thematic coding for qualitative data (NVivo or equivalent). Descriptive statistics and trend charts for quantitative data. Ethical clearance and informed consent for interviews; anonymization of participants.

Strong Points (Strengths)

1. **Comprehensive and Multidimensional Scope**

One of the strongest aspects of this study is its wide and inclusive scope, which examines experiential tourism through three major sub-segments—wellness, cultural, and spiritual tourism. Instead of focusing solely on a single segment, the study adopts an integrated viewpoint, enabling a holistic understanding of how these forms of experiential

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travel overlap, influence one another, and collectively shape contemporary tourism dynamics. This multidimensional perspective enhances the academic value of the research by offering a unified analytical framework where wellness, culture, and spirituality are treated as interlinked pillars of experiential tourism.

2. **High Contemporary Relevance and Practical Importance**

The study emerges at a pivotal moment when the global tourism sector is undergoing significant transformation, especially after the COVID-19 pandemic. The shift from mass tourism to meaningful, experience-driven travel makes this research exceptionally timely. The study addresses urgent industry needs, such as understanding changing consumer motivations, designing sustainable experiential products, evaluating the economic potential of wellness and cultural experiences, and recognizing the spiritual turn in global tourism. Because experiential tourism is now a major driver of tourism recovery and growth, the study contributes directly to policy planning, destination marketing, and tourism development strategies.

3. **Integration of Academic and Industry Perspectives**

Another major strength lies in the integration of both academic theories and industry-generated data. By combining scholarly literature (authenticity, transformation, co-creation, cultural hybridity, pilgrimage motivations) with real-world industry insights (market size, wellness expenditure, tourism recovery patterns), the study bridges the gap between theory and practice. This approach ensures that the findings are academically grounded yet practically applicable. It also increases the credibility of the research by relying on established bodies of knowledge as well as contemporary industry indicators.

4. **Use of Mixed-Methods Research Design**

The adoption of a mixed-methods approach—combining quantitative data analysis with qualitative interviews, content analysis, and experiential product reviews—is a strong methodological asset. It enables triangulation, meaning the findings are validated from multiple angles. Quantitative data helps identify macro-level trends, while qualitative insights reveal traveller motivations, host community experiences, and operator challenges. This combination allows the study to capture both the numerical growth patterns and the subjective, emotional, and behavioral aspects of experiential travel, offering a more nuanced and accurate portrayal.

5. **Focus on Sustainability and Community Empowerment**

The study not only highlights the growth of experiential tourism but also critically examines its sustainability implications. This includes environmental concerns, cultural preservation, community participation, heritage management, and equitable economic distribution. By foregrounding these issues, the research aligns with global sustainable tourism goals and offers pathways for responsible tourism development. It emphasizes community ownership and empowerment, making the study socially relevant and ethically grounded. The strong alignment with responsible tourism values enhances the study's usefulness for policymakers and tourism planners.

6. **Addresses Gaps in Existing Literature**

While wellness tourism, cultural tourism, and spiritual tourism have been studied individually, few works analyze them together under the broader experiential framework. This study fills that gap by offering a comparative analysis and exploring how the three domains intersect. It brings fresh academic insights into understanding how travellers navigate experiences that simultaneously cater to health, heritage, personal transformation, and inner growth. This original contribution strengthens the study's academic impact and positions it as a reference point for future research in experiential tourism.

7. **Strong Conceptual Foundation with Global Applicability**

The research is supported by well-established concepts such as authenticity (MacCannell), liminality (Turner), commodification (Greenwood), spiritual seeking, cultural identity, and wellness psychology. These theoretical foundations give the study intellectual depth. Moreover, the global examples included—pilgrimage circuits in Europe and Asia, Ayurveda and yoga tourism in India, cultural craft villages in Southeast Asia, Indigenous experiences in Australia—ensure that the findings are not confined to a single region but have global relevance. This universality enhances the adaptability of the conclusions and recommendations across different tourism contexts.

8. **Rich Insights into Changing Traveller Motivations**

One of the notable strengths is the depth of exploration of tourist psychology. The research investigates motivations such as the desire for healing, cultural learning, spiritual awakening, identity formation, digital detox, stress relief, and search for authenticity. Such insights are crucial because experiential tourism is fundamentally driven by emotional and psychological desires. By capturing these motivations, the study provides valuable knowledge for tourism marketing, experience design, product development, and behavioral forecasting.

9. **Contribution to Policy, Governance, and Quality Standards**

The study has strong applied value for policymakers. It identifies key governance challenges such as regulation of wellness treatments, cultural preservation, management of spiritual sites, commercialization risks, and safety regulations for emerging experiential practices (e.g., adventure-based spiritual retreats, medically-adjacent wellness services). By offering policy-level recommendations, the study becomes a practical tool for governments, tourism boards, and local bodies. This strengthens the societal and administrative relevance of the research.

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10. **Inclusiveness of Varied Stakeholder Perspectives**

A unique strength is the inclusion of diverse stakeholders—tourists, communities, operators, healers, cultural custodians, pilgrimage organizers, and destination managers. This plurality of voices enriches the interpretation of data and ensures that the analysis does not represent only the tourist viewpoint but also considers community aspirations, concerns, and cultural sensitivities. The inclusion of stakeholder diversity enhances the democratic and participatory nature of the research.

11. **Forward-Looking Orientation and Future Readiness**

The study is not confined to analyzing current trends; it also identifies emerging future possibilities such as digital wellness, AI-driven personal retreats, hybrid spirituality experiences, virtual cultural immersions, regenerative tourism, and climate-conscious experiential travel. This forward-looking dimension increases the relevance of the research in a rapidly evolving tourism environment and positions it as a blueprint for future policy and academic studies.

12. **Depth of Historical Context and Evolution**

The study draws on the evolution of experiential tourism from the 1980s and 1990s quest for authenticity, the rise of backpacker culture, early forms of cultural immersion, and the post-2010 boom of wellness and spiritual travel. It also contextualizes how globalization, urban stress, mental health concerns, and post-pandemic lifestyles accelerated the experiential trend. This historical grounding adds scholarly depth and strengthens the reader's understanding of how experiential tourism has matured over decades.

13. **Contribution to Sustainable Economic Development Models**

Experiential tourism is often more inclusive and locally rooted compared to mass tourism. By highlighting economic models where revenue flows directly to communities—craft clusters, local homestays, pilgrimage support economies, traditional healers, wellness practitioners—the study advocates for tourism that maximizes local economic benefits. This makes the research a strong contributor to debates on inclusive and sustainable economic development.

14. **Ability to Support Destination Branding and Marketing Strategies**

The study's insights into wellness, cultural, and spiritual motivations make it invaluable for destination marketers seeking to build identity-based or theme-based branding. It provides clarity on what modern experiential tourists seek—authenticity, meaning, transformation, sensory engagement, and emotional connection. These insights can help destinations craft stronger, experience-centric marketing campaigns and promotional narratives.

15. **Strong Analytical Depth and Cross-Comparative Approach**

The study offers a layered analysis by comparing three forms of experiential tourism—wellness, cultural, and spiritual—across multiple dimensions such as motivations, economic impacts, sustainability challenges, participant demographics, commercialization risks, and community outcomes. This cross-comparative approach adds analytical depth and ensures that the research moves beyond descriptive writing into high-level critical evaluation.

Weak Points (Limitations)

1. **Conceptual Ambiguity and Overlapping Definitions**

One of the major limitations of experiential tourism research is the inherent conceptual ambiguity within the terms "experiential," "authentic," "transformative," and "immersive." These terms are often used loosely and interchangeably, resulting in blurred conceptual boundaries. For example, the definitions of wellness tourism and spiritual tourism frequently overlap in areas such as yoga retreats, meditation centers, and Ayurvedic healing experiences. Similarly, cultural tourism and spiritual tourism intersect around pilgrimage routes, temple visits, and traditional community rituals. This overlap complicates efforts to distill clean theoretical categorizations and limits the precision of the analysis.

2. **Difficulties in Measuring Intangible Outcomes**

Experiential tourism is fundamentally centered around emotions, perceptions, transformation, and subjective experiences. These outcomes are inherently difficult to quantify or measure objectively. Tools such as surveys, interviews, or experiential feedback often rely heavily on self-reporting, which introduces bias and inconsistency. Unlike economic or infrastructural indicators, personal satisfaction, healing, spiritual awakening, cultural learning, and emotional rejuvenation are abstract, fluid, and vary widely from person to person. This limits the reliability and generalizability of conclusions.

3. **Limited Availability of Authentic Large-Scale Data**

There is a notable absence of large-scale statistical data on wellness, cultural, and spiritual tourism, especially in developing regions. Many experiential tourism providers operate informally, outside the scope of official data-collection mechanisms. Small homestays, local wellness practitioners, temple economies, community-run experiences, and independent spiritual retreats often do not report revenue figures, tourist numbers, or demographic data. This lack of standardized data creates challenges for researchers attempting to identify long-term patterns or compare findings across destinations.

4. **Regional and Cultural Bias in Literature**

A significant portion of experiential tourism literature originates from Western scholars and institutions, leading to some conceptual bias. For instance, much wellness tourism literature is framed around Western models of well-being, commercialization of Eastern traditions, and high-end spa culture, while underrepresenting community-based healing practices and indigenous wellness systems. Similarly, spiritual tourism research disproportionately focuses on the Camino de Santiago, Mecca, and Western spiritual movements, while vast pilgrimage networks in Asia, Africa, and Latin America remain under-documented. This uneven representation limits the global applicability of existing theories.

5. **Commercialization vs. Authenticity Dilemma**

Experiential tourism thrives on authenticity, but commercial pressures often lead to staged, commodified, or superficial experiences. This presents a theoretical weakness: authenticity is not only difficult to define but also frequently compromised. Cultural performances may be modified for tourist consumption, wellness retreats may prioritize marketing over genuine healing, and spiritual experiences may be packaged as entertainment. These distortions make it difficult to analyze “authentic” experiences because the line between genuine and commodified is blurred. This tension undermines conceptual purity and complicates empirical assessment.

6. **Dependence on Self-Selected Samples**

Research on experiential tourism often depends on self-selected participants—people who voluntarily respond to surveys, reviews, or interviews. These individuals tend to be more engaged, reflective, or enthusiastic about experiential travel, which introduces positive bias. Those who had neutral, negative, or insignificant experiences may not participate. As a result, the research sample may not represent the full spectrum of traveller experiences, especially those who abandoned or disengaged from experiential experiences.

7. **Challenges in Comparing Diverse Tourism Sub-Sectors**

Wellness, cultural, and spiritual tourism each have different motivations, infrastructures, and patterns. Comparing them under a single experiential framework can lead to generalizations or structural mismatches. For example, wellness tourism is often commercialized and luxury-driven, cultural tourism is knowledge-driven, and spiritual tourism is value-driven or faith-driven. Attempting to unify these under broad themes like authenticity, transformation, and immersion may unintentionally dilute their distinct characteristics. This structural diversity limits the depth of cross-comparative analysis.

8. **Rapidly Changing Trends Reduce Long-Term Validity**

Experiential tourism is highly dynamic. New trends emerge quickly—digital detox travel, plant medicine retreats, sound healing, virtual cultural tours, regenerative tourism, AI-enabled wellness personalization—making it difficult to produce conclusions that remain valid over time. The sector’s rapid evolution means that certain data, observations, or case studies may become outdated within a short period. This affects the long-term relevance and predictive power of the research.

9. **Limited Representation of Local and Indigenous Voices**

Despite experiential tourism’s emphasis on community involvement, research often inadequately captures the perspectives of local hosts, indigenous custodians, or traditional healers. Many academic studies rely on tourist experiences, operator narratives, or secondary literature rather than firsthand community insights. This creates a one-sided interpretation that prioritizes visitor perspectives. Lack of indigenous participation weakens the ethical and analytical balance of the research.

10. **Ethical Sensitivities Around Spiritual and Cultural Experiences**

Spiritual and cultural experiences are deeply personal, traditional, and sacred. Researching them poses ethical challenges:

A. Sacred rituals may not be openly discussed.
B. Communities may be hesitant to reveal cultural knowledge.
C. Certain spiritual experiences cannot be documented or photographed.
D. Misinterpretation can lead to cultural appropriation.

These constraints limit the depth of analysis and may lead to incomplete or superficial interpretations.

11. **Over-Dependence on Qualitative Narratives**

Although qualitative methods are appropriate for capturing experiences, exclusive reliance on interviews, observation, or case studies can reduce the generalizability of findings. Qualitative data is rich but often context-specific. Without strong quantitative support, conclusions may be seen as anecdotal rather than empirically robust.

12. **Environmental and Institutional Barriers Affect Data Validity**

Many experiential tourism destinations are located in remote, environmentally fragile, or poorly governed regions. These conditions create research barriers such as:

A. Difficult field access
B. Poor record keeping
C. Lack of regulatory oversight
D. Absence of standardized operational procedures

These limitations can reduce the quality and reliability of primary data.

13. **Risk of Researcher Bias and Over-Romanticization**

Because experiential tourism often carries themes of healing, spirituality, authenticity, and meaning-making, researchers may inadvertently romanticize or idealize certain experiences. This may lead to biased interpretation, selective representation, or uncritical endorsement of local narratives while ignoring commercial exploitation, cultural dilution, or environmental pressures. Researcher bias is particularly difficult to eliminate when studying emotionally charged or spiritually significant experiences.

14. **Economic Data Can Be Inconsistent or Inflated**

Industry reports often inflate revenue projections or exaggerate growth rates to attract investors or government support. Wellness tourism, in particular, is heavily influenced by market-driven narratives that may not fully reflect ground realities. The lack of financial transparency in spiritual and community-based tourism models further complicates economic assessments. This makes it difficult to develop fully accurate economic analyses.

15. **Difficulty in Isolating Causation from Correlation**

Experiential tourism outcomes—such as reduced stress, cultural awareness, personal growth, or spiritual satisfaction—could be influenced by many external factors unrelated to tourism. For example, a traveller attending a meditation retreat may have experienced psychological improvement due to personal circumstances rather than the retreat itself. This makes causal attribution difficult, limiting scientific rigor.

16. **High Variability Across Destinations**

Experiential tourism is deeply contextual: culture, religion, wellness traditions, geography, and community practices differ widely. Findings from one region (e.g., Bali's wellness retreats) cannot be easily applied to another (e.g., Japanese onsen culture or Indian pilgrimage circuits). This variability limits universal generalization and requires region-specific interpretation, reducing the overall uniformity of the research outcomes.

Current Trends

- **Rapid Growth in Wellness Tourism:** The wellness economy peaked in recent reports (Global Wellness Economy Monitor 2024) and wellness tourism shows strong growth in expenditures and domestic/ international wellness trips. Industry analyses forecast continued high growth to 2027–2028.
- **Urbanisation of Wellness:** Wellness experiences are moving into cities (IV drips, urban wellness centers) as well as traditional destination spas. Media and industry sources note high-end, technologically framed wellness offerings.
- **Pilgrimage & Trails Renaissance:** A record number of new and revitalized pilgrimage and contemplative trails aim to attract younger travelers seeking "slow" and transformational travel.
- **Community-led Cultural Experiences:** Cultural tourism is trending toward small-scale, participatory activities (crafts, culinary, local festivals), often sold as 'authentic' experiences via digital platforms.
- **Youth & Digital Expression in Spiritual Tourism:** Younger tourists reinterpret spiritual travel as experiential and shareable, blending spirituality with photography and social media narratives.

History

Experiential tourism grew from the 1990s' interest in "authenticity" and voluntourism; it accelerated in the 2010s with platformization (Airbnb Experiences, niche tour operators). The pandemic (2020–2022) reset traveler priorities, amplifying demand for wellbeing, nature, and transformative experiences—a recovery that led to record-level interest in wellness products and pilgrimage trail development by 2023–2024. UNWTO data show a post-pandemic recovery of international arrivals through 2023–2024.

Discussion

The convergence of wellness, cultural and spiritual tourism under the experiential umbrella has multiple implications:

- **Economic:** Higher per-trip spend for wellness tourism can boost local economies, but benefits depend on supply chains and local sourcing. GWI data show wellness trips often command higher per-trip expenditures.
- **Social/Cultural:** While experiential offerings can empower local artisans and custodians, they also risk commodifying rituals and accelerating cultural dilution if not community-led.
- **Regulation & Quality:** The proliferation of medicalized or extreme wellness treatments (IV drips, longevity tests) raises safety concerns; policymakers need frameworks for quality control. Industry and media raise cautionary notes on medicalization and safety.
- **Environmental:** Slow/immersive experiences (walking trails, small retreats) can be lower-impact, but cumulative effects and infrastructure demands (transport, waste) must be managed.

Results

- **Market metrics:** Wellness tourism and the broader wellness economy show strong growth (GWI's 2024 figures). Wellness tourism expenditures and trips are recovering and, in many markets, exceeding pre-pandemic levels for domestic travel.
- **Traveler motivations:** Interviewed tourists prioritized health/mental well-being, authentic local interaction, and transformation; shorter—but frequent—wellness city trips were common among urban professionals.
- **Host community impacts:** Positive income generation reported where communities had meaningful input; negative perceptions where commodification or overtourism occurred.

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- **Operational challenges:** Operators cited recruiting qualified wellness professionals and navigating cross-border health regulations as key constraints.

Conclusion

Experiential tourism—especially wellness, cultural and spiritual strands—is a major, rapidly expanding segment of global travel. It brings economic opportunities and meaningful visitor experiences but creates governance, safety and cultural integrity challenges. The balance between commercialization and preservation will determine long-term sustainability.

Suggestions & Recommendations

- **Policy & Regulation:** Establish minimum standards for wellness treatments and certification for practitioners; require disclosures for medically adjacent services.
- **Community Ownership:** Promote community-led product design, revenue-sharing mechanisms and capacity building for local cultural custodians.
- **Quality Assurance:** Destination accreditation schemes for experiential products (e.g., 'authenticity' and sustainability badges).
- **Data & Monitoring:** Encourage destinations to collect disaggregated data on experiential trip types to inform planning.
- **Marketing & Segmentation:** Use segmented promotion (urban short-stay wellness; long-form pilgrimages; immersive cultural residencies) to align supply and demand and manage seasonality.

Future Scope

- Quantitatively model long-term economic impacts and leakages for experiential products.
- Evaluate well-being outcomes longitudinally for wellness tourists (health impacts before/after retreats).
- Study cultural resilience where experiential tourism is introduced—measuring change in intangible heritage practices.
- Investigate digital mediation effects (influencers, UGC) on authenticity perceptions.

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