

**ONLINE MULTIDISCIPLINARY INTERNATIONAL CONFERENCE**  
**ON**  
**Viksit Bharat@2047**  
**Spectrum of Opportunities in Global Era**

 **Viksit  
Bharat**



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**Smt. Maniben M.P. Shah Women's  
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(Conducted by Seva Mandal Education Society)  
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**Matushri Kanbai Lalbai & Motibai Lohana  
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# THE ECONOMIC BURDEN OF MENTAL HEALTH ISSUES: A GLOBAL AND INDIAN PERSPECTIVE FOR VIKSIT BHARAT@ 2047

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## **Abstract:**

Mental health is a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community. Mental health issues are increasingly recognized as a significant global health and economic challenge, with direct and indirect costs impacting societies and economies. Economic reforms play a critical role in shaping the financial stability and psychological well-being of a nation's citizens. The transition towards a developed economy, as envisioned in Viksit Bharat@2047, necessitates a comprehensive understanding of how economic policies impact mental health. This paper explores the intersection between economic growth and mental health.

The study assesses the effects of urbanization, role of public sector, economic uncertainty, pandemic, financial stability, employment opportunities and how reforms impact stress levels, anxiety, and overall psychological health.

By relating economic reforms and mental well-being, this paper appreciates policies already in place and recommends measures for fostering an economically stable and mentally healthy society. These include integrating mental health into economic planning, enhancing financial literacy, and promoting workplace mental health initiatives. The findings underscore the necessity of a balanced approach where economic progress aligns with the psychological welfare of the population.

As India strides towards 2047, prioritizing mental well-being alongside economic growth will be essential in achieving a truly developed Bharat. A holistic framework incorporating both financial and mental health will ensure sustainable progress and societal well-being.

**Keywords:** Mental health, Economic reforms, mental well-being, Viksit Bharat@2047, financial security, employment, social welfare.

## **Introduction:**

Mental health has emerged as one of the most significant public health challenges globally, with implications for individuals as well as for economies. The World Health Organization (WHO) estimates that mental health disorders affect one in four people worldwide at some point in their lives, contributing to significant social, emotional, and economic burdens. Mental Health issues like Depression, Anxiety, Schizophrenia, Bipolar disorders result in a wide range of direct and indirect costs. It affects workforce productivity, increases healthcare expenses, and impacts overall national economic growth. These issues are often compounded by a lack of awareness, social stigma, and limited access to appropriate care, making it a critical area of concern for countries aiming to achieve long-term development.

In the context of India, the situation is even more alarming. Despite being one of the fastest-growing economies in the world, India struggles with a rising prevalence of mental health issues, with millions of people affected by conditions like depression, anxiety, and substance abuse. According to the National Mental Health Survey (2016), nearly 14% of Indians suffer from mental health disorders, a number that continues to rise due to factors such as urbanization, stress, and changing socio-economic dynamics. To add to this the mental health infrastructure in India remains underdeveloped, with a severe shortage of trained professionals, mental health facilities, and public awareness. The lack of comprehensive mental health policies and services exacerbates the economic burden on families, businesses, and the healthcare system.

The global economic burden of mental health disorders is substantial, with cost estimates indicating that mental health conditions cost the world \$1 trillion annually in lost productivity due to depression and anxiety alone. According to the OECD (2018) mental health issues contribute to 4% of global GDP in lost productivity, amounting to about \$2.5 trillion each year, expected to rise to \$6 trillion by 2030. Direct costs, such as healthcare

services, medications, and treatments, add significantly to the economic strain, with the US spending over \$200 billion annually on mental health care. In contrast, low-income countries allocate only about 1% of their health budget to mental health.

Globally mental health disorders account for 13% of the global disease burden (WHO, 2019). In developed countries, the prevalence of depression and anxiety is high- 7% of the population in the US experiences depression annually. In developing nations, the rates of mental health issues are increasing, but these regions face severe treatment gaps, with less than 10% of those in need receiving care. India and China are seeing rising mental health concerns, driven by stress from urbanization and socio-economic changes.

Mental health disorders severely impact the workforce. Absenteeism and Presenteeism (working while impaired) are major consequences, with depression and anxiety leading to 200 million days of lost work annually in the US, costing around \$51 billion. Mental health issues also result in reduced productivity, and workers with mental health disorders often experience diminished job performance. Untreated mental health conditions contribute to long-term disability and early workforce exit, which compounds economic losses. For example, depression is a leading cause of disability worldwide and is expected to be the leading global burden of disease by 2030.

Mental Health Statistics in India indicate that 14% of the population suffers from some form of mental health disorder, with depression (5.3%) and anxiety (3.8%) being the most common. Suicide rates are alarmingly high, with India accounting for 36% of global suicides. Alarmingly the youth are particularly vulnerable. Substance abuse is another growing concern.

Healthcare Infrastructure in India is woefully inadequate. India faces a severe shortage of mental health professionals (0.3 psychiatrists per 100,000 people) far below the global average. Mental health facilities are concentrated in urban areas (80% of professionals located in major cities) leaving rural areas underserved. Despite the Mental Healthcare Act (2017), India's mental health budget is less than 1% of the total health budget, limiting access to care.

The Economic impact of Mental health issues cost India 1.5 lakh crore Rupees annually in healthcare expenses, and productivity losses due to absenteeism and presenteeism are estimated at 2.5 lakh crore. Suicides contribute to an economic loss of 1.5 lakh crore, and untreated mental health conditions hinder workforce productivity and human capital development.

Cultural stigma prevents many from seeking help. Mental health issues are often viewed as weaknesses or spiritual problems. Reluctance to seek treatment leads to untreated conditions, increasing their severity and economic burden. Gender and social stigma disproportionately affect women and marginalized groups, exacerbating the problem in rural areas and lower-income households.

Economic reforms have long been recognized as a catalyst for national growth and development. They influence employment patterns, income levels, and access to essential services, all of which significantly impact the mental well-being of individuals. However, while economic reforms aim to enhance productivity and financial security, they often bring about transitional challenges, including job uncertainty, wage disparities, and increased competition, all of which can affect psychological resilience.

It is imperative to examine how economic policies shape mental health outcomes in the context of Viksit Bharat@2047. This paper explores the relationship between economic reforms and mental well-being, emphasizing the necessity of an inclusive approach that integrates financial stability with mental health support. The study aims to provide insights into how economic reforms can impact mental health and wellbeing as India progresses towards 2047.

Furthermore, this research underscores the importance of a multi-stakeholder approach involving policymakers, businesses, healthcare professionals and civil society in creating a supportive ecosystem where economic reforms enhance mental wellbeing and reduce economic burden. The findings and recommendations presented in this study will contribute to shaping a sustainable and mentally healthy workforce.

### Objectives:

- To explore the Relationship Between Economic Reforms and Mental Health.

- To Identify Cost-Effective Interventions.
- To Examine Government Policies and Healthcare Investments.
- To Identify Policy Interventions for a Mentally healthy Workforce

### Sources of Data Collection

The source of Data Collection is based on Secondary Data through Books, Newspaper, Articles, Journals & Internet.

### Discussion:

Economic reforms are necessary - the liberalization, privatization, and digitization of industries create new opportunities but also leads to financial stress, job insecurities, and disparities in mental well-being across different socio-economic groups. Understanding these dynamics is crucial in formulating policies that balance economic progress with social and mental stability.

### Key Economic Reforms can have Implications on Mental Health

- **The Role of Public Sector:** It plays a crucial role in providing stable employment, social security, and welfare benefits. When state-run enterprises are privatized or downsized, employees face job insecurity, loss of benefits, and increased work-related stress, leading to mental health issues like anxiety and depression.
- **Labour Market Flexibility:** it allows businesses to hire and fire employees more easily, promoting economic efficiency. However, it often leads to job insecurity, unstable incomes, and high stress among workers, affecting their mental well-being.
- **Impact of Foreign Direct Investment:** It brings economic growth, new jobs, and advanced technologies, but it can also lead to job displacement, increased competition, and workplace stress. Workers in traditional industries may face uncertainty, leading to anxiety and mental health issues.
- **Urbanization:** Economic liberalization has accelerated urbanization, leading to overcrowding, high living costs, job competition, and lifestyle changes. These factors contribute to stress, anxiety, and social isolation, especially among migrants and low-income workers.
- **Education Reforms:** Changes in education policies, such as increased emphasis on skill development and competitive exams, can create pressure on students. This leads to anxiety, stress, and mental health issues, especially regarding career uncertainty.
- **Impact of Trade Liberalization:** It opens domestic markets to global competition, benefiting large industries but often harming small businesses. Increased competition, market volatility, and job losses can cause financial stress, anxiety, and depression.
- **Economic Uncertainty:** Economic fluctuations like inflation, market crashes, and policy changes create financial instability, leading to stress, anxiety, and depression among individuals, especially those with low job security or debt burdens.
- **Post-Pandemic Economic Reforms** such as digital transformation and healthcare sector growth, have created new job opportunities but also led to job losses in traditional sectors. This shift has increased stress, job insecurity, and mental health challenges.
- **Informal Sector Workers** often lack job security, health benefits, and social protection, leading to financial stress, long working hours, and workplace exploitation leading to anxiety, depression, and overall poor mental health.
- **Financial Stability and Stress Reduction:** Economic policies directly impact financial stability, which plays a crucial role in reducing stress and anxiety. Stable job opportunities, fair wages, and social security measures contribute to a sense of financial security, leading to improved mental health. On the other hand, economic volatility, inflation, and wage stagnation can exacerbate stress levels, increasing the risk of



anxiety and depression. Ensuring that economic policies prioritize job security, access to affordable healthcare, and financial literacy can significantly reduce mental health burdens.

- **Employment Opportunities and Psychological Resilience:** The nature of employment opportunities created by economic reforms has a profound impact on mental well-being. Policies that promote stable, well-paying jobs enhance psychological resilience by providing individuals with financial security and career growth. However, rapid industrialization, automation, and labor market shifts may lead to job displacement and uncertainty, increasing psychological distress. Addressing these challenges through upskilling programs, social safety nets, and mental health support systems can help individuals adapt to changing job markets while maintaining their mental well-being.
- **Income Inequality and Mental Health Disparities:** Economic reforms influence income distribution, which in turn affects mental health outcomes. Societies with high levels of income inequality often experience greater psychological distress, as lower-income groups struggle with financial insecurity, limited access to quality healthcare, and reduced opportunities for upward mobility. Redistributive policies, such as progressive taxation, increased minimum wages, and expanded social welfare programs, can mitigate mental health disparities by ensuring equitable access to resources and opportunities. Policies aimed at reducing wealth gaps can foster a more inclusive economic environment, leading to improved mental well-being for all citizens.

## Policy Interventions and Recommendations

### Government Initiatives

#### 1. Mental Healthcare Act (2017)

Mandates the right to access mental health care and treatment. Decriminalizes suicide attempts, focusing on mental health care rather than punishment. Establishes Mental Health Review Boards for oversight and accountability. Promotes community-based care, reducing reliance on institutional treatment.

#### 2. National Mental Health Program (NMHP)

Integrates mental health services into primary healthcare systems. Promotes community-based and home-based care for early diagnosis and treatment. Conducts awareness campaigns to reduce mental health stigma. Faces challenges due to resource constraints and staff shortages.

#### 3. National Suicide Prevention Strategy

Strengthens mental health care systems and provides crisis intervention services. Initiates school and workplace-based programs to detect mental health issues early. Launches public awareness campaigns to address suicide prevention and mental health stigmas.

#### 4. Ayushman Bharat and Mental Health

It provides healthcare coverage for low-income families, including mental health services. Coverage includes outpatient and inpatient mental health treatment under the National Health Protection Scheme (NHPS). Faces challenges in rural areas, with insufficient infrastructure and trained professionals.

#### 5. Mental Health Financing and Budgeting

India allocates only 1% of the health budget to mental health, leading to underfunding. The private sector is increasingly involved in mental health care but faces inconsistent regulation and accessibility. Need for more public-private partnerships to improve accessibility and affordability.

#### 6. Role of Non-Governmental Organizations

NGOs play a key role in advocacy, mental health awareness, and support services. NGOs focus on community-based interventions, early intervention, and psychosocial support. Provide training programs for professionals and communities to address mental health effectively.

#### 7. Mental Health Awareness in Education Systems:

The New National Education Policy 2020 has introduced comprehensive mental health education in schools and universities, focusing on emotional well-being, stress management, and early intervention strategies. Life Skill education is mandatory.

#### 8. Strengthening Mental Health in Social Security Schemes

Developing policies to incorporate mental health support within India's social security and welfare measures, ensuring that workers in precarious jobs have access to psychological resources.

#### 9. Promoting Work-Life Balance and Mental Health

Advocating for government policies that encourage work-life balance, such as regulating working hours, mandating paid leave, and promoting flexible work arrangements to reduce work-related stress.

#### 10. Economic Policies for Reducing Financial Stress

Recommending economic policies aimed at reducing income inequality and improving financial stability, such as progressive taxation, financial assistance for low-income groups, and measures to control inflation.

#### 11. Digital Detox and Mental Health

Introducing public health policies to reduce the psychological impact of digital overload, particularly focusing on the workplace and educational environments in an increasingly digital economy.

#### 12. Support for Mental Health in the Gig Economy

Establishing labor laws and policies that provide mental health support for gig economy workers, who often face job instability and lack of healthcare benefits.

#### 13. Mental Health as a Corporate Social Responsibility

Encouraging businesses to include mental health initiatives within their CSR programs, including workplace counselling services, mental health days, and stress-reduction workshops.

#### 14. Building Community-Based Mental Health Infrastructure

Promoting decentralized mental health support systems in rural and urban communities, ensuring accessible and affordable care through local clinics, peer support groups, and telehealth services.

#### 15. Public Awareness Campaigns on Economic Stress

Launching national campaigns to raise awareness about the psychological toll of economic stress, highlighting the importance of mental health alongside economic well-being, and encouraging individuals to seek help when needed.

#### 16. Inclusive Policy Design for Vulnerable Groups

Focusing on the mental health of vulnerable populations, such as women, elderly citizens, and marginalized communities, by designing economic policies that address their unique mental health challenges.

#### 17. Technology-Driven Mental Health Solutions

Exploring innovation in mental health support via apps, online counselling, and AI-driven solutions that can provide accessible and affordable mental health care across India.

#### 18. Workplace Mental Health Programs

Workplace mental health programs support employees' well-being by promoting mental health awareness, offering resources, and reducing stress. Other benefits include improved productivity, reduced absenteeism, better employee retention and positive work culture.

## Conclusion

India is still in the process of fully integrating mental health considerations into its economic reforms. While progress has been made, there remains a significant gap in policies addressing the psychological impact of economic transitions. Cost-effective interventions need further research and implementation to ensure mental health support is accessible and affordable. Government policies and healthcare investments are gradually evolving, but stronger commitments are required to build a mentally resilient workforce. Moving towards **Viksit Bharat@2047**, India must enhance its focus on mental health within economic planning, ensuring sustainable and inclusive growth while addressing the ongoing challenges in policy and infrastructure development.

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# CULTURAL TOURISM IN INDIA WITH SPECIAL REFERENCE TO THE MARKETING STRATEGIES AT THE KUMBH MELA

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## Abstract

The Kumbh Mela, a religious gathering held every 12 years in India, is one of the world's largest spiritual and cultural events. Beyond its religious significance, it holds immense cultural, economic, and marketing value. Millions of people travel to the festival, participating in rituals and celebrations along the banks of sacred rivers. Recognized by UNESCO as an intangible cultural heritage of humanity, it also significantly impacts India's economy, especially tourism, local businesses, and infrastructure. This paper explores how the Kumbh Mela influences cultural practices, promotes economic growth, and serves as a powerful marketing platform. The study draws on research from various articles and reports to showcase the multifaceted nature of this grand event. Key aspects of the research include the economic impact of the festival, the role of brands in marketing campaigns, and the cultural and social influence it exerts on attendees. By analyzing these factors, the paper provides insights into the festival's significance, not just as a religious event but as a critical element of India's cultural and economic landscape.

**Keywords:** KumbhMela, CulturalHeritage, EconomicImpact, Tourism, MarketingCampaigns, PublicAwareness, India

## Introduction

The Kumbh Mela is a grand religious festival held every 12 years in India, attracting millions of pilgrims from across the country and around the world. It is considered one of the largest religious gatherings in the world, where devotees come together to bathe in the sacred waters of holy rivers like the Ganga, Yamuna, Godavari, and Shipra. The significance of the Kumbh Mela goes beyond its spiritual and religious dimensions; it is also a major cultural, economic, and social event that brings people from all walks of life to witness and participate in the ceremonies and festivities.

The origins of the Kumbh Mela date back to ancient Hindu mythology, where it is believed that the gods and demons fought over a pot of nectar, which eventually spilled in four places in India. These four locations—Prayagraj (Allahabad), Haridwar, Nashik, and Ujjain—are the venues where the Kumbh Mela is celebrated, rotating every 12 years to each of these locations. The Kumbh Mela has become a symbol of unity, faith, and spiritual awakening, drawing people from diverse backgrounds, regions, and religions. This diversity of participants is one of the unique aspects of the Mela, making it not only a religious event but also a cultural confluence.

The cultural significance of the Kumbh Mela is immense, as it serves as a celebration of India's rich heritage and ancient traditions. Pilgrims gather to perform rituals, such as taking a holy dip in the river, participating in religious processions, and attending spiritual discourses. These activities reflect the deep connection between the people and their faith. The Kumbh Mela, in its essence, represents the continuity of India's rich cultural traditions, where centuries-old practices are passed down through generations, further cementing its place as one of the most important spiritual and cultural events in the world.

Beyond the religious and cultural aspects, the Kumbh Mela also plays a significant role in the economic landscape of the country. According to various reports, the Mela has a far-reaching economic impact, boosting local economies and generating revenue through tourism, hospitality, retail, and services. The sheer scale of the gathering makes it an economic powerhouse, with millions of visitors requiring transport, food, accommodation, and other services. Local businesses, including shops selling religious paraphernalia, food stalls, and handicrafts, thrive during the festival, benefiting greatly from the influx of people. The government also invests heavily in infrastructure to manage the logistics of such a large-scale event, leading to improvements in transport, sanitation, and public health infrastructure.

In recent years, the Kumbh Mela has also evolved into a marketing and branding opportunity for businesses, both local and national. Brands see this as a chance to connect with a large, diverse audience and promote products and services that align with the values of the event. Companies such as Hindustan Unilever have used the Kumbh Mela to launch social campaigns, such as the Lifebuoy handwashing initiative, which promoted hygiene and sanitation in a meaningful and impactful way.

This paper aims to explore the multifaceted significance of the Kumbh Mela, focusing not only on its cultural and spiritual importance but also on its economic contributions and its role as a marketing platform for brands. By analyzing various reports and research studies, this paper will provide a comprehensive overview of the Kumbh Mela's cultural, economic, and social impact. Additionally, the study will examine how the Mela serves as a model for other large-scale events in India and globally, demonstrating the powerful intersection of culture, economy, and marketing. In doing so, this research will shed light on the broader implications of the Kumbh Mela, making it clear that it is much more than just a religious gathering; it is a dynamic and evolving event with a lasting impact on India's cultural and economic fabric.

### **Cultural Significance of the Kumbh Mela**

The Kumbh Mela, one of the most profound and spiritually significant events in India, is held in four locations: Allahabad (Prayagraj), Haridwar, Nashik, and Ujjain. According to Hindu mythology, the Kumbh Mela commemorates the battle between gods and demons over a pot of nectar, which is said to have spilled in these four cities, making them sacred. Pilgrims from across the globe converge at these sites to take a holy dip in the sacred rivers—Ganga, Yamuna, Godavari, and Shipra—believing that this act of purification will absolve them of sins and bring spiritual salvation. The Mela is a testament to the enduring power of faith and its role in shaping religious and cultural identity in India.

However, as Singh (2018) notes, the Kumbh Mela is more than just a religious ritual; it is a vibrant expression of India's cultural diversity. The event attracts people from all walks of life—different socio-economic statuses, languages, and regions—coming together in a shared spiritual experience. This cross-section of India's population underscores the event's significance as a symbol of unity. The Kumbh Mela embodies the idea of inclusion, where differences are set aside, and people unite under a common belief. The festival's ability to bring together individuals from varied backgrounds is a reflection of India's pluralistic society and its long-standing tradition of coexisting with diversity.

UNESCO (2017) further emphasizes the Kumbh Mela's role in preserving ancient rituals, calling it a significant cultural phenomenon. The Mela is a repository of India's rich spiritual heritage, where ancient practices and traditions are passed down through generations. The gathering is a celebration of India's cultural legacy, allowing people to connect with their roots, observe traditional practices, and observe the importance of preserving such customs. Moreover, it serves as a cultural exchange, where people from different parts of India and the world come together, sharing values, beliefs, and experiences that transcend regional and cultural divides. This convergence of cultures enriches the experience for all participants, making the Mela an event of immense cultural significance.

In addition to its religious and cultural importance, the Kumbh Mela also serves as a platform for social interactions and community building. Pilgrims from all corners of India engage in discussions, share meals, and participate in communal rituals that strengthen bonds within the community. These activities foster a sense of belonging and solidarity among participants, contributing to the creation of temporary yet strong social networks. This communal aspect of the Mela mirrors the broader Indian cultural landscape, where faith and tradition are not isolated from daily life but are woven into the fabric of society, shaping relationships and interactions.

The social unity witnessed during the Kumbh Mela also highlights the deep connection between people and their faith, emphasizing the role of religion as a social glue in Indian society. The Mela is not only a spiritual journey but also a space for people to connect with others who share their values and beliefs. It is a collective experience that reinforces India's cultural and spiritual identity, bringing together individuals from various backgrounds, regions, and communities.

In conclusion, the Kumbh Mela is a multifaceted event that transcends religious and cultural boundaries. While it remains deeply rooted in spiritual practices, its significance extends beyond that, reflecting India's diverse social fabric. As a celebration of tradition, faith, and unity, it provides a powerful reminder of the importance of

community and collective cultural heritage. Through its vast participation and the interactions it fosters, the Kumbh Mela serves as a model of cultural and social harmony that continues to inspire both India and the world.

### **Economic Impact of the Kumbh Mela**

The Kumbh Mela not only holds immense cultural and spiritual significance but also has a profound economic impact on the host cities and the broader nation. As Chaturvedi (2019) emphasizes, the event generates substantial economic activity, particularly in sectors such as tourism, hospitality, transportation, and retail. The festival attracts millions of visitors, both domestic and international, who flock to the Mela locations. This influx of people results in a surge in demand for accommodations, transport services, food, and local goods. Hotels, guesthouses, and restaurants experience unprecedented business activity, with many establishments fully booked weeks or even months before the Mela begins.

The Confederation of Indian Industry (2019) highlights that the Kumbh Mela contributes billions of rupees to the local economy through various channels. In Prayagraj (Allahabad), for example, businesses related to the Mela experience a boom during the event, as visitors purchase religious items, souvenirs, and food. The retail sector sees significant growth, with vendors and small businesses benefiting from the massive crowds. In addition to tourism-related industries, the Kumbh Mela also boosts local agricultural and handicraft sectors, as farmers and artisans showcase their products to the visitors. The increase in demand for food products, clothing, and religious items provides local artisans with a platform to sell their wares to a wider audience.

Furthermore, the Mela stimulates infrastructure development in the host cities. The government makes substantial investments in enhancing transportation networks, roads, sanitation systems, and healthcare facilities to accommodate the millions of visitors. These infrastructural improvements not only cater to the short-term needs of the Mela but also provide long-term benefits to the region. After the event, the enhanced infrastructure can serve as a catalyst for further economic development, drawing tourists and business investments long after the Mela has concluded.

The economic activity generated during the Kumbh Mela is not confined to the immediate vicinity of the festival. It has a ripple effect, benefiting industries across the nation. For instance, demand for transportation services increases as people travel from different parts of India to the Mela sites. Railways, airlines, and bus services experience a rise in passenger numbers. Additionally, the Mela creates temporary job opportunities in sectors such as security, sanitation, catering, and event management. Local residents and migrant workers benefit from these short-term jobs, further stimulating the regional economy.

The Maha Kumbh Mela scheduled for 2025 is expected to bring in even more visitors and generate a larger economic impact. With the event anticipated to attract millions of people, the economic boost to sectors such as tourism, retail, hospitality, and transportation is expected to be more significant than ever. The rise in disposable income, the growth of local businesses, and the creation of temporary job opportunities will be crucial factors in sustaining economic growth in the host cities.

### **Marketing Opportunities at the Kumbh Mela**

The Kumbh Mela has increasingly become an attractive marketing platform for brands looking to reach a massive and diverse audience. With millions of visitors, including pilgrims, tourists, and media personnel, the Mela offers an unparalleled opportunity for brands to showcase their products and services. According to Sharma and Gupta (2020), the event has evolved into a marketing hub, with companies taking advantage of its vast audience to launch new products, raise brand awareness, and promote social causes.

One of the most notable examples of a successful marketing campaign at the Kumbh Mela was Hindustan Unilever's Lifebuoy campaign in 2013. The campaign promoted hand hygiene by setting up handwashing stations and distributing free samples of Lifebuoy soap to pilgrims. This initiative not only helped raise awareness about hygiene but also positioned Lifebuoy as a brand that cares about public health. The campaign was particularly impactful in reaching rural and semi-urban populations, who may not have had easy access to hygiene education and products. By linking the brand to a social cause, Lifebuoy gained the trust and loyalty of consumers, who saw the brand as a promoter of public welfare.

With the Maha Kumbh Mela scheduled for 2025, marketing experts predict that brands will continue to leverage the festival's massive audience to engage with both urban and rural populations. The sheer scale of the event presents businesses with the unique opportunity to connect with millions of potential customers on a personal level. Companies are expected to use innovative marketing strategies, such as interactive campaigns, product sampling, and cultural tie-ins, to engage the diverse audience at the Mela.

Brands that participate in the Kumbh Mela often focus on creating campaigns that resonate with the religious and cultural themes of the event. For instance, companies in sectors like food and beverages, apparel, and health products often create campaigns that align with the values of spirituality, purity, and wellness. This helps in establishing a deeper emotional connection with consumers, who may view the brand as not just a product but as a partner in their spiritual journey.

Digital tools such as social media and mobile apps are also becoming an integral part of marketing strategies during the Kumbh Mela. Brands use these platforms to enhance their visibility, interact with customers, and track engagement. Social media platforms like Instagram, Twitter, and Facebook are flooded with images, videos, and posts from the Mela, amplifying the reach of marketing campaigns. Brands can use hashtags, influencer collaborations, and live streaming to engage with online audiences, further expanding their reach beyond the physical confines of the festival.

The Kumbh Mela's cultural and spiritual context offers brands the opportunity to showcase their social responsibility initiatives, which can strengthen their relationship with consumers. By participating in public welfare campaigns, brands not only promote their products but also demonstrate their commitment to social causes, building brand loyalty and consumer trust.

### **Social and Health Impact of the Kumbh Mela**

The Kumbh Mela serves as a powerful platform for spreading awareness about social and health issues, thanks to its vast audience and media coverage. Given the large number of pilgrims and the festival's high visibility, it provides a unique opportunity for government agencies, NGOs, and businesses to engage in social outreach programs. One of the most prominent examples of this is Hindustan Unilever's Lifebuoy handwashing campaign, which used the Mela as a stage to educate people about the importance of hygiene in preventing disease.

The Kumbh Mela also plays a significant role in promoting health initiatives, especially in rural and semi-urban areas. With millions of pilgrims attending the event, health organizations set up temporary clinics and medical camps to provide basic healthcare services, such as first aid, vaccinations, and health check-ups. These health services are crucial in ensuring the safety and well-being of the pilgrims, who often travel long distances to attend the Mela. The visibility of these healthcare campaigns helps spread awareness about health issues and encourages people to adopt healthier lifestyles.

Additionally, the Kumbh Mela has made strides in addressing environmental concerns. The growing number of visitors has prompted organizers to introduce eco-friendly measures such as waste management systems, water conservation projects, and campaigns to reduce plastic usage. The government and event organizers have implemented initiatives to ensure that the Mela's impact on the environment is minimized, such as using biodegradable materials, promoting reusable items, and setting up proper waste disposal systems.

The social impact of the Kumbh Mela extends beyond the event itself, as it has become a model for other large-scale cultural and religious gatherings. By promoting positive social change, the Kumbh Mela demonstrates how mass events can be used to address critical issues such as health, sanitation, and environmental sustainability. It has also fostered a sense of community and belonging among participants, reinforcing the idea that collective action can lead to positive societal change.

### **Technological and Digital Influence**

In recent years, the Kumbh Mela has embraced technological innovations to enhance the experience for both pilgrims and organizers. Real-time updates, mobile apps, and online platforms have become integral tools in managing the massive crowd and providing services to the visitors. Pilgrims can now access maps, event schedules, weather updates, and other essential information through their smartphones, making it easier to navigate the Mela and plan their visit.

Social media platforms like Instagram, Twitter, and Facebook have also played a crucial role in amplifying the cultural and social impact of the Kumbh Mela. With millions of photos, videos, and posts shared online, the Mela's reach extends far beyond the physical event, creating a global conversation about its significance. The use of hashtags, live-streaming, and influencer marketing has allowed brands to engage with a wider audience and promote their campaigns in real-time.

Furthermore, technology has helped organizers manage logistics more effectively. With real-time data on crowd movement, security, and health-related issues, the event is becoming more efficient and accessible. Innovations such as facial recognition technology for crowd management, online ticketing systems, and mobile apps for pilgrims are transforming the Kumbh Mela into a modern, digitalized event.

In conclusion, the Kumbh Mela is not only a religious and cultural event but also a powerful force driving economic, social, and technological changes. Its significance extends beyond spirituality, offering opportunities for economic growth, social awareness, and technological advancements that benefit both the local community and the nation at large. As the 2025 Maha Kumbh Mela approaches, its impact is expected to be even more profound, cementing its place as one of the world's largest and most influential gatherings.

## Conclusion

The Kumbh Mela, beyond being a deeply rooted religious and spiritual event, stands as a unique phenomenon that bridges culture, economy, and social dynamics. This paper explored the Mela's immense cultural, economic, and marketing impact, providing insights into how an ancient tradition has evolved into a global spectacle with far-reaching consequences for India and the world.

Culturally, the Kumbh Mela continues to be a cornerstone of India's religious heritage. The event draws millions of pilgrims and spiritual seekers who come to immerse themselves in the sacred waters, reflecting the deep religious devotion of the Indian populace. The rituals performed, the mass gatherings, and the communal spirit that prevails at the Mela underscore the enduring connection between spirituality and everyday life for millions. Furthermore, the Kumbh Mela serves as a platform for various cultural expressions, such as folk performances, religious discourses, and processions, creating a unique blend of ancient traditions and modern celebrations. The diversity of the participants—coming from various regions, religions, and backgrounds—reflects India's pluralistic society and adds to the richness of the event's cultural tapestry.

Economically, the Kumbh Mela acts as a catalyst for local and national economies. The massive influx of people creates a temporary economic boom in the regions hosting the event. Infrastructure development and improvements in transport and sanitation, although temporary, leave a lasting legacy that benefits the local population long after the Mela ends. Additionally, small and medium businesses, especially those in hospitality, retail, and services, experience a surge in demand. The food vendors, local artisans, and religious paraphernalia sellers see substantial growth during the event, illustrating how the Kumbh Mela contributes significantly to the livelihoods of many. The festival also opens avenues for large-scale investments in infrastructure and services, including healthcare, sanitation, and crowd management, which are vital for the safe and smooth conduct of the Mela.

In recent years, the Kumbh Mela has also emerged as a powerful marketing platform for businesses. With millions of people congregating in one location, brands across sectors see this as an opportunity to engage with a vast and diverse audience. From FMCG companies to tech giants, brands have capitalized on the Mela to launch targeted campaigns that resonate with the religious and cultural sentiments of the participants. The case study of Hindustan Unilever's Lifebuoy handwashing campaign is a prime example of how brands can leverage such an event to promote their products while simultaneously contributing to public health initiatives. The Kumbh Mela, thus, presents a compelling case of how large-scale events can be used strategically for both brand awareness and social good.

While the Kumbh Mela's primary focus remains spiritual, its expanding cultural, economic, and commercial dimensions highlight the ways in which traditional events are adapting to the modern world. This evolution is not just a reflection of changing consumer behavior but also an indication of how large events can have multifaceted impacts on society. The Mela's success in integrating these various aspects—culture, economy, and marketing—offers valuable lessons for other global events, demonstrating how they can balance tradition with innovation. For



instance, the Kumbh Mela showcases the potential for events to serve as platforms for both cultural preservation and modern engagement.

Looking to the future, the Kumbh Mela will likely continue to evolve in response to global trends and local needs. The increasing involvement of technology, social media, and brand sponsorships will shape how future generations experience the Mela. However, at its heart, the Kumbh Mela will remain an event of immense spiritual significance, a celebration of India's cultural heritage, and a beacon of the power of collective faith. As more people from around the world discover the Mela's significance, its role as a global event will undoubtedly grow, strengthening its cultural and economic importance.

In conclusion, the Kumbh Mela is not just a religious gathering; it is a multifaceted event that impacts culture, economy, and marketing in profound ways. Its continued success and evolution demonstrate the dynamic nature of India's rich cultural traditions and their ability to adapt to the changing times, making the Kumbh Mela a remarkable example of how tradition, spirituality, and modernity can coexist and thrive together. This paper has aimed to capture the essence of this remarkable event, exploring its lasting legacy and significance in shaping India's cultural and economic future.

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## YUVA VIKSHIT, BHARAT VIKSIT: EMPOWERING YOUTH FOR NATION DEVELOPMENT

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### Abstract:

On November 12, 2023, India's Prime Minister, Shri Narendra Modi, launched "Viksit Bharat@2047: Voice of Youth," a key milestone in achieving this national goal. Viksit Bharat@2047 seeks to transform India into a developed nation by 2047, which coincides with the country's 100th anniversary of independence. This vision aims to foster economic progress, improve society, preserve the environment, and promote good governance. Viksit Bharat is built around four fundamental pillars: Youth, Poor, Women, and Farmer. India has largest young working force. If we can utilize in proper way India can convert in to demographic dividend advantages. Here researcher is focusing the youth vikshit mrole of youth in Vikisit Bharat. Under NEP, India is able to provide skill-based vocationalization to our youth and train them for industrial requirements in the future. India will be a hub of human resources suppliers. Digitization, skill development programs, and institutional support will lead youth to be job creators instead of job takers. Dynamic, innovative, and ambitious youth will be transforming India in every sector of the economy. No doubt, the path has many hurdles, but unitary efforts of government and youth will result in positive changes. Research has found that our future is bright and prosperous; in 2047, Bharat will become Vikshit and Vishav Guru in every sector.

**Key Words:** Vikshit Bharat, Innovation, Technical skill, Institutional Support, Potential.

**Introduction:** Most Indians desire to see their country become a developed nation. To transform India from a developing to a developed country, we must address both macroeconomic and microeconomic issues. Young people, in particular, should play an important role in both economic and social progress.

The visionary idea of "Viksit Yuva, Viksit Bharat" has shifted the nation's focus to maximizing the potential of its young professionals. This paper investigates the critical role that the youth play in creating India's future, examining how their innovative thinking, strength, and determination would help the country proceed toward to a prosperous and bright future.

### Objectives of the Study:

- 1) To analyze the important of Young professionals
- 2) To discuss the advantages of demographic dividend.
- 3) To analyze the challenges and opportunities of young professional
- 4) To suggest some remedies for the same

### Research Methodology:

The study is based on secondary data. Sources of data are Government website, report, books and periodicals. However research is tried to collect authentic data through authentic sources.

### Importance of young Professional :

"A skilled youth workforce will benefit every industry and smart young professionals will contribute for better development of Nation." Harnessing the Potential of Young Professionals, including Company Secretaries, is critical to attaining the Viksit Bharat goal, which calls for India to become a developed country by 2047. Young entrepreneurs play an important role in the corporate governance system, assuring organizational compliance and ethical standards. Their involvement goes beyond business boardrooms to other aspects of national development, including:

1. **Corporate Governance:** Young entrepreneurs and other professionals are guardians of better corporate governance principles, ensuring transparency, accountability, and adherence to regulatory norms within businesses. Their role in upholding ethical standards fosters trust and investor confidence, vital for sustainable economic growth of the Nation.
2. **Legal and Regulatory Compliance:** Professionals are well-versed in legal and regulatory frameworks governing businesses. By ensuring compliance with laws and regulations, they contribute to a conducive business environment, which is essential for attracting investments and fostering entrepreneurship.
3. **Strategic consultants:** Professionals frequently act as strategic consultants to boards and management teams. Their knowledge of corporate law, finance, and governance allows them to provide useful insights and guidance, supporting informed decision-making that promotes organizational growth and stability.
4. **Promoting Sustainable Practices:** Viksit Bharat's vision prioritizes sustainable development practices. Young owner can advocate for and implement sustainable business practices inside firms that address environmental, social, and governance (ESG) concerns. This promotes responsible corporate citizenship and incorporates to India's commitment to sustainability.
5. **Encouraging Entrepreneurship:** In the framework of Viksit Bharat, promoting entrepreneurship is critical to economic development. Young professionals may help ambitious entrepreneurs by giving advice on regulatory requirements, business structuring, and compliance needs, fostering a favorable environment for start-ups and small enterprises to grow.
6. **Capacity Building and Skill Development:** Young professionals can help improve the employability of India's youth. By providing knowledge and expertise in corporate governance, legal compliance, and business ethics, they enable the next generation of professionals to effectively contribute to the nation's development goals.

The involvement of young professionals is essential in helping India achieve its objective of being a developed country by 2047 under the Viksit Bharat project. They contribute significantly to molding India's economic and social landscape for a prosperous future by supporting good governance principles, facilitating entrepreneurship, promoting sustainability, and fostering skill development.

### **Empowering youth for Nation building:**

Youth are the most dynamic and industrious segment of society. The number and dynamism of a country's youth population determines its capacity and potential for growth. It is considered that developing countries with a big youth population might see significant growth if they invest in young people's education and health while also protecting and ensuring their rights. Without a doubt, today's youth generations will be the innovators, builders, and leaders of the future. However, the majority of India's youth population power is underutilized for a variety of reasons, including unemployment, a lack of skill and quality education, and gender inequity. If the concerns issues above can be handled by expert advice and businesses can run the most effective way to use CSR financial fund.

The Viksit Bharat concept places a strong emphasis on empowering young for nation- building. Young professionals play an important role in this endeavor, acting as catalysts for change and innovation across all sectors. They bring new ideas and solutions to the nation's concerns and seize growth chances through their vitality, creativity, and passion.

Viksit Bharat is launching initiatives to help young professionals realize their full potential through education, skill development, and mentorship programs. By providing youngsters with the appropriate knowledge, resources, and opportunities, these initiatives enable them to actively participate in nation-building activities such as entrepreneurship, community development projects, and leadership roles in the public and private sectors. By cultivating a culture of cooperation, inclusiveness, and excellence, empowered young professionals are driving good change and setting the groundwork for a successful and resilient India in the years ahead.

### **Demographic Dividend Advantage:**

As per definition of the United Nations Population Fund (UNFPA), Demographic dividend is "the economic

growth potential that can result from shifts in a population's age structure, mainly when the share of the working-age population (15 to 64) is larger than the non-working-age share of the population (14 and younger, and 65 and older)".

India entered the demographic dividend opportunity window in 2005-06 and will remain there till 2055-56. Around 68% of the population falls between the ages of 15 and 64, and 26% falls within the 10-24 age group, making India one of the youngest countries globally. It is notable that India has a relatively young population with a median age of 28.4 years. Also, India will have 1.04B working age persons by 2030. Correspondingly, India's dependency ratio would be the lowest in its history by 2030 at 31.2%. With about 24.3% of the incremental global workforce over the next decade India would remain the largest provider of human resources in the world.

### How is India reaping its demographic dividend?

Indian Government has introduced many schemes for enhancement of quality of life as well as professional development of youth population. Following are some of the schemes help young dynamics and talented people can convert their dream into reality and contribute in nation's development.

**Youth Centric Policy:** Over 50% of India's population is under 25 years old, with over 65% under 35. India's government has implemented various schemes to meet the needs and aspirations of its youth, including the National Youth Policy-2014, Pradhan Mantri Kaushal Vikas Yojana, National Skill Development Corporation.

**YUVA:** Prime Minister's Scheme for Mentoring Young Authors, and Rashtriya Yuva Sashaktikaran Karykram Scheme.

**Investment in Education:** India has a literacy rate of 74.04%, lower than the global average of 86.3%. The government has implemented several schemes to address low literacy, including Sarva Shiksha Abhiyan (SSA), Right to Education (RTE) Act, Rashtriya Madhyamik Shiksha Abhiyan, Rashtriya Uchhattar Shiksha Abhiyan (RUSA), Mid-Day Meal Scheme, Beti Bachao Beti Padhao, and PM SHRI Schools.

- a) **Skill and up skill people:** The government has implemented schemes and initiatives such as the Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Rozgar Mela, Pradhan Mantri Kaushal Kendras (PMKK), Udaan, Apprenticeship Training under the Apprentices Act of 1961, Vocational Training Programme for Women, Skill Loan Scheme, Indian Institute of Skills (IISs), and SANKALP. Ensuring
- b) **Healthy Population:** A healthy population and enhanced healthcare facilities ensure greater use of human resources while also reducing the load on the healthcare system. The government has built world-class hospitals such as AIIMS and implemented schemes such as Aayushman Bharat Yojana, Digital Health Mission, Mission Indradhanush (MI), Janani Suraksha Yojana, Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA), and Mission Parivar Vikas to improve healthcare facilities.
- c) **Building Infrastructure:** Infrastructure, which includes components such as roads, ports, airports, bridges, railroads, water supply, power, and telecommunications, serves as the foundation for economic expansion, encompassing physical and structural systems critical for demographic development.
- d) **The Capital Expenditure:** The capital expenditure outlay for FY 2024-25 is being increased by 11.1 per cent to Rs. 11,11,111 crore. Constant increased expenditure have positive impact in economy.

The government has undertaken various programs to improve infrastructure, including the Digital India program, PM Gati Shakti Scheme, Bharatmala Scheme, PM SHRI, and Har Ghar Nal Yojana.

### Youth-led social initiatives for community development:

Young professionals of the country should create a platform and drive various social initiatives and provide proper advice to the corporates and the regulators for bringing more effective employment strategy of youth and utilize the youth work force by 100% by targeting secondary and tertiary sectors.

Under the Viksit Bharat framework, youth-led social initiatives receive recognition, funding, and

institutional support to scale their impact and reach. By harnessing the energy, creativity, and passion of the youth, these initiatives bring about tangible improvements in the lives of communities across India. Whether it's through grassroots activism, digital campaigns, or innovative projects, youth-led social initiatives exemplify the spirit of volunteerism and civic engagement, driving positive change and laying the groundwork for a more equitable and sustainable future for all.

### **Challenges and opportunities for young professionals:**

Some of the challenges in the current market are faced by young professionals includes:

1. **Skill Mismatch:** Young professionals sometimes experience obstacles due to a mismatch between their talents and job market requirements. The job market for young professionals should be expanded in such a way that they can demonstrate their abilities and new ideas, ultimately leading to the realization of Viksit Bharat's goal.
2. **Limited access to resources:** including finance, technology, and mentorship, hinders young professionals' entrepreneurial endeavors. The government's investment should focus on research and development in professional domains such as CA, CS, and CMAs, in accordance with investments in other R&D industries.
3. **Balancing work and personal commitments:** It can be challenging for young professionals in today's fast-paced world. There are numerous examples of young professionals being placed in small work environments with inadequate resources due to personal life responsibilities. However, this can be addressed by a variety of trainings, counseling, and other Opportunities will always be right in front of us; the one who seizes them will be able to reach the goal.
4. **Opportunities for professional development are accessible for young professionals.**
  - Encouraging entrepreneurship among young professionals would help Viksit Bharat achieve its intended objectives of innovation, job creation, and economic expansion.
  - Skill development initiatives provide young professionals with the appropriate training and competencies.
  - Driven to excel in their chosen field.
  - Viksit Bharat encourages global participation by offering opportunities for young professionals to interact, network, and learn across borders.
  - Career Mobility: Flexible career alternatives enable young workers to pursue a wide range of opportunities.

Young professionals have numerous challenges and opportunities under the Viksit Bharat vision, which aims to transform India into a developed nation by 2047. While the youth represent a demographic dividend and a large reservoir of talent, they face a number of challenges on their route to success. One key problem is to close the gap between education and employability, ensuring that young professionals have the skills and competencies necessary by a fast changing job market. Furthermore, problems such as limited access to excellent education, a scarcity of work prospects, and socioeconomic inequities can stymie the advancement of young professionals, particularly those from marginalized backgrounds.

### **Remedies for Youth Development:**

**“Youth is the canvas upon which the masterpiece of tomorrow is painted.”**

Despite these limitations, there are various chances for young professionals to succeed and make a meaningful contribution to nation-building initiatives. Viksit Bharat stresses promoting entrepreneurship, innovation, and skill development to empower young and utilize their creativity for positive change. Initiatives geared at encouraging digital literacy, providing vocational training, and establishing hospitable settings for start-ups and small enterprises provide opportunities for young professionals to follow their ambitions while also driving economic development. In addition, the Viksit Bharat framework's emphasis on inclusivity and diversity guarantees that

opportunities are available to all, regardless of background or circumstances. Young professionals may play an important role in fulfilling the goal of a wealthy and developed India by addressing obstacles and seizing opportunities.

Entrepreneurship and innovation are the two engines driving economic growth under the Viksit Bharat goal. Recognizing the transformative power of these aspects, Viksit Bharat places a high priority on creating an environment conducive to entrepreneurial initiatives and innovative endeavors. Viksit Bharat hopes to unleash a surge of creativity and vitality that will fuel economic progress and prosperity by encouraging people to take chances, explore their ideas, and start new businesses.

Viksit Bharat aims to create a new generation of entrepreneurs armed with the tools, resources, and support required to succeed in today's competitive business landscape through initiatives such as start-up incubation, access to funding, and skill development. Furthermore, Viksit Bharat aspires to accelerate technical advancement, increase productivity, and boost job creation by encouraging cross-sector innovation and incentivizing R&D. Finally, Viksit Bharat sees a future in which India emerges as a global hub of creativity, ingenuity, and economic vitality, resulting in long-term progress and prosperity for all of its citizens of Viksit Bharat, ultimately contributing to the nation's journey towards prosperity and progress.

### **Technology and digital literacy is essential tools for empowerment:**

According to the Viksit Bharat vision, technology and digital literacy are essential tools for empowerment, with the goal of boosting India to become a developed nation by 2047. In today's digital era, access to technology and competency in digital skills are essential for socioeconomic development and personal improvement. Viksit Bharat highlights the necessity of closing the digital gap and ensuring that all individuals, particularly young people and marginalized communities, have fair access to technology and the resources required for maximizing its advantages.

Viksit Bharat's technology and digital literacy efforts aim to empower individuals to fully participate in the digital economy, gain access to information and services, and leverage technology's revolutionary potential for personal and professional growth. These programs include a variety of activities such as offering digital skills training, improving internet connectivity and access to digital devices, and encouraging innovation in technology-based solutions to social concerns. By providing individuals with the information and resources they need to navigate the digital world, Viksit Bharat envisions a future in which technology acts as a catalyst for inclusive progress, empowerment, and opportunity for all segments of society.

### **Conclusion:**

"The energy of youth is the driving force behind national progress." The role of young professionals in building a vibrant India under the Viksit Bharat vision by 2047 is critical. Young professionals, as torchbearers of innovation, creativity, and ambition, have the key to realizing India's full potential and propelling the country forward. They can effect radical change in a variety of sectors, including technology and business, governance, and social development, thanks to their dynamism, entrepreneurial Skill and commitment to excellence. As we work toward the Viksit Bharat aim, it is critical to identify and empower young professionals, providing them with the resources, opportunities, and support they need to succeed. Using their excitement and potential, we can construct a future in which India becomes a global light of growth, innovation, and wealth. Together, young professionals can design a better tomorrow for India, realizing the ambitions of Viksit Bharat and assuring a prosperous future for generations to come. Our youth has tremendous potential, if their sources of energy will be diverted in constructive way in near future India will be a leader of world economy and vishv Guru in coming decades.

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## JAINISM, MINIMALISM AND SUSTAINABLE PERSPECTIVES

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### **Abstract**

The current paper looks into the concept of minimalism embedded in Jain philosophy and practises. When India is embarking on the centenary of independence, it's time to understand how religious ethos enabled and will facilitate sustainable development for the country. Minimalism has been traditionally looked from religious and economic points of views. The study explores its connection with sustainability.

**Keywords:** Jainism, Minimalism, Sustainability

### **Introduction**

Globalisation has resulted into expansion of materialism and mass consumption all over the world. Overconsumption impacts environment and natural resources in negative manner. Following Corona Pandemic there has been reflection over minimalism. For India it is like reinforcing the traditional and inherent values of its own culture. Specifically, Jainism always emphasised on minimal lifestyle.

### **Rational of the study**

India has historical tradition of minimalism. Following Covid 19 Pandemic minimalism has been talked about.<sup>1</sup> People started looking at the minimalism as valid perspective for living. However, the perspective behind minimalism has been modified. Economic and ecological perspectives are getting interwoven. It's about making the lifestyle choices. This paper examines the Jain perspective of minimalism in the context of sustainability.

### **Objectives**

The objectives of the present study are as follows.

- Exploring the concept of minimalism from the perspective of Jainism.
- Understanding the religious ethos in the context of sustainable development of Bharat.
- Analysing minimalism in the light of sustainability.

### **Research Methodology**

The current study takes up holistic approach towards the national development. The interconnection between tradition and contemporary world has been interpreted. The approach has been largely historical and qualitative. Many of the beliefs and practices have been examined. It takes up the case study of Jainism with special reference to minimalism and sustainability.

### **Scope & Limitations**

The present study focuses on the Jain principles and life style. Jainism has been ancient religion of India. However, some of the observations can be extended and are valid for the Indian context. Jainism holds potential solutions for today's society. Minimalism propounded by Jainism has been explored from the economic, ecological and sustainable perspectives in this study.

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<sup>1</sup>Aastha Rathour and Gunita Mankame, *Decluttering the Future: An Analysis of Indian Minimalism*, International Journal of Policy Sciences and Law (IJPSL), Volume 1, Issue 3, p.1745.



## Main part of the research

Jainism is a living and dynamic faith in India.<sup>2</sup> It commands respect to all living beings of the world. It revolves around extreme asceticism. Jainism like most religions focus on the emotional wellbeing of an individual. Minimalism is one of the aspects that come under the spiritual orbit of Jainism. Jainism is rooted in minimalism. Minimalism implied in Jainism is all about living simply so that others may simply live. Live and let live has been the motto of Jainism.

### Non-violence

*Ahimsā* or non-violence traditionally stands for not killing living beings. It has been central idea in Jainism. Nonviolence in the Jain context is not restricted to the killing or harming of living beings. It takes up much broader concept of minimum utilisation of resources. It stands for minimum disturbance to the living beings around us. It influences mental attitude of the person. Conservation of the resources has been the crucial need of the hour.

Jain perspective is not restricted to human beings. It encompasses the forces and resources of nature. Water, plant, soil, fire, wind, insects, birds and animals are living entities in the Jain cosmos. Hence, one has to be very cautious while using any of them. Lesser harm to the environment is expected. To illustrate water should not be wasted. Jain perspective is about the preservation and encouragement of biodiversity and wellbeing of all beings.

### Non-possessiveness

Jainism emphasises on five basic principles. Apart from *Ahimsā*, *Aparigraha* along with other four principles are considered important. *Aparigraha* stands for non-possessiveness and non-attachment. One should be satisfied with the existing resources. Too much greed leads to unhappiness, destruction and wastage of resources. It also implies for controlling and limiting the desires. It's about reducing dependence on the materialistic possessions.

Jain perspective is not restricted to human beings. It also includes natural resources. Non possessiveness is also about letting go the ownership of the resources. One should have shared approach towards the resources. This can be useful perspective for Viksit Bharat's journey. It can help to reduce the ecological disturbance and will enable to solve the economic problems of the contemporary period. Minimalism has close connection with religious renunciation.<sup>3</sup>

### Consumerism and resources

The excessive globalisation and liberalisation have resulted into the expansion of consumerism. Material consumption has been largely Eco destructive. The world is countering physical, technological, and increasingly moral and intellectual challenges over the past several centuries. It has made the situation gruesome. In the face of expanding consumerism, one has to work out the strategy to strike balance between usage, development, conservation and wastage of resources.

The perception and the stand of Jainism has been of reducing, sharing and reusing the resources. Minimalist approach is useful for reducing ecological footprint. One has to stop excessive consumption. Vows and self-restrained behaviour have been hallmarks of Jain culture. In recent times Jain asceticism has been seen as earth honouring asceticism.

### Sustainability

In recent times there has been a lot of discussion about sustainability. There has been a strong demand and emphasis on the green skills. Green skills stand for eco-friendly values, activities and professions. Indian culture has inherent many cultural practices and ethos which have been perfectly sustainable. Jainism's focus has been on

<sup>2</sup> Paul Dundas, *The Jains*, Routledge, 2002, p.2.

<sup>3</sup> Britt Halvorson, , *Garbage, Minimalism and religion*, in Encyclopaedia of consumption and Waste: the social science of garbage, Zimring Karl A., 2012, p.212.

less is more or small is beautiful. We have works like published his book 'Small is beautiful' by E F Schumacher that brought a path-breaking reform in the field of dehumanized economics.<sup>4</sup>

Religious practice of the Jain values in day-to-day life can effectively build a sustainable world and lifestyle. This can bring certainly positive social change. It's about changing thought paradigm and personal lifestyle patterns. Minimalism is compatible with sustainable goals. Eco conscious relevance of minimalism is expressed and accepted.<sup>5</sup>

## Conclusion

This paper has been concept paper. Creative envisioning and articulation of the religious ethos in the contemporary context needs to be done. Minimalism stands for paradigm shift in the lifestyle. It stands for reduction of material belongings and simpler living. Resources conservation is the need of the hour. In this context minimalism is necessary and timely. It is about handling unending wants of life. It facilitates more space and time. Through minimalist approach, Jainism offers the insight and guidance for the sustainable solutions for Viksit Bharat.

## Suggestions and Recommendations

Minimalism of Jain tradition can be help to create sustainable model. This holds implications not only for individual conduct but for the social wellbeing and national welfare. The world is searching for permanent solutions of the ongoing issues. Eco-conscious and bio friendly lifestyle is the outcome of the minimalist approach. A minimalist lifestyle stands for change in perception and can have a positive influence on the environment. Viksit Bharat can become leader for the rest of the world for sustainable lifestyle.

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## FINANCIAL INCLUSION AND MICRO FINANCE : A PATHWAY TO ECONOMIC EMPOWERMENT

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### Abstract

National and international study show that in a developing country mass communities are not using financial services. For the economic development of the country, it is necessary to include small investors and the marginalized sections of the society.

The expansion of services like entrepreneurship, savings, capital, investment etc. are necessary for weaker sections of the society and financially excluded. Micro finance and financial inclusion are very much correlated with economic growth. Also, there is a certain relationship between low income and poverty. In the context of India, it can be said that a large community is deprived of financial services and it is necessary to provide them with an understanding of the use of such services for economic development. This research study examines the importance of financial inclusion and micro finance in the context of economic development. This paper tries to seek information related to how micro Finance Promote Financial Inclusion for countries development.

**Key Word:** Micro Finance, Financial Inclusion, Economic Development

### Introduction

A large section of the low-income group in India uses financial services to a very low extent. Most of these people depend on money lenders for their financial needs. It is a fact that the weaker sections of the society need money for non-productive consumption and to meet medical needs. Despite the expansion of banking services with the economic development of the country, the backward sections of the society, especially in the rural areas, have been deprived of these services. Small artisans, small industrialists have not been able to benefit from these services. Therefore, it is a priority of the Government of India to cover the majority of the population under organized financial services. Housewives, small investors and people with low incomes need to be covered in them. Financial inclusion means that everyone has access to affordable and responsible financial services, which include savings, credit, insurance and payment services. Financial Inclusion helps people and businesses to prosper financially and also helps them meet unexpected expenses. This is for those who have been deprived of financial services. It helps in improving their standard of living by providing them with the benefit of services

### Objectives of the Study

1. To know the Role of Micro Finance in Promoting Financial Inclusion
2. To get Strategic for Economic Empowerment through Micro Finance and Financial Inclusion

### Methodology

Secondary data has been used for this research paper. Secondary data collected from websites, articles, journals etc.

### Review of Literature

1. Nickson (2025) studies on "Conceptualizing digital finance as a precursor for financial inclusion and financial service usage in Uganda". This study was conducted in the context of Uganda in which samples of 290 housewives were taken from 15 districts. In which the role of mobile banking and banking in the context of digital finance was examined, in addition, the digital financial structure was presented in the context of the consumption of financial services. The results of this study show that mobile banking and agent banking are important factors for financial inclusion. This study emphasizes on the government to provide affordable financial services to the people.

2. Azmeh (2024) study on “Exploring the dual relationship between fintech and financial inclusion in developing countries and their impact on economic growth: Supplement or substitute?”. This study examines the combined impact of financial technology and financial inclusion on economic growth. This study analyzes statistical data based on information obtained from 108 countries of the lower middle class and upper middle class, in which financial transactions with the use of mobile and technology and the use of traditional financial services were examined in different ways, which found that financial transactions with the use of technology had a positive impact on economic growth. According to the findings of this study, it is very necessary to strengthen the traditional banking structure and integrate modern technology to accelerate economic growth.
3. Chen, Z. (2023) study on “ Can digitalization foster sustainable financial inclusion? opportunities for both banks and vulnerable groups. *Sustainability*”. This paper examines the sustainability of digital banking and financial inclusion. It also examines the impact of digitalization on bank profitability and emphasizes the elaboration of two important principles: increasing profitability and reducing risk. The findings of this study suggest that digitization of banks has a positive impact on financial inclusion and provides theoretical and empirical support for realizing sustainable financial inclusion. Due to digitalization, banks can realize profit enhancement and risk sharing by providing sustainable financial services to their customers.

### **Role of Micro Finance in Promoting Financial Inclusion**

Micro finance plays a vital role in promoting financial inclusion by providing financial services to low-income individuals, households, and small businesses that lack access to traditional banking services. Here are some ways micro finance promotes financial inclusion:

#### **Access to Credit**

- Loans: Micro finance institutions (MFIs) offer small loans to individuals and businesses, enabling them to invest in income-generating activities, such as agriculture, trade, or small enterprises.
- Credit scoring: MFIs use alternative credit scoring methods to assess creditworthiness, allowing those without a traditional credit history to access credit.

#### **Savings and Deposit Services**

- Savings accounts: MFIs offer savings accounts, enabling individuals to save securely and earn interest.
- Deposit services: MFIs provide deposit services, such as fixed deposits and recurring deposits, helping individuals build savings and manage risk.

#### **Insurance and Risk Management**

- Micro insurance: MFIs offer micro insurance products, such as life insurance, health insurance, and crop insurance, to help individuals manage risk.
- Risk management: MFIs provide training and education on risk management, enabling individuals to better manage financial risks.

#### **Financial Education and Literacy**

- Financial education: MFIs provide financial education and training, empowering individuals to make informed financial decisions.
- Financial literacy: MFIs promote financial literacy, enabling individuals to understand basic financial concepts and manage their finances effectively.

#### **Economic Empowerment**

- Income generation: Micro finance helps individuals generate income, improving their economic well-being.

- Employment creation: Micro finance supports entrepreneurship, leading to job creation and economic growth.

#### Social Impact

- Poverty reduction: Micro finance helps reduce poverty by providing access to financial services, enabling individuals to improve their economic well-being.
- Social empowerment: Micro finance empowers individuals, particularly women, by providing them with financial independence and decision-making authority.

In summary, micro finance plays a critical role in promoting financial inclusion by providing access to credit, savings, insurance, and financial education, ultimately contributing to economic empowerment, poverty reduction, and social empowerment.

#### Economic Empowerment through Micro Finance and Financial Inclusion

Economic empowerment through micro finance and financial inclusion refers to the process of enabling individuals, particularly those from low-income households, to improve their economic well-being and independence. Here's how micro finance and financial inclusion contribute to economic empowerment:

#### Economic Empowerment Components

1. **Increased Income:** Micro finance provides access to credit, enabling individuals to invest in income-generating activities, such as small businesses or agriculture.
2. **Improved Financial Management:** Financial inclusion initiatives, such as financial education and literacy programs, help individuals manage their finances effectively, make informed decisions, and plan for the future.
3. **Asset Building:** Micro finance enables individuals to build assets, such as savings, investments, and property, which can provide a safety net and improve economic stability.
4. **Entrepreneurship:** Micro finance supports entrepreneurship, enabling individuals to start or expand small businesses, creating jobs and generating income.
5. **Reduced Vulnerability:** Financial inclusion helps individuals manage risk, reducing vulnerability to financial shocks, such as illness, injury, or natural disasters.

#### Micro finance and Financial Inclusion Initiatives

1. **Micro loans:** Providing small loans to individuals, often with flexible repayment terms.
2. **Savings and Deposit Services:** Offering secure and accessible savings and deposit services.
3. **Financial Education and Literacy:** Providing training and education on financial management, budgeting, and planning.
4. **Mobile Financial Services:** Leveraging mobile technology to provide financial services, such as mobile banking and mobile payments.
5. **Insurance and Risk Management:** Offering insurance products and risk management services to help individuals manage uncertainty.

#### Impact of Economic Empowerment

1. **Improved Livelihoods:** Economic empowerment enables individuals to improve their livelihoods, reducing poverty and increasing economic stability.
2. **Increased Confidence:** Economic empowerment boosts confidence, enabling individuals to take control of their financial lives and make informed decisions.

3. **Enhanced Resilience:** Economic empowerment helps individuals build resilience, reducing vulnerability to financial shocks and improving overall well-being.
4. **Social Mobility:** Economic empowerment can lead to social mobility, enabling individuals to improve their social status and access better education, healthcare, and other services.

By providing access to financial services, financial education, and entrepreneurship opportunities, micro finance and financial inclusion initiatives can empower individuals to take control of their economic lives, improve their livelihoods, and build a more secure financial future.

### Limitation of the Study

This study is based on secondary data and the result of the research depends on availability of the secondary data. Also the study may be limited by time constraints, which may affect the depth and breadth of the research.

### Recommendations

1. **Increase access to funding:** Governments and donors should provide more funding to micro finance institutions to support their operations and expansion.
2. **Improve financial infrastructure:** Governments should invest in improving financial infrastructure, including payment systems and credit reporting.
3. **Promote financial education:** Micro finance institutions and governments should promote financial education to help clients manage their finances effectively.

### Conclusion

In the context of India fin-tech, micro finance and financial inclusion are inter connected. Country-specific India can not grow without expansion of the financial services for the poor and financially excluded. Financial inclusion and micro finance are critical components of economic development and poverty reduction. While micro finance programs have had a positive impact on poverty reduction and economic empowerment, challenges remain. Future research should focus on addressing these challenges and identifying innovative solutions to promote financial inclusion and micro finance.

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## GREEN BUSINESS: GROWTH OF GREEN STARTUPS IN INDIA

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### Abstract

The paper explores the emerging trends of green startups in India, focusing on their growth in recent years. It presents a case study of two prominent green startups specializing in waste management and offering eco-friendly products and services. This study aims to contribute to the broader discourse on how green businesses can shape a more sustainable future for India.

**Keywords:** Green startups, Sustainable development, Waste management

### Introduction

The concept of green business has emerged as a keystone of sustainable development in the 21st century, with a growing emphasis on environment friendly economic growth. India, as one of the fastest-growing economies, committed to sustainable development, witnessing the rapid rise of green startups that aim to address critical challenges like climate change, resource depletion, and environmental degradation.

We are all aware of the fact that climate change is escalating quicker than expected, and pollution levels have risen significantly. Present and future generations' health and well-being, as well as their potential to flourish economically, are all in jeopardy. Appropriate solutions are needed now more than ever to ensure a cleaner and more sustainable future. Green business and green startups are the most suitable practices to be adopted in this direction for present and future development.

### Objective:

- To overview the growth of green startups in India
- To discuss the case study of 2 inspiring green startups associated with waste management

### Research Methodology:

This study employs a qualitative case study approach to explore the growth trajectory, challenges, and innovations in the waste management field. The startups were selected based on their contribution to waste management and Clean Bharat mission. The paper is based purely on the secondary sources of data such as company websites, annual reports, media articles, and industry publications. The startups were selected based on their contribution to waste management and Clean Bharat mission. TechnoServe and Inc42, Various Blog reports and concerned websites provided with significant information for this study.

### What is Green Startup?

A **green startup** refers to a business that is founded with the primary objective of addressing environmental challenges through sustainable and eco-friendly practices, products, or services. These startups prioritize reducing their ecological footprint, conserving natural resources, and contributing to the long-term sustainability of the planet while maintaining economic viability.

Key characteristics of green startups include:

1. **Focus on Sustainability:** Their operations, products, or services are designed to promote environmental sustainability, such as reducing carbon emissions, minimizing waste, or conserving energy and water.
2. **Innovation:** They often leverage innovative technologies or processes to solve environmental problems, such as renewable energy, circular economy models, or biodegradable materials.

3. **Triple Bottom Line:** Green startups aim to balance three pillars—economic growth, environmental protection, and social well-being.
4. **Sector Diversity:** They operate in diverse sectors, including renewable energy, sustainable agriculture, waste management, green transportation, eco-friendly construction, and more.

In essence, green startups contribute to the broader mission of sustainable development by embedding environmental consciousness into their core business strategies.

### Growth of green startup in India

According to the study of TechnoServe, As of January 2024, India is home to over 112,718 recognized startups, making it the third-largest startup ecosystem globally. (G., 2024)

Within this ecosystem, there are an estimated 3,300 climate tech startups across the country, contributing significantly to climate action and decarbonization efforts. (N., 2024)

As global efforts intensify to combat climate change and achieve sustainability goals, cleantech has become a vital innovation hub. In India, a rising number of cleantech startups are addressing both domestic and global environmental challenges. Inc42 has identified 63 Indian cleantech startups that are making significant strides in this sector. (Upadhyaya A., 2025)

According to a report of Economic Times, over 600 startups in India are dedicated to climate tech, focusing on areas such as green technology, renewable energy, and waste management. Notably, nearly 40% of these climate tech startups are led by women, reflecting a growing diversity in the sector.

Change Started highlighted 11 Indian green startups in 2024 that are working towards environmental sustainability and have significant potential for the future. (GreenStartups, 2024)

### Green startup sectors in India:

- Renewable Energy: Solar power generation, wind energy, biomass energy
- Electric Vehicles (EVs): Manufacturing of electric cars, scooters, and related charging infrastructure
- Waste Management: Recycling technologies, waste-to-energy solutions
- Sustainable Agriculture: Organic farming practices, precision agriculture technologies
- Cleantech: Energy efficiency solutions, water purification technologies

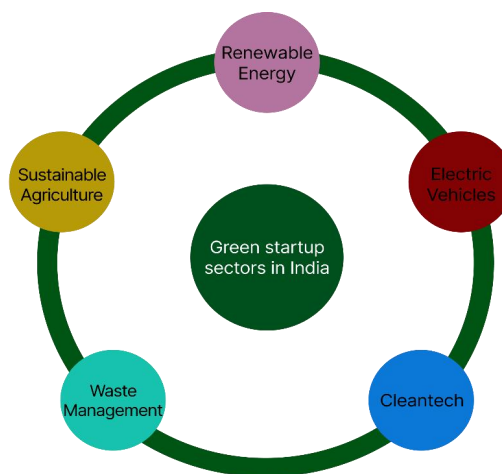


Fig1: Green startup sectors in India

Source: designed by author



**Case study:**

Several factors have contributed to the growing number of startups, including youth entrepreneurship and education initiatives like the Entrepreneurship Mindset Curriculum in Delhi government schools, government support through schemes like Pradhan Mantri MUDRA Yojana and the Credit Guarantee Fund Trust for Micro and Small Enterprises. Corporates are also making valuable contributions through corporate social responsibility (CSR) initiatives. Government initiatives like Startup India and Make in India have created a supportive ecosystem for startups by offering funding, mentorship, and regulatory support. These initiatives have served as a catalyst for a new age of eco-conscious and responsible entrepreneurs leading India's green entrepreneurship future. Few inspiring green startups:

**1. Brisil – Turning Rice Husk Ash into Eco-Friendly Silica**

Brisil has developed a technology to produce highly dispersible silica and precipitated silica from rice husk ash. The technology is a zero waste chemical process which uses rice husk ash as feed and produces precipitated silica and other by-products. The technology can extract up to 70% silica from the ash. The technology has already been commercialized. The technology can produce silica for all major applications, including tires, rubber, footwear, paints, coatings, toothpaste, food & pharmaceuticals.

Tanmay Pandya is the founder of Brisil Technologies which produce bio-silica by utilizing the rice husk ash. It was established in year 2018. It produces precipitated silica & highly dispersible silica for tires, rubber products, footwear, paint, toothpaste, food, and other industries. This bio-silica helps customers reduce their carbon emissions and achieve their sustainability targets. Rice husk ash is the leftover generated after using husk as fuel. The company licenses technology to rice husk ash-generating firms, thereby creating revenue by selling the plant and licensing the technology.

It claims, 2,27,500 kg CO<sub>2</sub> emission can be saved by using every ton of silica produced by using their technology. This enabled them to secure contracts with global sportswear and tire manufacturers, resulting in over 600% revenue growth in 2024-25. This bio silica is used by the following products:

**Tires**

Precipitated Silica has become key filler for the tire industry due to its properties and performance. Precipitated silica in tire improves physical & dynamic properties such as tensile strength, abrasion resistance, tear resistance, wet grip etc. Silica is perceived by the tire industry as a material which can address the environment challenges associated with the tire production, and can replace carbon black in the tires. Brisil's silica is more environment friendly material as it requires lesser energy as compared to the conventional silica production methods, and uses a waste as base material for silica. Brisil produces Highly Dispersible Silica and Conventional Silica for Tires Application.

**Industrial Rubber Products**

Brisil's green precipitated silica is used as a reinforcing agent in natural and synthetic rubber and products made from rubbers. This silica has application in belts, conveyer belts, gasket & seals, rice rollers and similar applications. Brisil offers powder, granular form of silica for the application.

**Footwear**

Brisil offers various grades of green precipitated silica for footwear application. Brisil's green silica enhances various properties in footwear such as abrasion resistance, durability and stiffness. Due to fine particle size, it will easily disperse in the matrix improving its modulus and resilience resulting in better flexibility & comfort.

**Food Products**

Brisil's green precipitated silica used in food products such as salts, sugar, spices, soup powders, milk powders to prevent the caking and induce the flow properties in the product. Brisil's precipitated silica products are odourless, colourless, inert and highly absorptive materials.

### **Toothpaste/Oral care**

Precipitated silica used as an abrasive agent in toothpastes due its abrasive nature. Low level of abrasion is sufficient for the efficient cleaning/polishing of the teeth.

### **Paints, Coatings and Inks**

Precipitated silica has been used by Paints, Coating and Ink industry due to various performance related advantages caused by silica. Smaller particle size of silica results in higher flow ability which improves paints, coating & inks' anti settling properties. Its oil absorption properties prevent products spreading ability.

### **Plastics**

Brisil's precipitated silica is used as a thickening, thixotropic and suspending agents in liquid systems, paste emulsion and plastics etc. It Improves flow characteristics of powder and insulating properties to PVC compounds for high voltage cables.

## **2. Plastroots – Zero-Landfill Waste Solutions**

Plastroots, founded in 2019 by Kapil Jangale, is a waste management company specializing in comprehensive dry waste solutions and training programs to help rural communities minimize their carbon footprint. The company promotes sustainable garbage disposal and advocates for a circular economy. By adopting organized waste management systems, it addresses the lack of structured waste management in rural areas, where around 75% of waste goes unsorted.

Headquartered in Nagpur, it serves various sectors, including local and national governments, industries, and commercial enterprises by providing pragmatic, cost-effective, and compliant solutions.

Plastroots create Clustered based facility model for villages, Municipalities, Institutes and Residential Complexes to formalize their waste collection, segregation & processing and end disposal of processed waste by implementing digital data management and reporting structure which helps to build organized waste management system. Social support program is part of this model to give continuous upliftment to Safaiworkers. In the heart of the city, a facility stands, where waste dreams Re-roots in capable hands, as discarded trash found a treasures Plasroots have saved 2100 trees, 59233.45 barrels of oil, 24079076.34 kwh of energy, 72266.45 cubic yards of landfill, saves 9711.7 tons of carbon dioxide.

Plastroots has a fundamental experience in helping companies to achieve their goals in EPR. They have more than 3100 safai sathi, more than 175 Progressive Client, managed more than 50,000 metric tons waste, providing services in more than 551 cities and villages.

### **Services provide:**

#### **Alternative Fuels and Raw Materials:**

Plastroots is committed to transforming waste into valuable resources for the cement industry. Their innovative approach harnesses the power of alternative fuels and raw materials, including Plastic waste, biomass, and Refuse-Derived Fuel (RDF), to drive sustainable practices and reduce environmental impact. Traditional fuel sources, like coal and natural gas, contribute to carbon emissions and deplete finite resources. By switching to these cleaner options & integrating alternative fuels and raw materials into cement production industries can significantly decrease their carbon footprint and reliance on non-renewable resources. They specialize in finding alternative fuels like Biomass, Plastic Waste, RDF Refuse-Derived Fuel (RDF) that can power cement kilns. Plastroots is already a trusted name working with a very transparent and traceable Urban Local Bodies (ULBs) endorsed model. They have tie ups with Cement factories and Waste to Energy Plant to collect and dispose of municipality & Industrial & Agriculture waste.

#### **EPR (Extended Producer Responsibility)**

India has a legal framework for EPR. According to the Plastic Waste Management Rules that were laid down in 2016 by the Ministry of Environment, Forest & Climate Change Extended Producers Responsibility or EPR

mandates every manufacturer (company) that generates plastic or uses plastic for packaging purpose should take the responsibility of it. They must treat, recycle or reuse the plastic product after the consumer disposes of it.

EPR has numerous benefits, such as reducing waste, and creating a circular economy. Instead of just making stuff and walking away, Plastroots stick around to make sure their products are disposed of properly. They have collaborated with Multiple Waste Warriors, to create awareness and implement EPR Collection, transportation, recycling, processing/ co-processing or disposal of equivalent quantity of plastic waste as set out in approved EPR plan.

### **Dry Waste Management**

Plastroots understand the importance of managing dry waste effectively to reduce environmental impact and promote recycling. Their comprehensive services encompass the collection, segregation, Logistic Management and responsible disposal of dry waste materials. They have collaborated with Waste Warriors & Safai Sathi's to create awareness and implement Waste Collection, transportation, recycling, processing/ co-processing or disposal of equivalent quantity of waste as set out in approved Dry waste Management plan through own distribution channel. Sources of Collection: In partnership with municipalities/local bodies, commercial establishment & industrial facility other method that ensures traceability.

### **Cluster Based Ecosystem for Village**

Plastroots Cluster Based Facility model is a game-changer, offering a comprehensive solution to waste management challenges by harnessing the power of collaboration and efficiency. Whether it is a small village or Commercial Establishment, with connecting sources like a school institute or a residential complex, the model is tailored to meet their unique needs while prioritizing sustainability and environmental responsibility. Plus, they are not just about managing waste, also provide education and training to villagers on waste segregation and sustainable practices. Instead of each village handling its waste independently, they bring villages together into clusters. In these clusters, they create centralized facilities to manage waste. It is like teamwork for waste management.

### **Recycling Plastic Products**

With the support of Urban Local Body (ULB) and Recycling Partner, they have established a recycling unit where they are processing soft-recyclable plastic waste from nearby Municipalities to reduce landfills and making Granules/Gitta. These materials are sent to the manufactures. This project contributes to Sustainable cities.

### **Conclusion**

Green startups, defined by their focus on environmentally friendly practices and products, have gained prominence in recent years due to increasing consumer awareness, supportive government policies, and global trends toward sustainability. From renewable energy ventures to eco-friendly packaging solutions, these startups are not only reducing the ecological footprint of business activities but also driving innovation and creating employment opportunities. Green business including green startups are the most reliable tools to achieve the targets of sustainable development. Despite many challenges the future prospects of green business and green startups is bright in India.

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# RURAL INDIA IN THE GLOBAL ERA: EVALUATING GOVERNMENT INITIATIVES FOR POVERTY ALLEVIATION AND HUMAN DEVELOPMENT TOWARDS VIKSIT BHARAT @2047

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## Abstract :

Rural India stands at the crossroads of significant transformation as the country envisions a developed nation by 2047 under the initiative of Viksit Bharat. With nearly 65% of the Indian population residing in rural areas, their development is crucial for the overall progress of the nation. Over the years, the Government of India has introduced several schemes and programs aimed at addressing the multifaceted challenges of poverty, inadequate healthcare, illiteracy, and infrastructural deficiencies that hinder rural development. These initiatives have been strategically designed to foster economic growth, social empowerment, and improve the standard of living in rural communities. However, the effectiveness of these programs depends on their proper implementation, governance, and the active participation of stakeholders.

This paper evaluates various government initiatives aimed at poverty alleviation and human development in rural India, identifying their impacts, challenges, and future prospects in the global era. By analyzing secondary sources such as government reports, academic studies, and policy evaluations, this study provides insights into policy effectiveness, economic inclusivity, and social empowerment. Additionally, it explores how these initiatives align with global sustainable development goals and the evolving needs of rural communities in a rapidly changing socio-economic landscape. The findings of this paper highlight the progress made so far and the key areas that require focused interventions to achieve the ambitious goal of a developed and self-reliant India by 2047.

**Keyword:** Rural Development, Poverty Alleviation, Human Development, Viksit Bharat 2047, Government Initiatives, Economic Inclusivity

## Introduction :

India's rural landscape, home to nearly 65% of the population, faces persistent challenges related to poverty, illiteracy, and inadequate infrastructure. Rural India is characterized by its agrarian economy, traditional lifestyles, and cultural diversity. However, despite its contributions to national food security and economic growth, rural areas continue to grapple with socio-economic disparities that hinder their progress. The Government of India has launched several initiatives aimed at addressing these issues and aligning rural development with the Viksit Bharat @2047 vision, which seeks to transform India into a fully developed and self-reliant nation by the year 2047.

Rural development is a critical component of national progress, as it directly impacts food security, employment generation, and social stability. Over the years, various government schemes and programs have been implemented to tackle the root causes of rural poverty and underdevelopment. These initiatives focus on sectors such as agriculture, education, healthcare, digital connectivity, and financial inclusion, aiming to create a holistic ecosystem that empowers rural communities and enhances their quality of life.

Despite the concerted efforts made through government policies, several challenges persist, including inadequate access to quality healthcare, limited educational opportunities, infrastructural bottlenecks, and socio-economic disparities among different regions. Addressing these challenges requires a multifaceted approach that incorporates technological innovations, public-private partnerships, and community-driven solutions.

This paper explores key government programs, their effectiveness, and their alignment with global development goals. Furthermore, it highlights the role of various stakeholders, including the government, non-governmental organizations, private sector enterprises, and local communities, in driving sustainable rural development. The objective of this research is to evaluate the success of these initiatives and to identify gaps that need to be addressed to achieve the vision of a developed India by 2047.

## Objectives

- To evaluate the impact of government initiatives on poverty alleviation and human development in rural India.
- To identify challenges in the implementation of rural development programs and suggest improvements for better effectiveness.
- To assess how these initiatives promote economic and social empowerment while aligning with global development goals and Viksit Bharat 2047.
- To explore the role of technology and community participation in enhancing rural development efforts.

## Sources of Data Collection:

The research paper is based on the Secondary Data such as Books, Internet , Research Paper and Magazine & Journals.

## Government Initiatives for Poverty Alleviation:

Poverty alleviation is a major goal of the Indian government, aiming to uplift millions of people living in rural areas who lack access to basic necessities such as food, shelter, healthcare, and education. Various initiatives have been launched to provide financial assistance, employment opportunities, and social security to improve the quality of life for the underprivileged. Despite notable progress, challenges such as implementation inefficiencies, fund shortages, and lack of awareness persist, requiring continuous policy efforts and community participation.

## Definition of Poverty Alleviation

Poverty alleviation refers to the strategies and programs designed to reduce poverty and improve the socio-economic conditions of disadvantaged communities by ensuring access to essential resources such as income, education, healthcare, and employment opportunities. It involves both short-term relief measures and long-term development policies to create sustainable livelihoods and economic self-reliance.

The Indian government has launched several initiatives to alleviate poverty, including:

## Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)

- Introduced in 2005, MGNREGA aims to provide at least 100 days of guaranteed wage employment per year to every rural household willing to do manual labor.
- The scheme serves as a powerful tool for poverty reduction by offering a stable source of income to rural households and fostering rural economic development.
- MGNREGA has been instrumental in infrastructure development by creating durable community assets such as roads, ponds, irrigation channels, and other critical rural infrastructure, which contribute to long-term economic growth.
- Several studies and government reports indicate that MGNREGA has significantly increased rural household incomes and contributed to food security by ensuring a steady flow of income to marginalized communities.
- The program has played a vital role in empowering rural women by providing them with employment opportunities, financial independence, and decision-making power within their households and communities.
- In addition to direct financial benefits, MGNREGA has contributed to environmental sustainability by promoting activities such as afforestation, water conservation, and land development projects.
- Despite its success, MGNREGA faces several challenges, including implementation gaps, delays in wage payments, and fund shortages, which hinder its effectiveness.

- Bureaucratic inefficiencies and corruption have also been reported in certain regions, leading to the misallocation of resources and leakage of funds.
- Furthermore, work allocation processes have been criticized for being inconsistent, with many workers not receiving the full 100 days of employment promised under the scheme.
- Efforts are needed to streamline the implementation process, improve transparency, and leverage technology such as digital payments and real-time monitoring to enhance efficiency and accountability.

#### **Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM)**

- Launched in 2011, DAY-NRLM aims to enhance livelihoods by promoting self-employment and skill development through capacity building and financial inclusion.
- The scheme focuses on empowering rural communities by organizing women into self-help groups (SHGs) that provide access to microfinance and entrepreneurial opportunities.
- DAY-NRLM has successfully mobilized millions of rural women into SHGs, enabling them to take up income-generating activities such as handicrafts, agriculture, and small-scale businesses, thus enhancing their socio-economic status.
- The scheme provides training, financial literacy programs, and support for market access to ensure sustainable income generation.
- However, challenges persist, including limited market linkages that restrict SHG members from accessing broader consumer markets and achieving economic scalability.
- Sustainability issues arise due to inadequate financial literacy and dependency on government support for business continuity.
- Operational challenges, such as administrative inefficiencies, lack of skilled personnel, and monitoring mechanisms, also affect the effectiveness of the program.
- Strengthening partnerships with the private sector, improving digital access, and offering tailored skill development programs can help overcome these challenges and enhance the program's impact.

#### **Pradhan Mantri Awaas Yojana (Gramin)**

- This housing scheme aims to provide affordable and quality housing to the rural poor by 2022, with an extended vision for 2047 to achieve 'Housing for All'.
- The scheme offers financial assistance to eligible beneficiaries for constructing pucca houses with essential amenities such as sanitation, electricity, and clean drinking water.
- It promotes sustainable construction practices by encouraging the use of eco-friendly materials and locally available resources to ensure environmental sustainability.
- PMAY-G has significantly improved the living standards of beneficiaries by providing them with safe and dignified living spaces, contributing to better health and social inclusion.
- However, several challenges persist, including issues related to land availability, particularly in densely populated and ecologically sensitive areas.
- Administrative delays in fund disbursement, beneficiary identification, and construction approvals have slowed down the implementation process.
- Quality control issues remain a concern, with reports of substandard construction and lack of proper monitoring mechanisms.

- Strengthening monitoring systems, leveraging technology for transparency, and fostering collaboration between central and state governments can help address these challenges effectively.

These initiatives aim to address the root causes of poverty and promote sustainable development.

### **Human Development Initiatives:**

Human development is a key focus area for the Indian government, aimed at improving the overall well-being and quality of life of people, particularly in rural areas. Various initiatives have been launched to enhance access to education, healthcare, and digital connectivity, which are essential for fostering social and economic growth. Below initiatives contribute to empowering individuals by providing them with better opportunities and resources to lead productive and fulfilling lives. However, challenges such as infrastructure gaps, resource constraints, and disparities in service delivery need to be addressed to achieve sustainable human development across all sections of society.

### **Definition of Human Development**

Human development refers to the process of expanding people's capabilities and opportunities to lead healthy, knowledgeable, and fulfilling lives. It encompasses various dimensions such as education, healthcare, economic participation, and social inclusion. The United Nations Development Programme (UNDP) defines human development as "the expansion of people's freedoms and opportunities and improving their well-being."

Some notable initiatives of human development are as follows:

### **National Rural Health Mission (NRHM)**

- NRHM was launched in 2005 to strengthen healthcare delivery in rural areas, focusing on maternal and child health, communicable diseases, and nutrition.
- The program has led to an increase in institutional deliveries and better health indicators such as reduced infant and maternal mortality rates.
- Persistent challenges include a shortage of healthcare professionals, inadequate infrastructure, and difficulties in reaching remote areas.

### **Sarva Shiksha Abhiyan (SSA) and Samagra Shiksha**

- The SSA program was introduced in 2001 to achieve universal elementary education and to improve learning outcomes.
- It provides infrastructure support, free uniforms, textbooks, and mid-day meals to encourage school enrollment and retention.
- Samagra Shiksha was introduced in 2018, is an integrated initiative covering pre-primary to higher secondary education with a focus on improving the quality of education.
- Challenges include high dropout rates, teacher shortages, and disparities in access to quality education.

### **Digital India and Rural Connectivity**

- The Digital India initiative aims to bridge the digital divide by providing broadband connectivity and digital literacy to rural areas.
- Programs such as BharatNet and Common Service Centers (CSCs) have enhanced access to e-governance services, banking, and online education.
- However, infrastructure gaps, low digital literacy, and affordability issues remain barriers to full digital inclusion.

These initiatives aim to address the multidimensional aspects of human development and promote inclusive and sustainable growth.

### Challenges and Opportunities:

Despite the significant strides made through these initiatives, several challenges remain. Rural areas continue to suffer from inadequate infrastructure, bureaucratic hurdles, and socio-cultural barriers that hinder progress. Limited financial resources, poor program monitoring, and resistance to change within communities also pose significant obstacles.

Opportunities exist in leveraging technology to improve service delivery, fostering public-private partnerships to enhance infrastructure, and adopting data-driven policy approaches to optimize resource allocation. Engaging local communities in the planning and implementation of programs can ensure better outcomes and sustainability.

### Conclusion and Recommendations:

Achieving the vision of Viksit Bharat @2047 requires a comprehensive, multi-sectoral approach that prioritizes inclusivity, sustainability, and innovation. Government policies must be tailored to the specific needs of rural populations, incorporating insights from stakeholders at various levels.

Recommendations include:

1. Strengthening the implementation of poverty alleviation programs through improved monitoring mechanisms and accountability frameworks.
2. Expanding financial inclusion by enhancing access to credit and entrepreneurial support for rural communities.
3. Investing in rural infrastructure, including roads, irrigation, and digital connectivity to facilitate economic growth.
4. Enhancing skill development initiatives to align with market demands and emerging economic opportunities.
5. Promoting social inclusion by addressing gender disparities and empowering marginalized communities.
6. Encouraging collaboration between government, private sector, and civil society organizations to create holistic development solutions.

In conclusion, while government initiatives have contributed significantly to poverty alleviation and human development in rural India, continued efforts are required to achieve the ambitious goals of Viksit Bharat @2047. A multi-pronged approach that integrates economic growth with social development is essential for the holistic progress of rural India.

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## MIDDLE INCOME TRAP-CHALLENGES FOR INDIA IN ACHIEVING VIKSHIT BHARAT@2047, OPPORTUNITIES AND WAY FORWARD

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### Abstract

The Vikshit Bharat@ 2047 initiative envisions India as a developed country by 2047, the centenary of its independence. This paper examines the fact that India is in Middle Income Trap and highlights India's vulnerabilities for being trapped as Middle Income country. This Paper focuses the challenges that India may face in achieving as developed country by 2047. This paper explores the remedies to overcome the challenges in achieving as developed country by 2047. Finally this paper recommends some strategies for availing the opportunities and the way forward.

**Key Words:** Vikshit Bharat, Middle Income Countries, Middle Income Trap, R&D, Innovation, Inclusive Institution , Educated unemployment, Inequalities of income, Skill, Economic Growth

### Introduction

According to World Development Report 2024 released by World Bank, various countries including India are trapped as middle income countries.

India is vulnerable to middle income trap due to lack of meaningful innovation, lack of new and advanced technology, diminishing marginal returns, stagnant industrialisation and export of labour intensive goods.

In 2025 India also faces various economic challenges. The Financial Stability Report of Reserve Bank of India (R.B.I) December 2024 mentions a trend of concern. There is a widening gap between savings and investment in Indian households. As a result there is decline in net savings as a percentage of Gross Domestic Product (GDP) in India.

The rising unemployment for educated youth is another economic challenge for India.

India's GDP growth is decelerating which is a big economic challenge for India.

Global uncertainties along with rising global interest rates ,exchange rate fluctuations and volatile rupee are also economic challenges for India.

But there are ample opportunities for India to transform itself as a developed country by 2047. India's demographic dividend with a young population presents great opportunity of economic growth. India's Share of global GDP has increased that made India as world's fifth largest economy.

Now ,how these opportunities can be utilised to mitigate challenges for India not to be trapped as middle income country and transformed to be a developed nation is important.

### Objectives:

- To examine the fact that India is trapped as Middle Income Country.
- To highlight India's vulnerabilities for being trapped as Middle Income Country.
- To focus the economic challenges that India may face in achieving as developed country by 2047.
- To explore the remedies to overcome the challenges in achieving as developed country by 2047.
- To recommend some strategies for availing the opportunities and the way forward.

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**Research Methodology:**

It is basically a descriptive study based on secondary data. The data related to this study have been gathered from various secondary data sources which include information from books, journals, articles, internet, R.B.I websites, World bank website, IMF website and other websites.

**Scope of the Study**

In 2007 the World Bank coined the term “Middle Income Trap “ in its report titled as “ An East Asian Renaissance; Ideas for Economic Growth”. The Middle Income Trap refers to a situation where rapidly growing economies becomes stagnant at middle income level and unable to grow as high income countries. According to the World Development report 2024, 108 countries were classified as Middle Income Countries ( MICs ) at the end of 2023 including India.

According to IMF, Middle Income Countries find themselves “ caught between the rapidly changing advanced technology of rich countries and competition in mature products from poor countries with low wages.”

World Bank classified the economies based on per capita Gross National Income (GNI).

Low Income Economies : 2021 GNI per capita of up to US \$ 1,085

Middle Income Countries are classified in Lower Middle Income Economies and Upper Middle Income Economies.

Lower Middle Income Economies: 2021 GNI per capita of US \$ 1,086 to US \$ 4,255

Upper Middle Income Economies: 2021 GNI per capita of US \$ 4,256 to US \$ 13,205

High Income Countries: 2021 GNI per capita of US \$ 13,206 or more.

Now India’s GNI per capita for 2021 was US \$ 2,180, for 2022 it was US \$ 2,400 and for 2023 it was US \$ 2,540 ([www.macrotrends.net](http://www.macrotrends.net))

Therefore India comes under Lower Middle Income Countries.

**Cases for India’s Vulnerabilities to Middle Income Trap:****Skill Gap:**

Educated youths have experienced much higher level of unemployment in India in recent times. The youth unemployment rate has increased with the level of education. A large proportion of highly educated young men and women, including the technically educated, are overqualified for the job they do. Expansion of skills training are also facing many challenges. There are spatial imbalances in the training. The creation of training capacity is low in poorer regions where the potential demographic advantage is high. Training programmes are less inclusive in socio economic point of view in spite of the fact that training positively relates to education and socio-economic levels. The returns from training are inadequately remunerated in the labour market, making training socially and economically less attractive. Apprenticeship training remains low. Although there is a renewed focus on apprenticeship training, low apprenticeship enrolment against the stated targets is an issue of concern. Out of around 120,000 establishments, only around 25,000 offer apprenticeships. Given the size of the youth population, it is very low. ( India Employment Report 2024, Youth, Employment, education and skill).

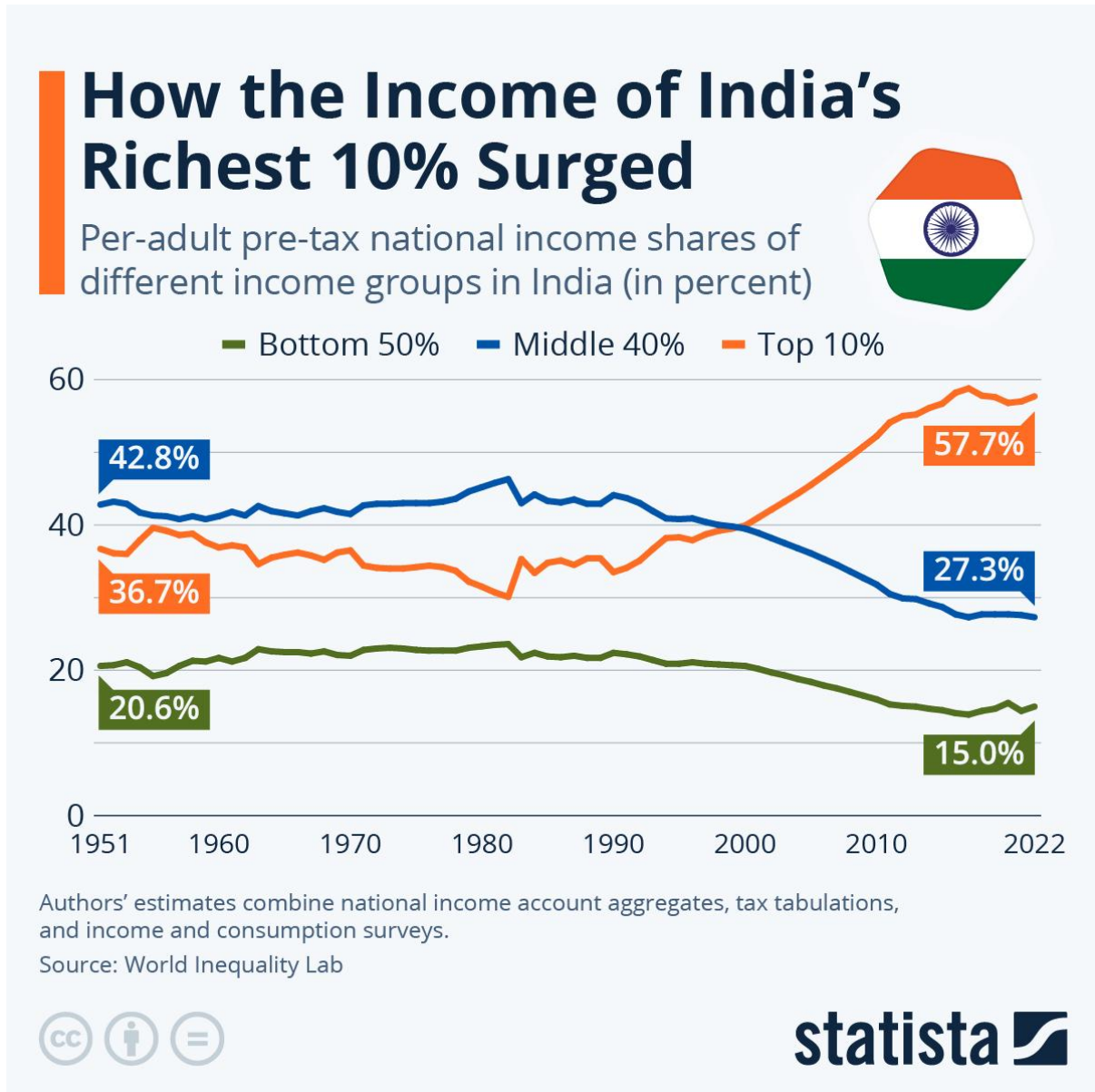
Slow employment generation and lack of structural transformation in spite of reasonably high growth, there has not been commensurate expansion in productive employment opportunities. Instead, there has been falling employment intensity in the growth process. It is widely acknowledged that this has been mainly due to the growth process being services-led – contrary to manufacturing-led that most developed countries experienced during their development process. Consequently, the process of structural transformation has been slow in India and even characterized as “stunted”. (India Employment Report 2024, Youth, Employment, education and skill).

**Rising Income Inequality:**

In India the gap between the rich and poor is increasing. According to the research group World Inequality Lab, the per adult pre tax national income share of 1 % of the country’s highest earners is 22.6% in 2022 while that of bottom 50% of earners stood at only 15%.

The following chart shows Income Inequality in India from 1951 to 2022. The population is split into bottom 50%, middle 40%,top 10% of the nation.

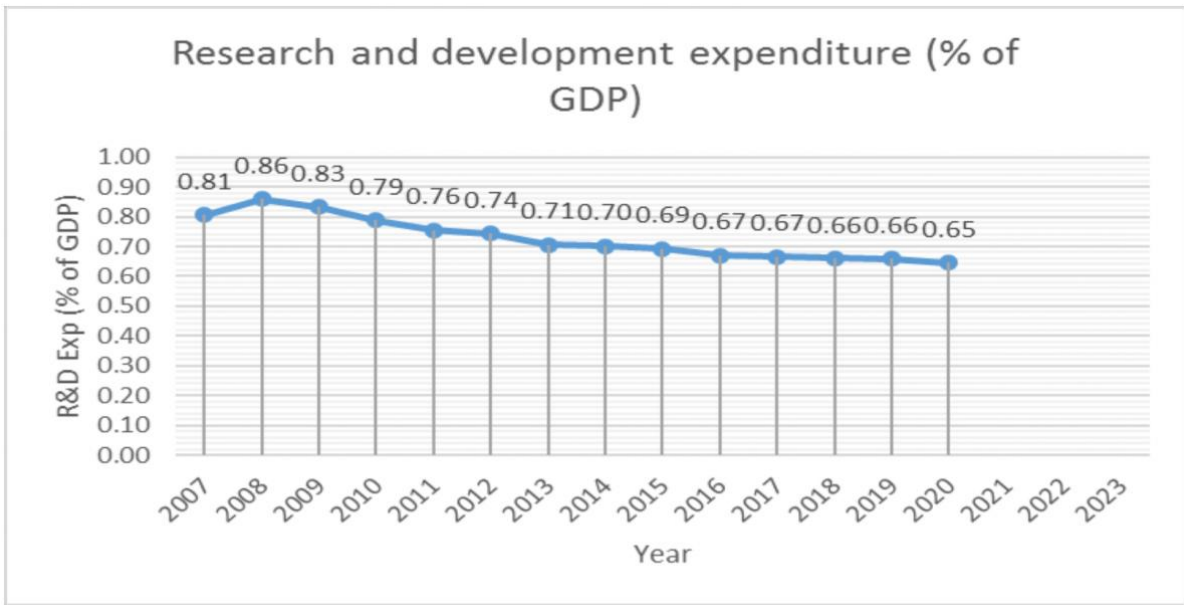
The middle 40% of the population of India received a share of national income which was higher than that of 10 % top until 2000. But after 2000, the inequality of income has increased.



**Figure 1 (Source: <https://www.statista.com/>)**

**Lack of Technological innovation:**

The following figure 2 shows that India’s R& D (Research and Development) expenditure is having declining trend from 2008 to 2020 which is a matter of concern.

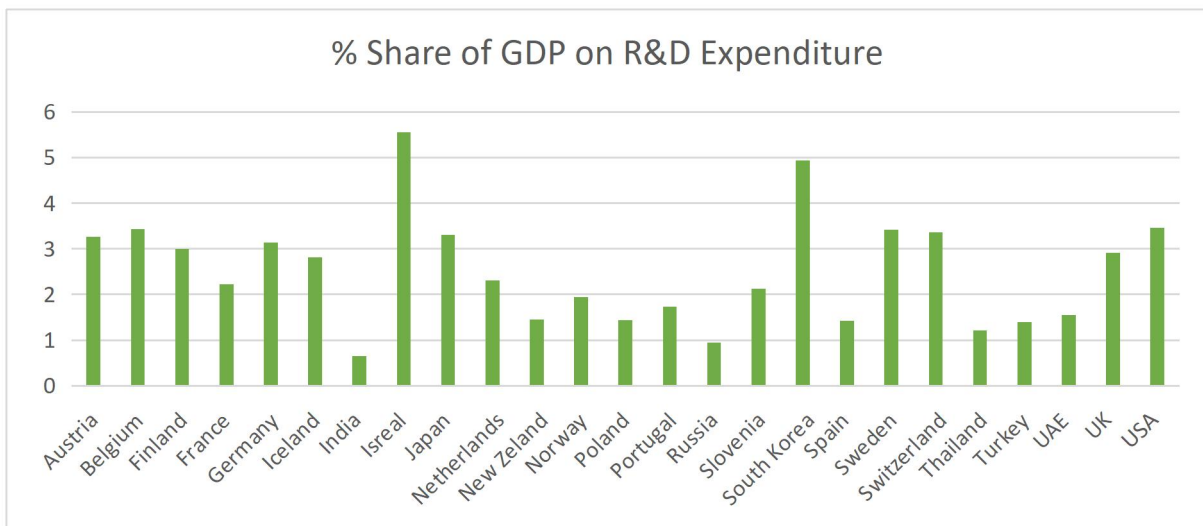


**Figure 2 Source: UNESCO Institute for Statistics (UIS)**

India’s overall spending on R&D was only .65% of GDP in 2020.

India’s innovation index 2021 revealed that the overall spending on R & D by India is very low which was .7% of GDP.

India’s spending on R & D in 2021 is relatively low compared to Israel (5.56%) (Highest in the world) ,South Korea (4.93%) (2<sup>nd</sup> highest in the world) ,USA (3.46) (3<sup>rd</sup> highest in the world), Belgium (3.43%), Sweden (3.42%), Switzerland (3.36%), Japan (3.30%), Austria (3.26%), Germany( 3.14%), Finland (2.99%), United Kingdom (2.91%), Iceland (2.81%), Netherlands (2.31%) France(2.22%), Slovenia (2.13), Norway (1.94%), Portugal (1.73%), United Arab Emirates (1.55%), New Zealand (1.45%),Italy (1.45%),Poland (1.44%), Spain(1.43%), Turkey (1.4%),Thailand (1.21%), Russia (.94%),



**Figure 3: ( Author prepared this bar diagram from the above country wise data using excel.)**

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**India's Decelerating Economic Growth:**

India's economic growth has decelerated in recent years. India is struggling to maintain the momentum required to the transition from a middle income to a high income nation.

Indian economy is projected to grow by 6.4% in 2024-2025 fiscal year ending in March 2025, which is the lowest since Covid 19 pandemic 2020-2021 fiscal year. The figure is lower than that of earlier forecast of 6.5%.

**Economic Challenges in achieving as Developed country by 2047:**

In 2025 India is facing various economic challenges. The Financial Stability Report of Reserve Bank of India (R.B.I) December 2024 mentions a trend of concern. There is a widening gap between savings and investment in Indian households. As a result there is decline in net savings as a percentage of Gross Domestic Product (GDP).

In 2022 the net household financial savings was 7.3% of GDP. In 2023 the net household financial savings dropped to 5.3% of GDP. The average net financial savings rate for the decade preceding to 2022 was around 5.3% of GDP. It shows significant decline in savings compared to previous years. Now lower household savings can reduce the fund available for investments which in turn will reduce economic growth.

Lower labour force participation for women is another challenge for India.

Global uncertainties along with rising global interest rates, exchange rate fluctuations and volatile rupee are also economic challenges for India.

**Remedies to come out of Middle Income Trap:**

The Middle Income Countries are suggested to give priority on "3Is" strategy of Investment, Innovation and Infusion for better growth benefits according to the World Development Report 2024.

Therefore Govt of India should increase in investment in various sectors especially in productive sectors.

Govt of India should encourage innovation by increasing the spending on R& D. The above analysis and bar diagram (Figure 3) shows India's spending on R&D is low compared to other developed and high growth countries.

Govt of India can adopt advanced technologies and modern business practices from abroad and infuse them in Indian economy.

Financial infusion can be another remedial measure to overcome the Middle Income Trap.

**Opportunities and Way Forward:**

India's Demographic dividend with young population and a median age of 29 can be considered as substantial opportunity for India to transform itself from developing country to developed country by 2047.

India's share in global GDP has increased from 1.1% in 1991 to 3.5% in 2023 making it as the world's fifth largest economy.

Both domestic and international Information and Technology (IT) firms provides extensive support in the expansion of Indian economy.

In non IT service sectors, India can have benefit from global talent short fall in developed countries especially in the fields of education and health care.

Infrastructure sector of India can also be considered as great opportunity for India to develop.

**Conclusion:**

According to World Bank Development Report 2024, 108 countries including India is trapped as Middle Income Countries which may create hindrances in transforming India from developing nation to a developed nation by 2047.

Few countries successfully transitioned from middle income status to high income status in the past like South Korea, Taiwan, Hong Kong, Singapore, Poland, Saudi Arabia, Seychelles. Therefore there is the probability that India can also be transitioned from the status of developing country to developed country if it can utilise the opportunities that are available for India by implementing the strategies and policies in favour of achieving the goals @Vikshit Bharat.

### Limitations of the Study:

The study is based on only secondary data sources.

### Recommendations:

Inclusive Institutions can play a pivotal role for coming out of the Middle Income Trap and in the transformation from developing country to developed country by 2047 for India as Inclusive Institutions are more likely generate long term economic growth and development.

Good Governance and Strategic Leadership can be another key factors to come out of Middle Income trap and in the transition from developing to developed country by 2047 for India.

Stagnant agricultural sector and manufacturing sectors needs to be addressed. Improvement in agricultural productivity is crucial as agricultural sector that employs more than half of the work force , contributes only around 17% of GDP.

Lower labour force participation for women to be addressed.

Policy related to increase in spending on R&D is utmost important.

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## “A STUDY ON PERCEPTIONS OF ELDERLY CITIZENS IN MUMBAI TOWARDS MEDICAL INSURANCE”

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### Abstract:

India has a very important role in the global world as a developing country having the fifth highest nominal GDP in the world. With a largely younger population, there is no doubt that this dynamic will change considerably in the years to come, as the population ages gradually. For elderly Indians to contribute to the vision of Viksit Bharat 2047, healthcare is an important catalyst. An ageing population brings with it myriad problems, one of the main being healthcare for the elderly. The overall spending on healthcare in India is only 3.54 per cent of its GDP.

Old age is the time that medical issues increase together with lower or no regular income. It is at this crucial juncture of life that a financial cushion is needed to cover medical expenditure.

While medical insurance plans have grown in popularity, it remains to be seen whether the same are being taken up by senior citizens on a large scale. Many individuals and families perceive payment of medical insurance premium as an added expense to their household budget without realising its importance. Perception towards health insurance is an important factor influencing the decision to subscribe to health insurance.

The purpose of this study is to investigate the factors influencing the perceptions towards health insurance taking a sample of elderly population from Mumbai city. The data for the study has been provided by a primary survey from Mumbai city.

The paper concludes with a discussion about the results and its implications to researchers, and other stakeholders.

**Keywords:** Pandemic, Perceptions, Medical Insurance, Socio-economic, Demographic, consumption

### Introduction

India, world's most populous country and the world's fifth largest economy in terms of GDP and also expected to be the world's fastest growing.

The National Family Health Survey (NFHS-4) performed by the Ministry of Health and Family Welfare found that more than 55% of Indian households do not seek government-provided health care. "Less than one-third (29%) of households had at least one regular member covered by health insurance or a health programme," according to the study's conclusion. According to the Insurance Awareness Survey done by the National Council of Applied Economic Research (NCAER) on behalf of the IRDA in 2010, only about 6% of insured families have health insurance coverage.<sup>6</sup>

It may be relevant to look at some statistics at the macro level. The USA's total health expenditure as a percentage of GDP was 16.57 per cent in 2022. Developing countries such as Brazil showed 9.89 per cent and China showed 5.38 per cent. As compared to this India's health expenditure was only 3.28 per cent of its GDP<sup>7</sup> as per figures of 2021. The average per centage of health care expenditure on GDP in the world is 10.36<sup>8</sup>.

Hence, it may be reasonable to infer that India's health insurance coverage is grossly inadequate.

As per Insurance Awareness survey report of 2022, published by the IRDAI, although the level of penetration of health insurance has increased after the entry of many private players with global tie-ups, it is still low compared to other countries. According to consumer feedback, the problem has been exacerbated due to:

<sup>6</sup> [https://www.policyholder.gov.in/uploads/CEDocuments/Insurance Awareness Survey Report.pdf](https://www.policyholder.gov.in/uploads/CEDocuments/Insurance%20Awareness%20Survey%20Report.pdf)

<sup>7</sup> <https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS?locations=IN>

<sup>8</sup> [https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS?locations=BR&most\\_recent\\_year\\_desc=true](https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS?locations=BR&most_recent_year_desc=true)



- Agents' inability to clearly explain the features of the products;
- Lengthy documents that are not user friendly and
- The perception that agents are only concerned with their commissions<sup>9</sup>.

Making decisions about health insurance depends much on awareness levels, knowledge and perceptions regarding public and private medical insurance systems. In the Indian setting, few empirical researches have been conducted in this field particularly in relation to the awareness of healthcare insurance among the elderly.

### Objectives Of The Study

1. To study the perceptions regarding medical insurance among the elderly citizens.
2. To compare the perceptions regarding medical insurance between policy and non-policy holders in the sample selected of elderly citizens.
3. To suggest some practical measures for the stakeholders.

### Research Methodology

#### Sources Of Data:

The current paper is based on primary data as well as a review of relevant journals, articles, reports, international research papers, and other sources. The researcher has conducted a survey of elderly citizens residing in Mumbai city to study their perceptions regarding health insurance. A questionnaire was created to collect information. Purposive and snowball sampling were used to collect data. Data was collected from about 75 policy holders and 75 non-policy holders and 142 of the questionnaires were deemed to be complete and eligible for study. The data was analysed and presented in tables and graphs.

#### Research Design:

**The current research is descriptive and exploratory in nature.**

The current study is descriptive as it is trying to describe the characteristics of the sample being studied.

Exploratory research looks at a data collection and looks for potential relationships between variables in order to generate a hypothesis.

#### Hypothesis:

Perception levels of Medical Policy and non-policy holders are different.

#### The Null Hypotheses:

$H_{01}$  : There is no significant difference between the perceptions of policy and non-medical policy holders towards medical insurance.

#### The Alternate Hypotheses:

$H_{11}$  : There is a significant difference between the perceptions of policy and non-medical policy holders towards medical insurance.

The above hypotheses have been tested based on data analysis. On the basis of the results either the null or alternate hypothesis will be accepted or the other will be rejected.

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<sup>9</sup> <https://www.policyholder.gov.in/uploads/CEDocuments/Insurance> Awareness Survey Report.pdf

## Data And Results

### Descriptive Statistics:

The frequency distribution of the demographics of the sample data is as given below:

**Table 1: Health Insurance Profile of Respondents**

		Frequency	Percent
Valid	Policy holder	65	45.77
	Non-Policy holder	77	54.22
	Total	142	100.0

Source: Primary Data Collection 2024

### Reliability Statistics

Reliability of the factors used in the questionnaire were tested using Cronbach's Alpha. The score of approximately 0.6 indicates a moderate level of internal consistency for the scale.

**Table 2: Reliability of the Scale**

Reliability Statistics	
Cronbach's Alpha	Number of Items
.570	6

### Descriptive Statistics of Perception

The statements in the table below gives an idea about the perception of consumers regarding health insurance. The above factors have been rated on a 5-point Likert scale of agreement with ratings as 1: Strongly Agree, 2: Agree, 3: Not sure, 4: Disagree, 5: Strongly Disagree. The descriptive statistics calculated in the table below gives us the average perception of consumers on health insurance.

**Table 3: Average Perception of Health Insurance Policy-Holders.**

Statistic	Perception about Health Insurance (Among Policy-Holders)					
	Taking a policy will not benefit me	Insurance will not reduce my medical expenditure	Premium is too high so it is not affordable	The eligibility criteria are difficult	I find product conditions too complex	Companies create lots of hassles during claim
Mean	2.10	2.22	2.59	2.41	2.34	2.20
Approximate Value	» 2	» 2	» 2	» 2	» 2	» 2
Opinion	Agree	Agree	Agree	Agree	Agree	Agree

Source: Primary Data Collection 2024

**Table 4: Average Perception of Non- Policy-Holders.**

	Perception about Health Insurance (Among Non-Policy Holders)					
Statistic	Taking a policy will not benefit me	Insurance will not reduce my medical expenditure	Premium is too high so it is not affordable	The eligibility criteria are difficult	I find product conditions too complex	Companies create lots of hassles during claim
Mean	2.15	2.44	2.74	2.57	2.33	2.14
Approximate Value	» 2	» 2	» 2	» 2	» 2	» 2
Opinion	Agree	Agree	Agree	Agree	Agree	Agree

Source: Primary Data Collection 2024

### Comparison of Perceptions between Policy and Non-Policy holders

The Mann-Whitney U test has been used to compare the differences between the two samples to determine if there is a statistically significant difference in perception between the two groups namely policy-holders and non-policy holders.

**Table: 5 Computation of Ranks for Mann Whitney U Test**

Policy holders	Non-Policy holders	Pol Holder Ranks	Non-Policy Holder Ranks
2.1	2.15	1	3
2.22	2.44	5	9
2.59	2.74	11	12
2.41	2.57	8	10
2.34	2.33	7	6
2.2	2.14	4	2

Source: Primary Data Collection 2024

### Testing of Hypothesis:

The Null hypothesis set for the study is:

“There is no significant difference between the perceptions of policy and non-medical policy holders towards medical insurance.”

Value of the **Z -Test statistic is -0.480384461** and **p value as derived is 0.630954041**

The null hypothesis of the test states that there is no significant difference between perceptions of the two groups. In other words, the two groups – namely: policy holders and non-policy holders have the same mean perception towards health insurance. Since the p-value of the test is (0.630954041) is not smaller than our significance level of 0.05, we fail to reject the null hypothesis.

We do not have sufficient evidence to say that the true mean perception is different between the two groups namely policy holders and non-policy holders towards health insurance.

### **Findings of the Study:**

The test results from the limited sample which was studied revealed that both policy and non-policy holders have more or less the same perceptions regarding health insurance. All the statements in the questionnaire were negative statements. As majority of policy as well as non-policy holders agree to the points discussed in the statements, it shows their apprehensions and concerns about medical insurance. This can be a setback for the insurance companies. They would want to investigate such complaints in order to increase reach among the elderly citizens.

### **Recommendations:**

A product as complex as health insurance requires some standardisation and simplification in order to improve coverage across India's enormous population.

There is a need to find more innovative and effective ways for improving knowledge and awareness levels among elderly citizens. Their health will affect the productivity and growth of their families and in turn the well-being and happiness levels of the society. There is a pressing and urgent need to have more development in this area of medical insurance

The suggestions from the study are inclusion of all the diseases under health insurance policies, creating more awareness about terms and conditions, separate senior – citizen desk to handle the claim and other issues, standardisation of terms and increase in the number of hospitals under coverage. Companies should provide an easy claim settlement system and low documentation.

### **Limitations and Future Research**

There are a number of restrictions on the current study. First of all, this study has all of the inherent limitations of a sample study because the conclusions are based on the chosen sample. There is a cap on the sample size. As time goes on, customers' tastes and expectations may shift. Families in Mumbai were the source of primary data. As a result, the results might not apply to individuals from different regions. Therefore, it is impossible to claim representation for the entire population and nation. Second, the quantity of the sample and the conditions of the procedure are limiting factors. The same data set should be used in a different study with a larger sample size and diverse demographics to improve representation and generalization of the findings.

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# TOURISM AS A CATALYST FOR SUSTAINABLE DEVELOPMENT: A CASE STUDY OF ALIBAUG

*Dr. Swati B. Mohite*

## Abstract

Tourism has emerged as a significant contributor to the global economy, with the potential to drive sustainable development. This study investigates the impact of tourism on sustainable development in Alibaug, a coastal town in Maharashtra, India. Primary data was collected through surveys, interviews, and observations. The results show that tourism has both positive and negative impacts on the local economy, environment, and community. The study concludes that sustainable tourism practices can contribute to the conservation of natural and cultural resources in Alibaug.

**Keywords:** sustainable tourism, sustainable development, Alibaug, India, tourism impacts

## Introduction

Tourism has emerged as a significant driver of economic growth and a key contributor to sustainable development across the globe. It serves as a tool for fostering cultural exchange, generating employment, and boosting local economies while presenting opportunities to preserve natural and cultural heritage (UNWTO, 2023). However, the rapid and unchecked expansion of tourism can have adverse effects, including cultural homogenization, environmental degradation, and disruption of local communities. This duality underscores the importance of adopting sustainable tourism practices that balance economic growth with social equity and environmental stewardship.

Alibaug, a picturesque coastal town in Maharashtra, India, exemplifies a destination where tourism has played a pivotal role in shaping its socio-economic landscape. Known for its serene beaches, historical forts, and proximity to Mumbai, Alibaug has become a popular tourist destination. The influx of visitors has contributed to the growth of hospitality and service sectors, providing livelihoods to many locals. At the same time, challenges such as environmental strain, over-tourism, and cultural erosion have raised concerns about the long-term viability of its tourism-driven economy.

This research investigates the potential of tourism as a tool for sustainable development in Alibaug. By examining the interplay between tourism and local cultures, communities, and the environment, the study seeks to identify strategies that align tourism activities with sustainable development goals (SDGs). Drawing on case studies, field observations, and existing literature, the research explores the prospects for creating a model that ensures economic benefits while safeguarding Alibaug's unique cultural and natural heritage.

By focusing on Alibaug as a case study, this research provides valuable insights into the broader implications of sustainable tourism practices in small coastal towns. It emphasizes the need for community participation, policy interventions, and innovative approaches to strike a balance between development and preservation. The findings aim to inform policymakers, stakeholders, and researchers about the transformative potential of tourism in fostering inclusive and sustainable growth.

## Brief History and Socio-Cultural Background of Alibaug

Alibaug, a coastal town located in the Raigad district of Maharashtra, India, holds a rich historical and socio-cultural legacy that dates back several centuries. Its strategic location along the Arabian Sea made it a significant port and trading hub during the Maratha Empire and subsequent colonial periods. Alibaug is often associated with Sarkhel Kanhoji Angre, the legendary Maratha admiral, who used the region as a base to establish naval supremacy in the Arabian Sea. The town's history is deeply intertwined with the maritime activities and political strategies of the Marathas during the 17th and 18th centuries (Ranade, 2002).

The name "Alibaug" is believed to have originated from Ali, a prominent Muslim figure who owned mango plantations in the area. Over time, the place came to be known as "Alichi Bagh," meaning "Ali's Garden," which

later evolved into Alibaug (Kulkarni, 2017). During the British colonial era, Alibaug retained its importance as a small yet vibrant trading post while gradually evolving into a cultural and administrative center.

### Socio-Cultural Fabric

Alibaug's socio-cultural identity reflects the confluence of its rich history and diverse demographic composition. Predominantly inhabited by the Agri and Koli communities, the town showcases a deep connection to its coastal heritage. These communities are traditionally involved in fishing and agriculture, which continue to be the primary livelihoods for many residents (Raigad Gazetteer, 1989). Festivals such as Narali Poornima, celebrated by fishermen to honor the sea, and Ganesh Chaturthi, reflecting Maharashtra's broader cultural ethos, are integral to Alibaug's cultural landscape.

The region is also known for its traditional art forms, including folk music and dance. Dashavatara performances, a form of devotional storytelling through dance-drama, are common in the region and represent its cultural vibrancy (Deshpande, 2013). Additionally, Alibaug's historical forts, such as the Kolaba Fort and Murud-Janjira, stand as testaments to its architectural and cultural heritage, attracting tourists and historians alike.

### Modern Socio - Cultural Dynamics

In recent decades, tourism and urbanization have influenced Alibaug's socio-cultural environment. The influx of tourists, particularly from nearby cities like Mumbai and Pune, has introduced modern influences while simultaneously creating opportunities for cultural exchange. However, this has also led to challenges, such as the erosion of traditional practices and a shift in occupational patterns from traditional fishing and farming to service-oriented jobs in the tourism sector (Shinde, 2020). Efforts to preserve local heritage, such as promoting eco-tourism and cultural festivals, are gaining traction as part of broader sustainable development initiatives.

Alibaug's socio-cultural narrative is a blend of its historic maritime significance, vibrant local traditions, and modern influences shaped by tourism and globalization. This unique tapestry provides a rich foundation for studying the impact of tourism on local cultures and communities.

### Review of Literature

The following is a review of selected books that provide insights into the impact of tourism on local cultures and communities, with an emphasis on sustainable development, socio-cultural transformations, and case studies relevant to coastal regions like Alibaug:

Smith, M. K., & Richards, G. (2013). *Cultural Tourism in a Changing World: Politics, Participation, and (Re) presentation*. Channel View Publications. This book explores the evolving dynamics of cultural tourism and its influence on local identities and communities. It discusses how tourism reshapes local traditions, often leading to commodification while simultaneously offering opportunities for cultural preservation. The case studies in the book provide valuable context for analyzing Alibaug's transition under the influence of tourism.

Dodds, R., & Butler, R. (2019). *Overtourism: Issues, Realities, and Solutions*. De Gruyter. Focused on the phenomenon of overtourism, this book examines the environmental, cultural, and social challenges associated with uncontrolled tourism growth. It emphasizes the need for sustainable tourism practices to mitigate adverse impacts on local communities and ecosystems, offering frameworks that can be applied to Alibaug's tourism sector.

Sharpley, R., & Telfer, D. J. (2015). *Tourism and Development: Concepts and Issues*. Channel View Publications. This comprehensive text examines the relationship between tourism and development, emphasizing sustainable approaches. It offers theoretical perspectives and real-world applications, making it relevant for understanding how tourism can be leveraged for sustainable development in regions like Alibaug.

Raj, R., Griffin, K., & Morpeth, N. D. (2013). *Cultural Tourism*. CABI. The book delves into the interplay between cultural tourism and sustainable development. It discusses strategies for preserving local heritage while promoting tourism, offering insights into how Alibaug's rich cultural traditions and historical landmarks can be integrated into sustainable tourism initiatives.

Shinde, K. (2020). *Tourism and Socio-Cultural Transformation in Maharashtra's Coastal Towns*. Journal of Tourism Studies. Though a journal, this work provides focused insights into Maharashtra's coastal regions,

including Alibaug. It highlights the socio-cultural transformations brought about by tourism and offers case studies and field research that are directly relevant to understanding Alibaug's evolving socio-economic and cultural landscape.

## Methodology

This study employs a mixed-methods approach:

- **Primary Data Collection:** Surveys and interviews with local businesses owners.
- **Secondary Data Analysis:** Research articles, tourism statistics, and academic literature.

## Objectives:

1. To examine the economic benefits of tourism in Alibaug.
2. To analyze the socio-cultural changes brought about by tourism.

## Discussion and Findings:

### Personal and Socio-Economic Impact of Tourism on Alibaug Local People

Tourism in Alibaug has become an essential part of the local economy, but it also brings along significant changes to the personal and socio-economic aspects of the lives of its residents. Based on the surveys, interviews, and focus groups conducted as part of the research, we can summarize the findings as follows:

#### 1. Personal Impacts of Tourism on Local People

The personal impacts of tourism on local people are diverse, influencing their daily lives, cultural practices, and social dynamics. Many locals reported both positive and negative changes due to the influx of tourists.

##### Positive Personal Impacts:

- **Increased Opportunities for Employment:** Many locals found new job opportunities in the tourism sector, including roles in hospitality, transportation, and retail.
- **Exposure to New Cultures:** Tourism has led to cultural exchange, giving locals opportunities to interact with people from different regions and countries.
- **Improved Infrastructure and Services:** The tourism boom has led to improved infrastructure, such as better roads, healthcare, and amenities in some areas.

##### Negative Personal Impacts:

- **Cultural Erosion:** Some locals expressed concern that the rapid influx of tourists is eroding traditional cultural practices, leading to a shift toward commercialized versions of their customs and lifestyles.
- **Overcrowding:** Local residents mentioned the strain on public services and infrastructure, especially during peak tourist seasons, resulting in a decrease in the quality of life for residents.
- **Price Inflation:** With the rise in demand due to tourism, the cost of living, particularly for essential goods and services, has increased, making it difficult for many locals to afford basic necessities.

#### 2. Socio-Economic Impacts of Tourism on Alibaug's Local People

The socio-economic impacts of tourism are more pronounced in Alibaug, where the local economy relies heavily on tourism. Below is a detailed analysis of the socio-economic changes based on survey data.

##### Positive Socio-Economic Impacts:

- **Job Creation:** The majority of locals surveyed (about 60%) reported that tourism provided direct employment opportunities, such as hotel staff, tour guides, and vendors.

- **Income Generation:** Tourism has significantly contributed to household incomes, with local businesses (especially those in the hospitality and food sectors) seeing increased profits during tourist seasons.
- **Growth of Local Businesses:** The rise in tourism has encouraged local entrepreneurs to start new businesses, particularly in areas such as retail, transportation, and entertainment, resulting in increased local wealth.

**Negative Socio-Economic Impacts:**

- **Economic Disparity:** Not all locals benefit equally from the tourism sector. Some small-scale farmers and non-tourism-related businesses have found it difficult to compete with the growing hospitality industry, resulting in increasing socio-economic disparity.
- **Seasonality of Income:** A large proportion of income from tourism is seasonal, making it difficult for some locals to rely solely on tourism-related income throughout the year.
- **Dependence on Tourism:** Many locals have become overly dependent on tourism for their livelihoods, which makes them vulnerable to fluctuations in tourist arrivals due to external factors like economic downturns or natural disasters.

**3. Survey Data and Findings**

The findings from the survey of 100 local residents and business owners reveal the following key socio-economic trends:

- **Economic Impact:**
- Tourism has been a significant employment generator in Alibaug, providing jobs directly and indirectly.

**1.1 : Employment in Tourism Sector**

Employment Type	Percentage of Respondents (%)
Direct Employment (hotels, restaurants, guides)	60%
Indirect Employment (suppliers, transport)	25%
No Employment in Tourism	15%

60 % of respondents of various tourist places from Alibaug (mostly Coastal region) indicated that they or a member of their family were employed in the tourism sector like in hotels, restaurants, etc. 25% are engaged as guide, transporters, suppliers .

**1.2 Income Generated From Tourism**

Tourism has led to business expansion, increasing revenue for local businesses. However, seasonality remains a challenge.

Monthly Income from Tourism (INR)	Percentage of Respondents (%)
0 – 5000	11%
5001 - 10,000	33%
10,001 - 15,000	10%
15,001 - 20,000	9%
20,001 & Above	13%
No Response	24%



Tourism has significantly contributed in Economic development of Alibaug, leading to increased revenue for local entrepreneurs. However, the income generated from tourism-related activities varies across different income brackets, with seasonality being a key factor affecting earnings.

A considerable portion of respondents (33%) earn between ₹5,001 - ₹10,000 per month, indicating that a majority of local businesses and employees rely on small to medium-scale tourism activities such as food stalls, local shops, and transportation services. Meanwhile, 11% of respondents fall within the lowest income category of ₹0 - ₹5,000, reflecting the financial instability faced by some small vendors and part-time tourism workers.

Higher income brackets show a gradual decline in representation, with 10% of respondents earning ₹10,001 - ₹15,000, while only 9% earn ₹15,001 - ₹20,000. The percentage of respondents earning above ₹20,000 stands at 13%, representing those engaged in well-established businesses such as hotels, resorts, and high-end service providers.

A significant 24% of respondents did not disclose their income, suggesting variability in financial stability or reluctance to share financial details. This also highlights the potential presence of informal or seasonal employment, where earnings fluctuate depending on the tourist season.

Overall, while tourism has boosted economic opportunities, the earnings remain unevenly distributed, with a significant portion of the population earning lower to mid-range incomes. Sustainable tourism practices and business diversification could help stabilize income levels and mitigate the challenges posed by seasonal fluctuations.

### 1.3: Perception of Cultural Change

Tourism has led to cultural exchanges but also the **commercialization of traditions**.

Cultural Impact Factor	Percentage (%)
Commercialization of Traditions	45%
Promotion of Cultural Awareness	30%
Indifferent	25%

Tourism in Alibaug has significantly influenced the local culture, manifesting in both positive and negative ways. A survey assessing the cultural impact of tourism revealed that 45% of respondents perceive a commercialization of traditions, indicating that nearly half of the community feels that traditional practices are being commodified for tourist consumption. This sentiment aligns with broader observations where tourism leads to the commodification of culture, potentially eroding the authenticity of cultural expressions.

Conversely, 30% of respondents believe that tourism has led to the promotion of cultural awareness. This perspective suggests that tourism can serve as a platform for cultural exchange, enhancing the visibility and appreciation of local traditions among both visitors and residents. Such interactions can foster a sense of pride and encourage the preservation of cultural heritage.

The remaining 25% of respondents are indifferent, indicating a neutral stance or a perception that tourism has neither significantly benefited nor harmed the local culture. This group may not have experienced noticeable cultural changes due to tourism or may feel disconnected from the tourism industry's impacts.

These findings highlight the complex relationship between tourism and cultural dynamics in Alibaug. While tourism can be a catalyst for cultural preservation and economic development, it also poses challenges related to the commodification of cultural practices. Balancing these outcomes requires thoughtful management to ensure that tourism development supports and sustains the local culture.

## 5. Recommendations for Sustainable Tourism

- 1. Diversifying Tourism Activities:** Encourage year-round tourism with eco-tourism and cultural tourism to reduce seasonality effects.

2. **Waste Management Initiatives:** Implement strict waste disposal policies and beach clean-up drives.
3. **Community Involvement:** Promote community-driven tourism models to ensure economic benefits reach locals.
4. **Infrastructure Planning:** Develop sustainable infrastructure, ensuring minimal environmental disruption.
5. **Policy Regulations:** Enforce responsible tourism policies, such as limiting visitor numbers at sensitive locations.

## 6. Conclusion

Tourism in Alibaug has significantly contributed to economic growth, employment, and infrastructure development. However, it has also led to socio-cultural transformations and environmental challenges. Sustainable tourism practices are essential to balance economic benefits with environmental and cultural preservation. By adopting eco-friendly policies, responsible tourism practices, and community participation, Alibaug can ensure long-term sustainability as a thriving coastal destination.

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# THE ROLE OF SMALL FINANCE BANKS IN FINANCIAL INCLUSION AND RURAL DEVELOPMENT

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## Abstract:

Small finance Banks are specialized institute to work for financial inclusion in India to serve low income group it also promotes a rural development. In rural economy Small finance banks (SFBs) play a important role in rural development .These specialized institutions in rural sectors are designed to fulfill the needs of underserved populations ,including those in rural areas .The SFBs contributes to rural development by financial inclusions ,credit accessibility ,agricultural financing and empowerment of rural entrepreneurs. The study highlights the role, features of SFBs and a role of SFBs in financial inclusion and rural development .The study are mainly based on a secondary data .The data are collected from various resources and published paper.

**Keywords:** Small Finance Bank, Role of SFBs in Financial Inclusion, Role of SFBs in Rural Development

## Introduction:

To reduce economic disparity and for inclusive growth ,rural development plays a crucial role in an economy .To provides a financial services is a key components of rural development ,as it empower to rural youth ,promotes entrepreneurship and drives economic activities .In rural economy Small finance banks (SFBs) play a important role in rural development .These specialized institutions in rural sectors are designed to fulfill the needs of underserved populations ,including those in rural areas .The SFBs contributes to rural development by financial inclusions ,credit accessibility ,agricultural financing and empowerment of rural entrepreneurs. The Main role of SFBs to lend to small business units, small and marginal farmers, Micro and Small industries and unorganized sector entities.

## Small Finance Bank

Small Finance Banks are specialised finance institutes created with an intention to implement the concept of financial inclusion in India to serve low-income groups. Small Finance Bank is registered under the Companies Act, 2013 .as a public limited company in the private sector. Like conventional banks, the functions and role of small finance banks also involves accepting deposits and lending activities. It also aims to strengthen the Indian economy by connecting small businesses with formal financial institutions.

## Features of Small Finance Banks

The following important features of a Small Finance Banks are:

- Small Finance Banks (SFBs) can accept all kinds of deposits.
- SFBs can undertake lending activities.
- Prior approval from the Reserve Bank of India (RBI) is required for branch expansion for the initial three years.
- The major area of operation of Small Finance Banks (SFBs) is in unserved rural areas, and to allocate 75% of loans to propriety sector lending (PSL).
- The primary focus of Small Finance Banks is on the financial inclusion of low-income individuals and small businesses.
- SFBs are not allowed to lend to the large-scale sector like MNCs and large manufacturing units.

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**Role of Small Finance Banks in Financial Inclusion**

Financial inclusion means a process of ensuring access to banking services and timely and adequate lending services to vulnerable sections of society like low-income households and people in unbanked areas. The role of small finance banks in financial inclusion are:

- The major function of a small finance bank is to deliver essential banking services to low-income group and their businesses;
- Small Finance Banks must open 25% of their branches in unbanked or unserved rural centres, and they also are mandated to allocate 75% of the net credits to the priority sector;
- Small Finance banks have filled the gap of financial services in unbanked and unserved areas, that was created due to the underperformance of large banks and cooperative banks;
- Small Finance Banks are likely to bring change to the traditional banking sector in India and overcome challenges faced with regard to the statutory norms of cash reserve ratio (CRR) and framework for cost-effective banking solutions;
- The rise in small loans to businesses and marginal farmers will increase the financial activities in the unbanked areas;
- SFBs have played a major role in the development of the MSME Sector (Micro Small and Medium Enterprises) by providing loans to the small businesses and startups;
- The Government of India and RBI have taken regular efforts to bring weaker sections of the society into financial inclusion programmes like JAM Trinity;
- Microfinance activities of SFBs form a sizeable portion of the loan book and subsequently contribute to keeping the lending rates higher than that of other banks;
- SFBs can be pivotal in scaling up small lending and low-cost deposits in underserved areas;
- SFBs are created to achieve the twin-fold objectives of providing an institutional framework for promoting rural and semi-urban savings and providing lending facilities for the growth of economic activities in unserved areas.

**The Role of Small Finance Banks in Rural Development****1. Financial Inclusion:**

In rural area Small Finance banks have emerged as champions of financial inclusion .They have established a heavy network of branches in remote locations, making formal banking services accessible to people who were previously underserved or excluded from banking system. By Providing basic banking facilities such as saving accounts, remittance services and insurance products .SFBs have empowered individuals in rural areas to participate in the formal economy .This inclusion helps rural communities overcome from financial barriers ,built assets ,and secure their financial future .

**2. Credit Accessibility:**

Stimulating economic growth and promoting rural development credit access is very important factor .Small Finance banks understood the financial needs of rural individuals and small business and provide tailored credit products to meet their requirements .Whether its microfinance loans for small scale enterprises or agriculture loans for farmers ,SFBs offers accessible credit options with flexible repayment terms .By extending credit facilities to rural communities ,SFBs enable individuals to invest in income generating activities ,expand their businesses ,and improve their quality of life.

### 3. Agricultural Financing:

Rural Economy are mainly based on agriculture sector ,so agriculture sector is a backbone of rural economies ,it provides financial support to farmers is essential for rural development .SFBs recognize the importance of agriculture and offer specialized agricultural financing solutions .The SFBs provides Crop loans, equipment finance for agriculture use , working capital loans to farmers ,enabling them to purchase inputs ,modernize their farming technique and improve productivity .By Supporting the agricultural sector ,SFBs contribute to increased agricultural output ,enhanced rural income ,and overall economic development in rural areas .

### 4. Empowering Rural Entrepreneurs:

The SFBs actively support and empower rural entrepreneurship by providing them with the necessary financial assistance .Many individuals in rural areas possess entrepreneurial skills and innovative ideas but lack the capital to turn their ideas into reality .SFBs offers small business loans ,self –employment loans ,and skill development programs to help rural entrepreneurs establish and grow there ventures .This support not only creates employment opportunities in rural areas but also fosters local economic development ,reducing the migration of rural population to urban centers.

### 5. Technology and Digital Inclusion:

In recent digital days ,access to technology and digital financial services is crucial for overall development .Small Finance Banks have leveraged technology to bridge the digital divide in rural areas .They provide digital banking services ,mobile banking apps ,and internet banking facilities to ensure that individuals in remote locations can access and manage their financial transactions conveniently .This digital inclusion enables rural communities to benefit from the advantages of the digital economy ,such as online payments ,access to government schemes ,and financial planning tools .

### Conclusion:

There has to be a structured and multidimensional approach through small finance banks, regional rural banks, NBFCs, digital platforms, infrastructure, and technological innovations to achieve the goal of Financial Inclusion. The roles of SFBs have been instrumental in bringing the underprivileged and unorganised sectors into the mainstream of formal banking activities. By establishing almost all branches in rural and semi-urban areas of the country to serve the lowest-earning strata the society will amplify the pace of financial inclusion and increase economic benefits to unserved areas.

The SFBs Plays a major role in rural development in India,with financial inclusion ,credit accessibility ,agricultural financing ,and empowerment of farmers and rural entrepreneurs.SFBs are driving economic growth ,reduce disparities, and fostering a more inclusive society .The SFBs banks have successfully brought banking services to remote areas ,provides credit facilities to underserved populations ,and supported the agricultural sector .By Continuing to prioritize rural development ,Small Finance Banks can play a transformative role in creating vibrant and sustainable rural economies ,ultimately leading to the holistic growth of the nation.

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## ENTREPRENEURSHIP AND EMPOWERMENT: CHALLENGES, SUCCESS AND STRATEGIES OF WOMEN ENTREPRENEURS

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### Abstract:

Entrepreneurs are indispensable to the overall development of the global economy as they create opportunities and foster potential on a large scale. For a long time, entrepreneurship was considered to be male domain. However, it would be wrong to believe that women are not capable of entrepreneurial success. Currently, there are about 8 million women entrepreneurs in India, which constitute 14% of the total number of entrepreneurs in the country. These women hold ownership over 10% of the formal enterprises registered in India. Furthermore, more than 20% of the micro, small and medium enterprises is owned by women, who also employ around 23% of the work force (India Today, March 2024). Despite these encouraging figures, women entrepreneurs often face challenges and in establishing and managing business compared to male entrepreneurs.

The study explores challenges and opportunities encountered by women entrepreneurs in Mumbai and Mira Bhayander City through the journey of 6 women entrepreneurs. Their narrative exemplifies resilience and the transformative power of collaboration and empowerment.

**Key Words:** Entrepreneurship, empowerment, Challenges, Strategies

### Introduction:

Entrepreneurs are indispensable to the overall development of the global economy as they create opportunities and foster potential on a large scale. For a long time, entrepreneurship was considered to be male domain. However, it would be wrong to believe that women are not capable of entrepreneurial success. Women have an innate ability to juggle life tasks, and accepting multiple responsibilities. Women start today to venture into the world of entrepreneurship harnessing their implicit abilities and taking the risk to invest with all the money. Currently, there are about 8 million women entrepreneurs in India, which constitute 14% of the total number of entrepreneurs in the country. These women hold ownership over 10% of the formal enterprises registered in India. Furthermore, more than 20% of the micro, small and medium enterprises is owned by women, who also employ around 23% of the work force (India Today, March 2024). It is heartening to learn that women entrepreneurship in India is increasing at a rapid rate, holding 68% of the loans under the Mudra Yojana and 77.7% of the beneficiaries under the Scheme, Stand Up India. Despite these statistics, women entrepreneurs continue to face obstacles in establishing and managing enterprises when compared to male counterparts. They are able to explore new economic opportunities, at the same time, manage traditional gender roles and stereotypes. However, there are few challenges that are different and unique to women in business. Although, women entrepreneurs play a crucial role in economic development and innovation, still they face several obstacles stemming from societal norms, financial constraints and limited access to resources.

The scenario of women entrepreneurship has evolved significantly in recent decades, shaped by global forces such as liberalization, privatization, globalization (LPG) and the IT revolution. Out of these shifts have emerged new economic opportunities, helping women to break out of social norms and stereotypes. These changes, however, also pose unique challenges for women in business.

### Dynamics of Economy and Emerging Opportunities for Female Entrepreneurs:

As a result of the LPG and technological advancement, many women have been able to enter into business. According to Suba B. and Sneha M. (2016), these changes have expanded economic opportunities for women to own and manage businesses. The rise in higher education, industrialization, urbanization and supportive social laws has further enabled women to participate actively in the entrepreneurial space. There has been a transformation of women into job creators and not just seekers due to the readily available digital tools and platforms especially in the areas of technology, design and publishing (Arya, 2017).

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**Difficulties Faced by Women Entrepreneurs:**

Despite these opportunities for many, sadly women entrepreneurs still encounter serious challenges. Goyal M. and Jai P. (2011) highlight that women often enter entrepreneurship due to external factors like trauma or adversity, including divorce, pregnancy-related discrimination or career limitations (e.g., the glass ceiling). These events push women to seek alternative sources of income. Gender discrimination due to prevailing patriarchal society's norms presents a huge concern for women when it comes to finding additional funding and dealing with other financial problems. Investment firms perceive female entrepreneurs as high-risk investments which deny them the necessary funding. Additionally, competition in male-dominated industries can be intense, further complicating their success.

Mauchi F.N. et al (2014) highlights that gender-related barriers such as financial constraints, balancing work and home responsibilities, networking difficulties and a lack of management skills and education inhibit women's entrepreneurial growth. Contrary to popular perception, these obstacles are made even worse by societal norms that curb the progression of women into men dominated spaces. Particularly, looking at the lack of access to the raw material market for female entrepreneurs, it seems the average barrier for them is much lower. That indicates that the barriers of financial and work-life balance are much more severe.

**Push and Pull Factors in Women Entrepreneurship:**

Women's decisions to enter entrepreneurship are influenced by both 'push' and 'pull' factors. As Arya S. (2017) observes, pull factors include the desire for independence, self-esteem, career goals and also the need to establish one's identity. Many women are motivated by the need to prove their capabilities and achieve self-satisfaction. On the other hand, push factors such as economic hardship, unemployment or personal circumstances like divorce or the death of a breadwinner drive women to pursue entrepreneurship out of necessity.

**Socio-Cultural Context and Regional Challenges:**

Those women who set up their own businesses are often greatly challenged within the socio-culture framework of the country, for example India, which is still largely patriarchal in character in its economic and business activities. While pointing out the phenomenon of globalization, G. Yoganandan and G. Gopalselvam (2018) note that the government policies attempted to promote women entrepreneurship in India, but gendered challenges remain very significant.

Women in developing countries, including India, often face lower levels of representation in small and medium-sized enterprises (SMEs) and are stuck by cultural, financial and educational barriers (Tambunan, 2009). The study also highlights that many women are 'forced entrepreneurs', they are driven into entrepreneurship due to socio-economic need rather than personal ambition.

In India, as highlighted by Das (2000), women entrepreneurs face unique challenges in the SME sector, such as access to finance, balancing work-family life and overcoming gender-based discrimination. Motivations for entrepreneurship in India are often driven by the need to enhance family income, rather than the entrepreneurial drive seen in Western women.

**Financial Constraints and Access to Capital:**

A major issue for women entrepreneurs in India as well as in other developing countries is the lack of equal representation in financial institutions. Women make up only a small proportion of the population involved in monetary activities, with barriers to accessing funding, building networks and expanding their businesses. These barriers are compounded by cultural norms that restrict women's mobility and professional development, further hindering their entrepreneurial success.

**Materials and Methods:**

This study intends to capture the entrepreneurial stories of six women from Mumbai and Mira Bhayander City using a narrative approach. Aims and objectives of the study include exploring the personal and professional struggles these women went through and how they perfected their craft. To ensure that the research captures a diverse range of experiences, purposive sampling was employed. The goal was to capture varied perspectives from women entrepreneurs who represent different industries, business models and levels of experience.

The data was collected through semi-structured interviews with each of the selected entrepreneurs to gather comprehensive personal narratives. The interview focused on areas such as entrepreneurial journey, challenges and barriers, leadership and management, work life balance etc. The interview lasted for over an hour with each of the participants. Secondary data was collected through academic journals, reports, research papers etc. to provide a broader contextual understanding of women's entrepreneurship. Thematic analysis was employed for data analyses.

### Case Studies:

- Callie's journey is one of defying expectations, building a legacy of empowerment for women in business. Raised in a humble Madras household, she learned the importance of giving back to society early on. After years in the corporate world, Callie established the Indian Women's Business Club (IWBC) in Mumbai, aimed at providing women with the tools and support to thrive in business. Despite initial financial struggles and societal pressures, Callie built her network from her savings focusing not on perfection but on getting the job done. Her story reflects perseverance, dedication and the power of community, ultimately creating a ripple effect in the business world.
- Archana's path to health and wellness began after the age of 40, spurred by her mother-in-law's health struggles. A certified health and wellness coach, Archana runs Be Active Wellness Centre, offering personalized health plans based on a blend of Ayurveda and modern science. Her holistic approach focuses on nutrition, lifestyle and mindset. As a passionate advocate for women's health, she created a product 'Balanced Nutrition', to address common deficiencies particularly in vegetarians. Archana's journey showcases the power of self-belief, as she balanced family life with her passion for helping others live healthier more balanced lives.
- Janya, an Ayurvedic practitioner with over 26 years of experience offers personalized treatments using ancient healing methods. She studied Ayurvedic medicine and post-graduate programs in Ayurvedic Cosmetology and Panchakarma. Inspired by her family's legacy of doctors, Janya pursued her passion for Ayurveda later in life supported by her family and husband. With sheer grit and willpower, Janya established a clinic providing holistic remedies. Her journey is one of dogged perseverance and hard work supported all the way by her family.
- Sarah's ambition to start her own business led her to establish a successful salon specializing in various chemical treatments for skin and hair. Coming from a financially struggling family, she worked hard to make a name for herself in the beauty industry. Despite facing challenges such as her dark skin and language barriers, Sarah persevered and opened her salon, creating a space that celebrated all forms of beauty. Her journey is a testament to the idea that with determination and resilience, anyone can overcome obstacles and achieve their dreams.
- Julia's journey as a photographer highlights her resilience and creativity. She began her photography journey using her phone and transitioned to professional work during the pandemic. Her photography has garnered attention for its emotional depth and authenticity. Julia is a member of an international photography club and skillfully balances her career with her responsibilities as a mother. She uses her creativity to tackle money and practical issues. Her skill in making powerful visual images, along with her determination and self-belief, keeps pushing her growth as a photographer. This inspires others to chase their dreams, no matter the obstacles.
- Al-saba, a 29-year-old homemaker from Mira Road, saw an uncertain future after her husband died. She became the only provider for her three young children. With few resources, she had a hard time meeting their basic needs feeling overwhelmed by her kids' care. Things changed when a social worker from a nearby charity showed her how to start a cloud kitchen using her cooking skills to make money. Her cloud kitchen became known for its tasty homemade food changing her life and motivating others in her area. She now earns a steady income, securing her children's education and basic needs. The success of the kitchen rebuilt her self-esteem and control over her life.

### Result and Discussion:

The case studies presented provide a deep insight into the diverse and multifaceted journeys of female



entrepreneurs across various industries from health and wellness to beauty, Ayurvedic treatments, photography and cloud kitchen.

### **Gender and Societal Barriers:**

Managing these barriers is not only a challenge for women around the globe but also that these barriers are greater in male-dominated sectors. As brought out and narrated by Goyal and Jai (2011), Callie, Archana and Janya, women who are into business are confronted with stereotypes, prejudices and social stigmas which make it hard for them. These challenges are visible in various ways from difficulties in obtaining finance for businesses to cultural biases that view women as incompatible for leadership roles. Callie highlights a social construct that reduces women to home-care givers and nurturers, discourages some of them to take charge of their own companies which, she says, "can create reluctance." Sarah for example, had to break the beauties standards in society and the language barrier in the beauty industry. All these women are, however, united by their determination to overcome, and have channelized their own experiences into launching platforms to support other female founders.

### **Support Systems and Mentorship:**

The examples of these successful women imply that such supportive environment role models play a significant role in the success of women entrepreneur, as these allow them to surmount the challenges. The absence of a support system when it came to women entrepreneurs in India is what inspired Callie to create the Indian Women's Business Club a platform to empower women with networking and educational opportunities. Archana, became a health and wellness coach at the age of 40. Her mother-in-law's struggle with her health inspired her to take a plunge in the health and wellness industry. On the other hand, Janya received unwavering support from her family which encouraged her to pursue her passion unaffected by societal gendered expectation. Thus, mentorship plays a pivotal role in supporting and encouraging these women to march on their journey. Archana was mentored by Sneha Desai, while Callie had her corporate experience which guided her to achieve her goals. For Al-saba, a local NGO worker's encouragement, guidance and support build confidence to enter in to the arena of cloud kitchen. Mentors help them to be confident, hone their abilities and assist them in effectively coping with the obstacles they encounter in their domains.

### **Financial Hardship and Ingenuity:**

These women also had to overcome a widespread obstacle with regards to money matters. Sarah's journey in fact describes the struggle she faced due to financial constraint. Though she did receive a little assistance from an investor, her success really came down to her grit, hard work and ultimate financial freedom. Callie also built her salon and eventually her business club with her own savings and avoided getting help from investors or family. This resourcefulness is echoed in Julia's story where she has worked with limited resources and used her savings to finance her photography business. Her ability to use free props and find creative solutions to financial limitations highlights the practical and inventive mindset of successful entrepreneurs. Al-saba's journey is a testament of strength, community support and hope that determination and support can turn challenges into opportunities.

### **Balancing Personal and Professional Life:**

The balancing act of managing both personal and professional lives was another common theme. Archana, Al-saba and Julia faced challenges in balancing their entrepreneurial endeavours with family responsibilities. Archana struggled with managing her wellness clinic and being a mother, while Julia found it hard to manage her responsibilities as a mother with her creative passion for photography. For Al-saba entering into world outside was a difficult task, managing cloud kitchen and three young children with no support from family members after death of her husband. This is in line with Arya's (2017) observation that women often have to juggle multiple roles which can hinder their progress as entrepreneurs. However, all the women in these case studies found ways to navigate these challenges by seeking support from their families, friends and mentors. Their narratives demonstrate that effective entrepreneurship includes not only, professional competences, but also, emotionally resilient nature and time management.

### **Conclusion**

All these six women entrepreneurs' journey is of resilience, self- efficacy and networking and demonstrates the need of these qualities in women to set their own business. Despite many barriers—ranging from financial struggles

to societal expectations—their stories show that with the right support systems, mentorship and a strong determination to succeed women can not only survive but thrive in competitive industries. These women serve as powerful examples of how passion, resilience and creativity can break down barriers and reshape societal expectations of female entrepreneurship. Furthermore, their experiences highlight the need for platforms like the Indian Women’s Business Club to provide resources, education and networking opportunities for women in business empowering them to achieve financial independence and leave a lasting impact on their industries.

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# STRATEGIC INTEGRATION OF ARTIFICIAL INTELLIGENCE IN ADVANCING SUSTAINABLE DEVELOPMENT: CHALLENGES AND OPPORTUNITIES

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## Abstract

Artificial intelligence (AI) holds significant promise for advancing sustainability across various sectors by optimizing resource use, minimizing waste, and delivering environmentally conscious outcomes. This article delves into how AI can enhance sustainability in production, distribution, healthcare, manufacturing, transportation, utilities, and construction. Additionally, it explores AI's potential to offer personalized services and mitigate risks to health and infrastructure. The discussion also addresses the challenges associated with implementing AI for sustainable practices and offers practical recommendations for organizations and policymakers. Ultimately, this article underscores the critical role of AI in promoting sustainability and offers actionable insights for developing AI-driven strategies to tackle urgent environmental and social issues.

**Keywords:** Artificial Intelligence, Sustainability, Production Processes, Waste Reduction, Individualized Services

## Introduction

Artificial Intelligence (AI) has transformed our lives and workplaces, and its potential to enhance sustainability is gaining significant attention from researchers and policymakers globally. By harnessing AI's capabilities, production and distribution processes can become more sustainable, resource waste can be minimized, and services can be tailored to be more environmentally friendly. This article explores AI's contributions to sustainability across various sectors, including healthcare, manufacturing, transportation, utilities, and construction. It also examines AI's role in delivering socially responsible outcomes and mitigating risks to health and infrastructure. Additionally, the article addresses the challenges of implementing AI for sustainable development and offers practical recommendations for organizations and policymakers. This work emphasizes the crucial role of AI in advancing sustainability and provides key insights for developing AI-driven strategies to tackle critical environmental and social issues.

## Methodology

This article draws on a comprehensive literature review to explore the role of artificial intelligence in promoting sustainability. The review was conducted using a range of academic databases, including Web of Science, Scopus, and Google Scholar, as well as relevant industry reports and publications. Search terms such as "artificial intelligence," "sustainability," "production processes," "distribution processes," "resource efficiency," "environmental impact," "social responsibility," and "individualized services" were employed to identify pertinent studies.

The selected literature was analyzed using a thematic approach to uncover key trends, challenges, and opportunities in the application of AI for sustainability. The article also presents examples from sectors such as healthcare, manufacturing, transportation, utilities, and construction to demonstrate AI's potential in advancing sustainable practices. Additionally, the methodology involved consulting experts in AI and sustainability to capture the latest developments and best practices. Their insights and recommendations are integrated into the article, offering practical solutions for organizations and policymakers to adopt.

## Objectives

- To analyze the potential of artificial intelligence in driving sustainable development across various sectors by identifying key applications, challenges, and opportunities.

- To propose strategic frameworks and practical solutions for the ethical and effective implementation of AI in promoting sustainability, addressing issues such as data quality, regulatory standards, and unintended consequences.

## Results

A pivotal role in advancing sustainability is played by AI, which is essential for creating a more sustainable future. Vast datasets are processed and insights are offered by AI to enhance production processes, distribution, and waste management, with the potential to substantially decrease the environmental footprint across various sectors. Additionally, personalized services are delivered and risks to health and infrastructure are mitigated by AI, significantly contributing to a more socially responsible society. As AI technology continues to evolve, it is crucial that its potential for sustainable outcomes is harnessed, ensuring that it is applied in an ethical and responsible manner.

## Discussion

AI can enhance the sustainability of production processes by optimizing resource use, lowering energy consumption, and minimizing waste. For example, AI can analyze production data to identify inefficiencies and recommend improvements, as well as predict maintenance needs to prevent equipment failures and reduce downtime. A recent example from the steel industry illustrates AI's impact: a steel plant in India implemented AI-powered process optimization technology that analyzes sensor data to pinpoint inefficiencies and suggest enhancements. This led to a 1.5% reduction in carbon emissions, a 3% decrease in energy consumption, and a 5% boost in productivity. The AI system also facilitated predictive maintenance, reducing downtime and increasing equipment reliability. This example underscores AI's potential to drive significant sustainability improvements in industrial settings by optimizing resource utilization, cutting energy use, and minimizing waste.

AI can significantly enhance distribution processes by optimizing logistics routes, reducing transportation costs, and improving inventory management. It also enables real-time shipment tracking and helps lower carbon emissions by identifying the most efficient routes. Moreover, AI enhances supply chain transparency and mitigates the risk of unethical practices. A notable example of AI's impact in this area is Amazon, one of the world's largest online retailers. Amazon has implemented AI-powered optimization technology, known as Amazon Scout, to boost delivery efficiency and minimize environmental impact. This system analyzes data on customer preferences, traffic, and weather to optimize delivery routes and schedules. As a result, transportation costs have been reduced by up to 20%, delivery times have decreased by up to 30%, and carbon emissions have been cut by up to 10%. Additionally, the AI system enables real-time shipment tracking, further improving supply chain transparency and reducing the likelihood of unethical practices. By leveraging AI to optimize logistics, reduce costs, and improve inventory management, Amazon is setting a new standard for sustainable distribution processes.

AI can significantly reduce waste by analyzing data to pinpoint areas of high resource consumption and recommending strategies to minimize it. For instance, AI can optimize energy use in buildings by monitoring usage patterns and adjusting settings accordingly. In agriculture, AI can analyze data to fine-tune irrigation systems, reducing water waste. A practical example from the food and beverage industry is AB InBev, one of the world's largest breweries, which has implemented an AI-powered system called SmartBarley to optimize energy consumption in its production plants. This machine learning-based system analyzes real-time data on energy usage, equipment performance, and environmental conditions to suggest energy-saving measures. As a result, the brewery has reduced its energy consumption by up to 20%, cutting both costs and its environmental footprint. Additionally, AB InBev has deployed an AI-driven irrigation system on its barley farms, which uses data on weather, soil moisture, and crop growth to optimize water use, leading to a 15% reduction in water consumption. This example highlights AI's potential to drastically reduce resource waste—such as energy and water—by optimizing resource utilization and minimizing environmental impact in industrial settings.

AI can play a pivotal role in advancing sustainability across various sectors, including healthcare, manufacturing, transportation, utilities, and construction. In healthcare, AI can enhance patient outcomes by enabling personalized treatment plans and predicting disease outbreaks. In manufacturing, AI can optimize production processes to reduce waste and energy consumption. In transportation, AI can improve traffic flow and reduce emissions by identifying the most efficient routes. For example, the construction technology company Katerra utilizes AI-powered software to streamline building design and construction, reducing material waste and construction time while enhancing

energy efficiency. This software analyzes data on the environmental impact of building materials and recommends more sustainable alternatives, leading to a reduction of up to 30% in construction waste. Additionally, it optimizes building design for energy efficiency, resulting in up to a 50% reduction in energy consumption. This example illustrates AI's potential to drive sustainability across various sectors, particularly in the construction industry, by optimizing resource use and minimizing environmental impact.

AI can enhance sustainability by delivering personalized services tailored to consumer behavior and preferences. For example, AI can recommend energy-efficient products and services or suggest eco-friendly alternatives to traditional items. It can also enable customized transportation options that reduce carbon emissions and encourage sustainable travel. Retailers are leveraging AI-powered recommendation engines to offer customers environmentally friendly alternatives based on their preferences and past purchases. For instance, the UK-based retailer Marks & Spencer uses AI-driven recommendation engines to suggest food products with lower carbon footprints, analyzing data on product lifecycles, supply chains, and customer preferences. This allows the retailer to recommend options such as vegan products, seasonal produce, and locally sourced goods. Similarly, ride-hailing companies are using AI to provide personalized transportation options that promote sustainable travel, including electric or hybrid vehicles, carpooling, and public transit. These industry examples demonstrate AI's potential to offer individualized services that foster sustainability and guide consumers toward more environmentally conscious choices.

AI can play a vital role in mitigating risks to individual health and infrastructure by analyzing data to identify potential threats and predicting future events. For instance, AI can detect anomalies in medical data that signal possible health risks or anticipate equipment failures before they happen. It also enables real-time monitoring of critical infrastructure, such as bridges or dams, to prevent potential disasters. AI-powered algorithms are being developed to analyze medical data and predict health risks for individuals. For example, researchers at the Cleveland Clinic are using AI to analyze electronic health records and identify patients at high risk of developing sepsis, a life-threatening condition arising from infections. By examining data such as vital signs, lab results, and medication history, the AI algorithm can predict sepsis hours before clinical symptoms emerge, allowing for earlier intervention and better outcomes.

Additionally, AI is being applied in infrastructure monitoring to detect potential hazards and avert disasters. For instance, the Port of Rotterdam, one of Europe's largest ports, uses AI to monitor the condition of quay walls, which are crucial for the port's safety and stability. The AI system analyzes images and sensor data to detect cracks, erosion, or other anomalies that could signal a potential collapse or failure, enabling timely repairs and maintenance. This example underscores AI's potential to safeguard individual health and infrastructure by analyzing data and predicting potential hazards.

While artificial intelligence (AI) has significant potential to advance sustainability, several challenges must be overcome for its successful implementation. A primary challenge is data quality and accessibility, as incomplete or biased data can result in inaccurate or limited insights, hindering AI's effectiveness in promoting sustainability. Another challenge is the lack of standardization and interoperability among AI systems, which can impede their integration and reduce their overall impact. Additionally, concerns about privacy and security arise with the use of sensitive data in AI systems, leading to ethical and legal considerations. To address these challenges, organizations and policymakers must prioritize investments in robust data infrastructure and governance frameworks, encourage collaboration and standardization across sectors, and ensure the transparent and ethical deployment of AI systems.

Without clear regulations and standards for using AI in sustainability efforts, organizations may face difficulties in adopting these technologies due to legal and ethical concerns. For instance, AI systems programmed with biased data could produce unfair or discriminatory outcomes. Additionally, issues related to liability and accountability may arise when AI systems are used to make decisions that impact the environment or public health. To address these concerns, policymakers should work to establish clear guidelines and ethical frameworks for the use of AI in sustainability. This approach can ensure responsible and equitable AI implementation while encouraging innovation and progress toward sustainable development goals.

Another major challenge in deploying AI for sustainability is the potential for unintended consequences. AI systems might optimize one aspect of sustainability while inadvertently compromising others. For example, an AI system designed to enhance energy efficiency in production processes might overlook the effects on water usage,

potentially increasing water consumption and harming the environment. Additionally, AI systems could reinforce biases or worsen existing inequalities if trained on biased data, leading to discriminatory decision-making. These potential unintended consequences must be carefully considered when designing and implementing AI systems for sustainability.

To address these challenges, organizations and policymakers can implement several practical solutions. First, investing in robust data infrastructure and management systems is crucial to ensure data quality and accessibility. This can involve forming partnerships with data providers and investing in technologies that standardize and integrate data from various sources. For instance, recent collaborations to enhance data infrastructure for AI in sustainability include Microsoft's partnership with Ecolab and the Alliance for Water Stewardship to create a water management tool that leverages AI and IoT technologies to monitor water usage and identify conservation opportunities. Another example is the collaboration between the World Economic Forum and the Global Partnership on AI to develop guidelines for ethical and sustainable AI use. These partnerships highlight the importance of cooperation between technology companies, sustainability organizations, and policymakers in overcoming the challenges of AI implementation for sustainability. By investing in data infrastructure and fostering collaboration, organizations and policymakers can effectively tackle the hurdles of AI adoption and unlock its potential for promoting sustainability.

Secondly, organizations and policymakers should establish clear regulations and ethical guidelines for the use of AI in sustainability. This involves collaborating with stakeholders to create frameworks for AI development and deployment that ensure transparency and accountability. Organizations can also adopt practices such as ethical AI design and building diverse, inclusive teams to minimize the risk of unintended consequences and biases. Ongoing monitoring and evaluation of AI systems are essential for identifying any negative impacts and enabling timely interventions and adjustments.

Thirdly, organizations and policymakers should embrace a holistic approach to sustainability that acknowledges the interconnectedness of various environmental and social factors. This approach requires considering the potential unintended consequences of AI implementation and prioritizing the equitable distribution of benefits. Thorough impact assessments and active engagement with stakeholders are crucial to ensuring that their needs and concerns are addressed. For example, Microsoft's partnership with the Environmental Defense Fund (EDF) to develop an AI tool for identifying and reducing methane emissions from oil and gas operations exemplifies this approach. The tool was developed in collaboration with industry experts, regulators, and environmental groups, ensuring it is effective, transparent, and accessible to all stakeholders. By adopting a collaborative and transparent approach, organizations can ensure their AI solutions not only promote sustainability but also address the concerns of all involved parties.

## Conclusion

Artificial intelligence (AI) has the potential to significantly advance sustainability across various sectors. By analyzing data and optimizing processes, AI can reduce waste, enhance efficiency in production and distribution, and support sustainable practices through personalized services. Additionally, AI can mitigate risks to individual health and infrastructure by identifying potential threats and predicting future events. As AI continues to evolve, it holds the promise of driving substantial positive impacts in addressing the environmental and social challenges we face today. However, it is crucial to approach AI deployment with caution and ethical considerations to ensure its responsible and sustainable use.

Despite the challenges in implementing AI for sustainability, practical solutions are available to navigate these obstacles. The intersection of AI and sustainability offers immense opportunities to tackle some of the world's most pressing environmental and social issues. Achieving successful AI implementation for sustainability requires a comprehensive strategy that addresses challenges related to data quality and accessibility, regulatory uncertainties, unintended consequences, and the equitable distribution of benefits. By investing in data infrastructure, establishing clear regulations and ethical guidelines, and adopting a holistic approach to sustainability, organizations and policymakers can overcome these hurdles and unlock AI's full potential for a more sustainable future. Through continued collaboration and innovation, AI can play a transformative role in promoting sustainability and advancing the United Nations Sustainable Development Goals.

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## IMPACT OF FINANCIAL INCLUSION ON RURAL DEVELOPMENT IN INDIA

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### Abstract -

Every economy transform its journey from developing to developed phase. The country like India where agriculture is the backbone of economy and more than 70% of population having dependency on the agricultural products and services. Most of the population are living in rural area in India. After developement of industries and major infrastructural facilities in urban areas then it become populated, but still people are living in rural areas. Main reason behind the development of urban area is growth of industries and infrastructural facilities and sufficient resources are also responsible. Availability of finance and easy access to financial services are key drivers of development and growth of any sector in the particular area or region availability of finance is not required only but at the same time it should have circular flow which decides growth rate and development of overall economy. Financial inclusion not now new, many developed as well as developing countries had a history of public Financial Institutions. Financial inclusion includes not just access and use of finance but also its affordability. Financial instruments like bank deposits, insurance, credit limit and other facilities should available to rural public easily.

According to great leader and Father of Nation, 'Mahatma Gandhi' says India lives in rural areas and still it holds true. Villages are base of Indian society and also it represents India in real sense. The government had identified several elements of social and economic infrastructure which is crucial to enhance the quality of life in rural area in order to ensure that fruits of Indian progress and effects of urbanization should be shared by all sections of society include human being who are not migrated still living in villages.

**Keywords** - Financial Inclusion, development, rural area.

Objective of society -

- 1) To evaluate the need of financial inclusion in India.
- 2) To study the concept of Financial Inclusion and find the level of its compliance.
- 3) To identify suitable method for Financial Inclusion in India.
- 4) To evaluate role of different Financial Institutions towards financial inclusion in India.

### Introduction -

The benefits of economic development must reach to the bottom of the pyramid of population. As stated in abstract 'Mahatma Gandhi' had said that, 'soul of India lives in its villages'. Today we are in the crucial junction where soul of our country is lacking of all the facilities of social infrastructure and basic financial services. When we are planning to make 100 new smart cities we cannot neglect villages in India. Entire growth and development begin or can be achieved with a conversion of surrounding and neighbouring villages to smart villages. Financial inclusion is one of the way or it acts as lubricant and facilitating progress and development (Christabell and Vinay 2012). It is one of the important aspect that underpins successful rural development. Financial inclusion is new way in global Finance.

The World bank defines it as, 'the access of individuals and businesses to useful and affordable financial products and services including payments, savings, credit, insurance delivered in a responsible and sustainable way'. Financial inclusion become more considerate and having keen attention as it has adopted in Sustainable Development Goals at international level. It is the key enabler for many of other goals given its promise of reducing global povety and boosting shares prosperity. Global Financial crisis of 2018 that is sub-prime problem accentuated the wave of financial inclusion while adding the two essential attributes of financial literacy and capability.



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## Financial inclusion in Indian Perspective -

The Committee of Dr.C.Rangrajan defines financial inclusion as follows,

"The process of ensuring access to financial services as timely and adequate credit wherever needed by vulnerable groups such as weaker sections and low income groups at an affordable cost".

The Committee on Financial Sector Reforms, Chairman Dr.Raghuram Rajan broadly defines - financial inclusion refers to universal access to avoid range of financial services at a reasonable cost this include not only banking products but also other financial services such as insurance and equity products.

In 2005 financial inclusion has become a part of policy and discussion in India. By bringing low income groups in the perimeter of formal banking sector financial inclusion protects wealth and other resources. As far as India is concerned government embarked on policy of social and development banking, when it nationalised major part of its banking sector in 1969 to expand geographically and functional reach of banking to promote financial inclusion in India. Following are the efforts taken by Government for financial inclusion-

- 1) Pradhanmantri Jan Dhan Yojana 2014
- 2) Financial literacy program .
- 3) Pradhan Mantri Jeevan Jyoti Bima Yojana.
- 4) Atal pension Yojana 2015.
- 5) Pradhanmantri Mudra Yojana 2015
- 6) Stand up India .
- 7) Pradhan Mantri Vay Vandana Yojana.

The process of ensuring access to financial services and timely availability of adequate credit wherever needed by vulnerable groups such as weaker sections and low income groups at an affordable cost is fundamental requirement of financial inclusion. Indian approach has been shaped by two key regulatory interventions relating to the distribution of bank branches and credit.

Financial liberalisation was an integral part of structural economic reform. Banks are advised not to undermine their business consideration in order to ensure long term sustainability of the financial inclusion process. India focused on exploring cost effective and sustainable delivery mechanism to reach out to remote locations of the country. Affordable and appropriate process to financial services is increasingly being recognised as a driver of economic growth, poverty alleviation, prosperity and sustainability. Access to formal finance, which is helpful to boost employment generation, reduce vulnerability to economic shocks and increase investments in human capital.

At a micro level greater financial inclusion can support sustainable and inclusive socio economic growth for all. Global Financial Inclusion Index Database India has significant rise in its population having bank account which is result of government schemes for financial inclusion. According to the Financial Inclusion Index by Reserve Bank India for March 2024 was 64.2. This is an increase from 60.1 in March 2023. Financial inclusion index measures how much people in India have access and use formal financial services. The rising index shows that financial inclusion is improving in India. Pradhan Mantri Jan Dhan Yojana is the key driver for this increase in financial inclusion index. In this scheme 66% accounts are from rural and semi urban areas. The national strategy for financial inclusion 2020 to 2025 is a strategy to make financial services more accessible and to improve financial literacy in India. Main object of this is financial services available to everyone as it will improve financial literacy and education and boost use of digital financial services. Mobilization and utilisation of funds that supports inclusive growth. Modern Information and Communication Technology can act as a tool to develop a platform which helps to extend the financial services in remote areas in the country. India's banking sector which is the great and vital pillar of financial inclusion and economic growth of country has undergone a shift from conventional banking to convenience banking for reboots the axis of fundamental banking services to the rural population. Rapid adoption of mobile and Internet Banking and other feasible models have replaced physical presence of banks across India and mobile has led India towards an era of digital banking. The effect of pandemic on the access of finance for

rural household was mixed and varied across financial services. For meaningful implementation, India is approaching to financial inclusion as a need to move forward from access of deposit to access to use of all financial services. More focus is needed on increasing access to bank credit and life insurance in rural areas according to the World bank social inclusion is the process of improving the ability , opportunity and dignity where financial inclusion delivers financial services at affordable cost to weaker section of society . Financial Inclusion unlock the immense potential of rural India by fostering collaboration, liberation technology and building trust, with all this we can overcome challenge and empower communities with the help of financial inclusion as a sustainable goal.

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# GENDER INEQUALITIES IN INDIA: AN INTERSECTIONAL ANALYSIS OF SOCIAL NORMS, INSTITUTIONAL FRAMEWORKS, AND ECONOMIC POLICIES

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## Introduction

Gender inequalities in India are deeply rooted in the fabric of social, economic, and political structures, creating a complex web of disadvantages for women. The intersectionality of gender with other identities—such as class, caste, ethnicity, and disability—exacerbates these inequalities, leading to compounded disadvantages that hinder women's access to essential resources and opportunities. This paper aims to dissect the interactions between social norms, institutional frameworks, and economic policies that influence access to education, healthcare, and labor market opportunities for women, particularly in low- and middle- income countries (LMICs) like India.

The social norms that govern gender roles in India are often steeped in traditional patriarchal values, which dictate the behavior and opportunities available to women. These norms are reinforced by cultural practices and beliefs that prioritize male authority and control over female autonomy. Scholars such as Naila Kabeer have highlighted how these social norms shape women's agency and decision-making power, often relegating them to subordinate roles within both the family and society. For instance, the expectation that women should prioritize domestic responsibilities over education or employment severely limits their opportunities for personal and professional growth.

Institutional frameworks in India, including legal and policy structures, also play a crucial role in perpetuating gender inequalities. While there have been significant legislative advancements aimed at promoting gender equality, such as the Prohibition of Child Marriage Act and the Sexual Harassment of Women at Workplace Act, the implementation of these laws remains inconsistent. Mary E. John emphasizes that the gap between policy and practice is often influenced by entrenched social norms and the lack of political will to enforce these laws effectively. Furthermore, institutions that are supposed to support women's rights, such as the judiciary and law enforcement agencies, often exhibit biases that undermine women's access to justice and protection.

Economic policies in India have historically favored male-dominated sectors, leading to disparities in labor market opportunities for women. Bina Agarwal's work on women's access to resources highlights how economic policies often overlook the specific needs of women, particularly in rural areas where they face additional barriers due to caste and class. The informal labor market, which employs a significant proportion of women, is characterized by low wages, lack of job security, and limited access to social protections. This economic marginalization is compounded by the lack of access to quality education and healthcare, which are critical for women's empowerment and economic participation.

## Theoretical Framework

The implications of Althusser's theory of ideological state apparatuses provide a valuable lens for understanding how institutional changes can affect gender and marginalized groups.

Althusser posits that institutions such as education, family, and media serve to reproduce dominant ideologies, which in turn shape individuals' beliefs and behaviors. In the context of India, this means that institutional reforms aimed at promoting gender equality must also address the underlying ideological constructs that perpetuate discrimination and inequality.

By examining these interconnected factors, this paper seeks to illuminate the multifaceted nature of gender inequalities in India and the urgent need for comprehensive strategies that address the unique challenges faced by women. Through a critical analysis of social norms, institutional frameworks, and economic policies, the paper aims to contribute to the ongoing discourse on gender equality and women's empowerment in India and other LMICs.

The theoretical framework for this analysis is grounded in intersectionality, a concept that posits that various forms of social stratification—such as race, gender, class, caste, and ethnicity—do not exist separately from one another but are interwoven in complex ways. This framework is essential for understanding the multifaceted nature of inequalities that women face, particularly in a diverse and stratified society like India. Scholars such as Naila Kabeer emphasize the importance of recognizing the multiple dimensions of inequality and how they interact to shape individuals' experiences (Kabeer, 2005). Kabeer's work highlights that women's experiences of poverty, discrimination, and marginalization cannot be understood in isolation; rather, they are influenced by a confluence of factors that include their socio-economic status, cultural background, and geographic location.

Mary E. John further elaborates on the cultural and social contexts that inform gender relations, emphasizing the need for a nuanced understanding of women's agency and empowerment (John, 2005). John's analysis underscores that women's empowerment is not merely about increasing access to resources but also about challenging the social norms and cultural practices that restrict their choices and opportunities. This perspective is particularly relevant in the Indian context, where traditional gender roles often dictate the boundaries of women's agency, limiting their participation in education, employment, and decision-making processes.

Bina Agarwal's work on gender and development provides additional insights into the significance of institutional frameworks in shaping economic opportunities for women and marginalized groups (Agarwal, 1994). Agarwal argues that institutions play a critical role in either facilitating or hindering women's access to resources, such as land, credit, and education. Her research highlights the need for gender-sensitive policies that address the specific barriers women face in various sectors, particularly in rural areas where caste and class dynamics further complicate their access to economic opportunities. By focusing on the institutional dimensions of gender inequality, Agarwal's work complements the intersectional framework by illustrating how systemic factors contribute to the perpetuation of gender disparities.

In addition to these foundational theories, Althusser's concept of ideological state apparatuses provides a valuable lens through which to examine how institutions perpetuate social norms and inequalities. According to Althusser, institutions such as education, family, and the legal system serve to reproduce the dominant ideology, which often marginalizes certain groups (Althusser, 1971). This theory is particularly relevant in understanding how educational systems can reinforce traditional gender roles, thereby limiting women's aspirations and opportunities. For instance, curricula that prioritize male achievements or fail to address gender issues can perpetuate stereotypes and hinder the development of critical thinking among young women.

This paper will explore how these ideological apparatuses impact access to essential services and opportunities for women in India. By examining the interplay between intersectionality, cultural contexts, institutional frameworks, and ideological state apparatuses, the analysis aims to provide a comprehensive understanding of the barriers women face in accessing education, healthcare, and labor market opportunities. This theoretical framework not only highlights the complexity of gender inequalities but also underscores the necessity for targeted interventions that address the unique challenges faced by women in a rapidly changing socio-economic landscape. Through this lens, the paper seeks to contribute to the ongoing discourse on gender equality and women's empowerment, offering insights that can inform policy and practice in India and other low- and middle-income countries (LMICs).

## **Discussion And Analysis**

### **Social Norms and Gender Inequalities**

#### **Cultural Contexts**

Social norms play a crucial role in shaping gender roles and expectations, particularly in a culturally rich and diverse country like India. Traditional gender roles dictate that women are primarily responsible for domestic duties, which significantly limits their access to education and employment opportunities. In many Indian communities, cultural norms often prioritize male education over female education, leading to significant gender disparities in literacy rates (John, 2005). This preference for male education is rooted in patriarchal values that view women primarily as caretakers and homemakers, thereby undermining their potential contributions to society and the economy.

The implications of these social norms extend beyond education; they permeate various aspects of women's lives,

including healthcare access and labor market participation. For instance, women are often socialized to prioritize family needs over their own aspirations, which can lead to a cycle of dependency and disempowerment. This cultural conditioning not only affects individual women but also has broader societal implications, as it perpetuates gender inequalities that hinder national development.

### **Impact on Education**

Access to education is profoundly influenced by prevailing social norms. In many cultures, girls are expected to marry early and take on domestic responsibilities, which can lead to high dropout rates among female students. Kabeer (2005) argues that educational attainment is not merely a matter of access but is also shaped by the quality of education and the socio-cultural context in which it occurs. The subjugation of women is further compounded for those from lower castes, who face systemic discrimination, and is exacerbated for women with disabilities, who experience triple marginalization.

The lack of educational opportunities for women has far-reaching consequences. Educated women are more likely to participate in the labor force, contribute to household income, and invest in their children's education, thereby breaking the cycle of poverty (Agarwal, 1994). Conversely, the absence of education limits women's ability to make informed choices about their health, family planning, and economic opportunities, perpetuating a cycle of dependency and inequality.

### **Healthcare Policies and Access**

Healthcare policies in low- and middle-income countries (LMICs) often reflect societal biases, leading to a lack of accessibility for women. For instance, programs like the Janani Suraksha Yojana, which aims to reduce maternal mortality, may not adequately address the barriers faced by marginalized women, such as those from lower castes or rural areas. These women often encounter systemic obstacles that prevent them from accessing essential healthcare services, including transportation issues, financial constraints, and cultural stigmas surrounding reproductive health. To effectively address these disparities, healthcare policies must be gender-sensitive and inclusive. This includes ensuring that healthcare facilities are equipped to meet the specific needs of women, providing training for healthcare providers on gender-sensitive care, and implementing community outreach programs to raise awareness about women's health issues. By prioritizing women's health and well-being, policymakers can empower women to take control of their health, which in turn enhances their ability to participate in the workforce and contribute to economic growth.

Accessing healthcare services is another critical area where gender inequalities manifest. In many communities, discussing issues related to reproduction, sexuality, and health is considered taboo, leading to a culture of silence around women's health issues. Women are often socialized to keep quiet about their health concerns, which can result in untreated medical conditions and a lack of awareness about reproductive health. For instance, women who are unable to bear children often face societal stigma and blame, which can severely impact their mental health and self-esteem (Mukherjee, 2018). Moreover, issues related to mental health, such as postpartum depression, are frequently labeled as elite concerns, further marginalizing women from lower socio-economic backgrounds. The stigma surrounding mental health prevents many women from seeking help, exacerbating their struggles and limiting their ability to participate fully in society. Sharma (2021) provides an in-depth analysis of how socio-economic factors contribute to ongoing disparities in education, health, and labor market participation, highlighting the urgent need for gender-sensitive healthcare policies.

### **Education Policies**

Education policies in India often fail to address the specific needs of marginalized groups, including women, lower castes, and individuals with disabilities. While there may be initiatives aimed at promoting girls' education, these programs frequently overlook the unique challenges faced by these groups. Kabeer (2005) emphasizes the need for inclusive education policies that recognize the diverse needs of all students. For example, educational institutions should provide safe and accessible environments for girls, particularly in rural areas where cultural norms may further restrict their mobility and access to education.

Additionally, teacher training programs should incorporate gender-sensitive pedagogies that challenge traditional gender roles and promote gender equality in the classroom. By fostering an inclusive educational environment,

policymakers can empower girls and women to pursue their aspirations, thereby contributing to a more equitable society.

### **Empowerment through Education, Health, and Dignity**

Empowerment through education, health, and dignity is a multifaceted approach that recognizes the interconnectedness of these elements in fostering gender equality and sustainable development. Education serves as a foundational pillar for women's empowerment, enabling them to acquire knowledge, skills, and confidence necessary to navigate various spheres of life. Access to quality education not only enhances women's economic prospects but also promotes their agency, allowing them to make informed decisions about their health, family, and careers (Kabeer, 2005).

#### **Education as a Catalyst for Empowerment**

Education is a powerful tool for breaking the cycle of poverty and dependency. Educated women are more likely to participate in the labor force, earn higher incomes, and invest in their children's education, thereby contributing to intergenerational improvements in socio-economic status (Agarwal, 1994). Furthermore, education fosters critical thinking and awareness of rights, enabling women to challenge discriminatory practices and advocate for their needs. For instance, studies have shown that educated women are more likely to seek healthcare services, understand reproductive health issues, and make informed choices regarding family planning (John, 2005).

However, to maximize the impact of education on women's empowerment, it is essential to implement gender-sensitive educational policies that address the unique challenges faced by marginalized groups. This includes creating safe and inclusive learning environments, providing scholarships for girls, and incorporating gender-sensitive curricula that challenge traditional gender roles (Sharma, 2021). By fostering an educational landscape that prioritizes gender equality, societies can empower women to realize their full potential.

#### **Health as a Foundation for Empowerment**

Access to quality healthcare is equally critical for women's empowerment. Health is not merely the absence of illness; it encompasses physical, mental, and social well-being.

Women who have access to comprehensive healthcare services are better equipped to manage their health, which in turn enhances their ability to participate in economic activities and community life. For instance, maternal health services are vital for ensuring safe pregnancies and childbirth, which directly impacts women's ability to engage in the workforce (Mukherjee, 2018).

Moreover, addressing mental health issues is crucial for women's empowerment. Mental health challenges, such as postpartum depression, are often stigmatized and overlooked, particularly in low-income communities. By providing mental health support and resources, healthcare systems can help women overcome barriers to participation in society and the economy (Sharma, 2021). Gender-sensitive healthcare policies that prioritize women's health needs can lead to improved health outcomes, increased productivity, and enhanced quality of life.

#### **Dignity and Social Recognition**

Dignity is an essential component of empowerment, as it encompasses respect, recognition, and the ability to live free from discrimination and violence. Women who are treated with dignity are more likely to assert their rights and participate actively in their communities.

Social norms that devalue women's contributions and perpetuate gender-based violence undermine their dignity and hinder their empowerment (Althusser, 1971).

To promote dignity, it is crucial to challenge and transform harmful social norms that perpetuate gender inequalities. This can be achieved through community awareness programs, advocacy campaigns, and legal reforms that protect women's rights and promote gender equality. By fostering a culture of respect and recognition for women's contributions, societies can create an environment where women feel empowered to pursue their aspirations and participate fully in all aspects of life.

## Conclusion

In conclusion, the empowerment of women through education, health, and dignity is essential for achieving gender equality and sustainable development. By investing in quality education, ensuring access to comprehensive healthcare, and promoting dignity and respect for women, societies can unlock the potential of half their population. This not only benefits women individually but also contribute to broader economic and social progress. Gender-sensitive policies and practices are crucial for addressing the unique challenges faced by women, particularly in low- and middle-income countries. By prioritizing women's empowerment, we can create a more equitable and prosperous future for all.

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## VIKSIT BHARAT @ 2047: SPECTRUM OF OPPORTUNITIES IN THE GLOBAL ERA

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### Abstract:

India's vision for 2047, the centenary of its independence, aspires to transform the nation into a fully developed global leader across economic, technological, social, and strategic domains. This ambitious journey reflects India's immense potential, driven by opportunities and challenges.

India's strengths, such as its demographic dividend, thriving startup ecosystem, and advancements in space and digital technologies, provide a strong foundation for growth. With one of the youngest populations globally, India is well-positioned to drive innovation, entrepreneurship, and productivity. Initiatives like "Digital India" and ISRO's global achievements highlight the country's capability to lead technological and scientific revolutions.

However, achieving this vision requires overcoming significant challenges, including income inequality, regional disparities, and environmental issues. Robust urban planning and infrastructure development are critical for managing rapid urbanization and ensuring equity and livability.

This paper emphasizes actionable strategies, including reforms in education, skill development, and gender equity, to foster inclusive growth. It advocates for strengthening India's global position through strategic trade partnerships, participation in international organizations, and leadership in climate change initiatives.

By effectively leveraging its strengths and addressing systemic challenges, India can achieve the vision of "Viksit Bharat" and emerge as a key global player by 2047.

**Keywords: Viksit Bharat 2047, Inclusive Growth, Social Equity, Global Diplomacy**

### Introduction :

India, marking 100 years of independence, aims to achieve the vision of "Viksit Bharat" (Developed India) by 2047. This vision is a collective aspiration to establish India as a global leader in economics, technology, and societal development. However, the journey towards this vision is both challenging and promising. Globalization shapes the world economy, creating interdependencies among nations and opening vast markets for trade, investment, and cultural exchange. Rapid technological advancements demand a skilled, adaptable workforce. India also faces internal challenges such as socio-economic disparities, unequal access to resources, and regional imbalances. However, these challenges present opportunities for India, such as integrating into international value chains, attracting foreign direct investment, and showcasing its talent on a global platform. With a young and dynamic population, India can leverage its demographic advantage to drive economic growth, innovation, and entrepreneurship. Emerging technologies can revolutionize governance, healthcare, education, and infrastructure, bringing about transformative change across all sectors. This paper explores these opportunities by focusing on key drivers such as education reforms, skill development, technological advancements, global diplomacy, and sustainability.

### Objectives:

- To understand India's vision of "Viksit Bharat" for 2047.
- To explore global opportunities for economic, technological, and social growth.
- To identify key challenges like inequality, sustainability, and urbanization.
- To propose actionable strategies for inclusive and sustainable development.



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**Sources of Data Collection:**

The research paper is based on the Secondary Data such as Books, Internet , Research Paper and Magazine & Journals

**Economic Opportunities****Demographic Dividend**

India's young and dynamic workforce represents one of its most valuable assets. By 2047, a significant portion of India's population is expected to remain under the age of 35, providing a powerful demographic advantage. This youthful population has the potential to drive economic growth through productivity, innovation, and entrepreneurship. However, to unlock this potential, effective policies in education and skill development are essential.

- **Education:** Reforming the education system to focus on critical thinking, digital literacy, and vocational skills will prepare young Indians for emerging job markets. Collaboration with global institutions can enhance access to quality education.
- **Skill Development:** Initiatives such as "Skill India" must be expanded to ensure the workforce is equipped with technical and digital skills to meet industry demands. Continuous reskilling programs can help individuals adapt to rapid technological changes.
- **Entrepreneurship:** Creating a supportive ecosystem for startups, including access to capital, mentorship, and ease of doing business, can encourage youth to innovate and create employment opportunities.

**Startups and MSMEs**

India's startup ecosystem is thriving, with over 100 unicorns, making it the third-largest globally. Micro, Small, and Medium Enterprises (MSMEs) are also vital to the economy, contributing significantly to GDP and employment. By fostering innovation and reducing bureaucratic hurdles, these sectors can drive substantial growth.

- **Innovation:** Promoting research and development through funding and partnerships with academia and industry can boost the creation of new technologies and products.
- **Regulatory Ease:** Simplifying processes like licensing, taxation, and compliance can encourage more startups and MSMEs to emerge and thrive.
- **Global Competitiveness:** Initiatives like "Make in India" and "Startup India" need to evolve, emphasizing international market access and innovation-driven growth. These programs must focus on helping Indian businesses become globally competitive in quality and efficiency.

**Global Supply Chains**

As global supply chains diversify, India has a significant opportunity to establish itself as a manufacturing and logistics hub. Countries are seeking alternatives to traditional supply chain giants, presenting India with a chance to capture this demand.

- **Infrastructure Development:** Massive investments in transportation, energy, and logistics infrastructure are essential to support efficient manufacturing and trade. Projects such as the Dedicated Freight Corridors and Bharat Mala are steps in the right direction.
- **Trade Agreements:** Strengthening bilateral and multilateral trade agreements can help India secure a competitive edge in international markets, enabling easier access for Indian goods and services.
- **Policy Stability:** A stable and transparent policy environment is critical to attracting foreign direct investment (FDI) and ensuring long-term confidence among investors. Consistent taxation and trade policies will support India's global positioning.

By effectively leveraging its demographic dividend, fostering the growth of startups and MSMEs, and integrating deeply into global supply chains, India can unlock tremendous economic opportunities and achieve sustainable growth by 2047.

## Technological Advancements

### Digital Transformation

India's digital revolution, spearheaded by initiatives like Digital India, has set the stage for transformative changes across industries, governance, and public service delivery. By leveraging emerging technologies, India can enhance productivity, transparency, and efficiency in multiple domains.

- **Artificial Intelligence (AI):** AI can revolutionize industries such as healthcare, agriculture, and manufacturing by enabling data-driven decision-making, predictive analytics, and automation. AI-powered systems can improve diagnostics, optimize supply chains, and enhance personalized services.
- **Internet of Things (IoT):** IoT devices can transform sectors such as smart cities, agriculture, and industry by enabling real-time monitoring and automation. For example, IoT-based sensors in agriculture can improve water usage, crop monitoring, and yield prediction, contributing to food security.
- **Blockchain:** Blockchain technology can bring transparency and efficiency to governance and financial systems. Its applications in secure digital transactions, supply chain management, and e-governance can significantly reduce fraud and enhance trust.
- **Public Services:** Digital India's backbone initiatives like Aadhaar and UPI have streamlined service delivery. Building on this, integrating advanced technologies in e-governance, education, and healthcare can ensure access, efficiency, and equity.

### Space Exploration

India's space program, led by the **Indian Space Research Organisation (ISRO)**, has made remarkable strides, establishing the country as a key player in space exploration. Expanding space technology applications can unlock significant economic and scientific opportunities:

- **Telecommunications:** Satellites can improve connectivity in remote areas, bridging the digital divide and enabling access to education, healthcare, and e-commerce.
- **Navigation and Earth Observation:** Advanced satellite systems like NAVIC can support disaster management, agriculture monitoring, and urban planning by providing accurate and real-time data.
- **Space Economy:** Expanding commercial ventures, such as satellite launches and space tourism, can position India as a global hub for affordable and reliable space services. Collaborations with private players under the "Indian National Space Promotion and Authorization Center" (IN-SPACE) initiative will further fuel innovation.

### Renewable Energy

India's leadership in renewable energy is pivotal for meeting global sustainability goals and ensuring domestic energy security. As one of the largest producers of solar and wind energy, India is poised to lead the global energy transition.

- **Solar and Wind Energy:** Scaling up solar and wind installations, along with innovations in storage technologies, will enable India to meet its ambitious targets under the National Solar Mission and global climate agreements.
- **Green Hydrogen:** Investing in green hydrogen production and infrastructure offers immense potential for decarbonizing industries like steel, cement, and transportation. India can become a global hub for green hydrogen production and export.

- **Energy Access and Security:** Expanding renewable energy projects in rural areas can ensure universal access to affordable and clean energy, contributing to inclusive growth.
- **Global Collaboration:** Strengthening international partnerships, such as the International Solar Alliance (ISA), can amplify India's role in shaping the global renewable energy landscape.

By focusing on digital transformation, space exploration, and renewable energy, India can simultaneously address domestic challenges and position itself as a global leader in innovation, sustainability, and scientific progress by 2047.

## Social and Educational Reforms

### Education and Skill Development

A well-educated and skilled workforce is the cornerstone of India's progress towards becoming a developed nation by 2047. To achieve this, India must revamp its education system to align with the demands of the 21st century.

- **Focus on Critical Thinking and Digital Literacy:** Education should emphasize critical thinking, problem-solving, and digital literacy from an early age. This will prepare students for a rapidly evolving global economy driven by technology and innovation.
- **Vocational Training and Industry Linkages:** Expanding vocational training programs tailored to industry needs can equip students with job-ready skills. Public-private partnerships can facilitate internships, apprenticeships, and on-the-job training, bridging the gap between academia and industry.
- **Global Collaborations:** Partnering with leading global educational institutions can enhance access to world-class education, research, and faculty expertise. This will also promote international exposure and collaboration in areas like science, technology, and innovation.
- **Equity in Education:** Special focus should be given to marginalized communities to ensure equitable access to quality education, fostering inclusivity and social mobility.

### Women Empowerment

Empowering women is critical for driving India's economic and social development. Women constitute nearly half of the population, and their active participation in the workforce and decision-making processes can have a transformative impact.

- **Education and Skill Development for Women:** Providing women with access to quality education and vocational training can unlock their potential and improve workforce participation.
- **Health and Well-being:** Ensuring access to affordable healthcare, maternal care, and nutritional support will improve the overall well-being of women and their families.
- **Entrepreneurship Opportunities:** Promoting women entrepreneurship through financial incentives, training programs, and networking opportunities can create job opportunities and reduce gender disparities in income.
- **Policies for Gender Equity:** Implementing and enforcing policies that ensure equal pay, workplace safety, and representation in leadership roles is essential for achieving true gender equality.

### Healthcare

A robust healthcare system is vital for a nation's development. India must focus on strengthening its healthcare infrastructure and addressing disparities between urban and rural areas.

- **Infrastructure Development:** Building more primary health centers and hospitals in underserved regions will improve access to basic and specialized healthcare.

- **Telemedicine and Technology Integration:** Leveraging telemedicine can provide remote consultations, reducing the burden on urban hospitals and improving healthcare access in rural areas. AI-driven diagnostics can enable early detection of diseases, enhancing treatment outcomes.
- **Preventive Healthcare and Awareness:** Promoting preventive healthcare practices through awareness campaigns and vaccination drives can reduce the disease burden.
- **Healthcare Workforce Development:** Training more healthcare professionals and incentivizing them to work in rural areas will address the urban-rural divide in healthcare services.
- **Universal Health Coverage:** Expanding programs like Ayushman Bharat can ensure affordable and equitable healthcare for all citizens, reducing out-of-pocket expenses.

By focusing on these areas, India can build a foundation for inclusive and sustainable development, empowering its people and ensuring a healthy, educated, and skilled population ready to meet the challenges of the future.

## Global Diplomacy and Strategic Alliances

### International Organizations

India's active participation in organizations like the UN and G20 enables it to shape global agendas. Enhancing contributions to peacekeeping, climate change mitigation, and global trade reforms will amplify its influence.

### Trade and Bilateral Relations

Diversifying trade partnerships and deepening relations with emerging economies will reduce dependencies and enhance resilience. Free trade agreements (FTAs) should prioritize sectors where India holds competitive advantages.

## Challenges and Mitigation Strategies

### 1. Inequality and Regional Disparities

India faces significant disparities in income levels and regional development, with certain states and rural areas lagging in growth and access to essential services. Addressing these inequalities is crucial for ensuring inclusive development.

- **Policy Interventions for Inclusive Growth:** Strengthening social welfare programs such as Direct Benefit Transfers (DBT), targeted subsidies, and rural employment schemes like MGNREGA can help uplift marginalized populations and reduce income disparities.
- **Targeted Investments:** Focused investments in backward regions, especially in infrastructure, education, and healthcare, can create opportunities for economic growth and improve living standards. Establishing industrial corridors and special economic zones in underdeveloped areas can attract businesses and generate employment.
- **Empowering Local Governance:** Strengthening Panchayati Raj institutions and providing them with financial and administrative autonomy can enable localized solutions to regional challenges, ensuring that development reaches the grassroots.
- **Skill Development Programs:** Tailoring skill development initiatives to the specific needs of underserved regions can empower the local workforce and bridge regional skill gaps.

### 2. Environmental Sustainability

Rapid economic growth often comes at the expense of the environment. Striking a balance between development and sustainability is essential to safeguard India's natural resources for future generations.

- **Promoting Sustainable Agriculture:** Innovations like precision farming, organic farming, and efficient irrigation systems such as drip irrigation can reduce water usage and minimize the environmental

impact of agriculture. Supporting farmers with access to climate-resilient seeds and training in sustainable practices will also help.

- **Green Infrastructure Development:** Infrastructure projects must prioritize energy efficiency, low-carbon materials, and sustainable designs. Programs like the National Electric Mobility Mission Plan (NEMMP) should be expanded to reduce carbon emissions in transportation.
- **Renewable Energy Expansion:** Scaling up renewable energy projects, including solar, wind, and green hydrogen, will reduce dependence on fossil fuels. Incentivizing businesses and households to adopt renewable energy solutions through subsidies and tax benefits will further accelerate the transition.
- **Conservation Initiatives:** Strengthening efforts to conserve biodiversity protect forests, and clean rivers (e.g., Namami Gange) will mitigate environmental degradation. Strict enforcement of pollution control norms is also essential.

### 3. Urbanization

India is witnessing rapid urbanization, with more than half of its population expected to live in urban areas by 2047. While urbanization drives economic growth, it also presents challenges related to infrastructure, housing, transportation, and environmental degradation.

- **Smart City Initiatives:** Expanding the Smart Cities Mission to include more urban centers and integrating smart technologies like IoT, AI, and data analytics in urban planning can improve resource management, governance, and service delivery. Smart city solutions should address energy efficiency, waste management, and water conservation.
- **Affordable Housing:** Addressing the housing shortage through public-private partnerships, government subsidies, and innovative construction techniques will ensure affordable and quality housing for all. Programs like PMAY (Pradhan Mantri Awas Yojana) need to be scaled up with a focus on urban slums and lower-income groups.
- **Public Transport Systems:** Investing in efficient and eco-friendly public transport systems, such as metro networks, electric buses, and shared mobility solutions, can reduce traffic congestion and air pollution while ensuring affordable mobility for urban populations.
- **Urban Governance and Infrastructure:** Strengthening urban governance through municipal reforms and empowering local bodies with adequate resources and technical expertise is critical. Urban infrastructure projects should prioritize sustainable growth, including green spaces, waste recycling systems, and disaster-resilient construction.

By addressing inequality, prioritizing environmental sustainability, and managing urbanization effectively, India can overcome these challenges and lay the foundation for inclusive, sustainable, and resilient growth. These strategies will be pivotal in realizing the vision of "Viksit Bharat" by 2047.

### Conclusion and Way Forward

Achieving the vision of "Viksit Bharat @ 2047" demands a collaborative national effort involving government, industry, and civil society. Key policy recommendations include:

- Strengthening education and skill development frameworks.
- Promoting innovation through increased R&D investments.
- Expanding global trade networks and strategic alliances.
- Prioritizing environmental sustainability and green growth.

India's journey towards 2047 is both a challenge and an opportunity. By leveraging its unique strengths and addressing systemic challenges, the nation can realize its potential as a global leader.

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# THE ROLE OF ARTIFICIAL INTELLIGENCE IN CONSERVING NATURAL RESOURCES

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## Abstract

The rapid depletion of natural resources due to human activities has become a critical global issue. As the world grapples with the challenges of climate change, deforestation, water scarcity, and biodiversity loss, the need for innovative solutions to conserve natural resources has never been more urgent. Artificial Intelligence (AI) has emerged as a powerful tool in addressing these challenges. This research paper explores the various ways in which AI can be leveraged to conserve natural resources, including optimizing resource use, monitoring environmental changes, and predicting future resource availability. The paper also discusses the potential challenges and ethical considerations associated with the use of AI in natural resource conservation.

## Keywords

Artificial Intelligence, Natural Resource Conservation, Sustainability, Environmental Monitoring, Resource Optimization, Climate Change, Biodiversity, Ethical Considerations, Algorithmic Bias, Data Privacy.

## Introduction

Natural resources are essential for the survival and well-being of all living organisms on Earth. However, the unsustainable exploitation of these resources has led to severe environmental degradation, threatening the planet's ecosystems and the future of humanity. The United Nations has identified the conservation and sustainable use of natural resources as one of the key components of the Sustainable Development Goals (SDGs). In this context, AI has the potential to revolutionize the way we manage and conserve natural resources.

AI refers to the simulation of human intelligence in machines that are programmed to think and learn like humans. It encompasses a wide range of technologies, including machine learning, natural language processing, computer vision, and robotics. These technologies can be applied to various aspects of natural resource conservation, from monitoring and data analysis to decision-making and resource optimization.

## AI in Resource Optimization

One of the most significant contributions of AI to natural resource conservation is its ability to optimize resource use. AI algorithms can analyze vast amounts of data to identify patterns and make predictions, enabling more efficient use of resources such as water, energy, and raw materials.

### 1.1. Water Conservation

Water is one of the most critical natural resources, and its scarcity is a growing concern in many parts of the world. AI can play a crucial role in optimizing water use in agriculture, industry, and households. For example, AI-powered irrigation systems can analyze weather data, soil moisture levels, and crop requirements to determine the optimal amount of water needed for irrigation. This not only reduces water waste but also improves crop yields.

In urban areas, AI can be used to detect leaks in water distribution systems and predict water demand, allowing for more efficient water management. AI algorithms can also analyze data from sensors placed in water bodies to monitor water quality and detect pollution, enabling timely interventions to protect aquatic ecosystems.

### 1.2. Energy Efficiency

The energy sector is another area where AI can contribute to natural resource conservation. AI algorithms can optimize energy consumption in buildings, industries, and transportation systems. For instance, AI-powered

smart grids can balance energy supply and demand in real-time, reducing energy waste and lowering greenhouse gas emissions.

In the transportation sector, AI can optimize traffic flow and reduce fuel consumption by analyzing data from sensors and cameras. AI can also be used to develop more efficient renewable energy systems, such as wind turbines and solar panels, by predicting weather conditions and optimizing energy production.

### **1.3. Sustainable Agriculture**

Agriculture is a major consumer of natural resources, including water, land, and energy. AI can help make agriculture more sustainable by optimizing resource use and reducing environmental impact. For example, AI-powered precision agriculture systems can analyze data from satellites, drones, and sensors to monitor crop health, soil conditions, and weather patterns. This information can be used to optimize irrigation, fertilization, and pest control, reducing the need for water, chemicals, and energy.

AI can also help reduce food waste by predicting crop yields and optimizing supply chains. By analyzing data on weather, market demand, and transportation, AI algorithms can help farmers and distributors make informed decisions about when and where to harvest and distribute crops, reducing food loss and waste.

## **2. AI in Environmental Monitoring and Conservation**

In addition to optimizing resource use, AI can also play a crucial role in monitoring and conserving natural ecosystems. AI-powered tools can analyze data from various sources, including satellites, drones, and sensors, to monitor environmental changes and detect threats to biodiversity.

### **2.1. Deforestation and Land Use Change**

Deforestation is a major driver of biodiversity loss and climate change. AI can help monitor deforestation and land use changes in real-time by analyzing satellite imagery and other data sources. For example, AI algorithms can detect illegal logging activities and track changes in forest cover, enabling timely interventions to protect forests.

AI can also be used to predict the impact of land use changes on ecosystems and biodiversity. By analyzing data on land use, climate, and species distribution, AI algorithms can help policymakers and conservationists make informed decisions about land management and conservation planning.

### **2.2. Wildlife Conservation**

AI can also contribute to wildlife conservation by monitoring animal populations and detecting threats such as poaching and habitat destruction. For example, AI-powered camera traps can automatically identify and count animals in the wild, providing valuable data on population trends and distribution.

AI can also be used to analyze acoustic data to monitor wildlife populations and detect illegal activities such as poaching. For instance, AI algorithms can analyze audio recordings from rainforests to identify the calls of endangered species and detect the sounds of gunshots or chainsaws, indicating illegal activities.

### **2.3. Marine Conservation**

The oceans are facing numerous threats, including overfishing, pollution, and climate change. AI can help monitor and protect marine ecosystems by analyzing data from satellites, underwater drones, and sensors. For example, AI algorithms can analyze satellite imagery to monitor coral reef health and detect illegal fishing activities.

AI can also be used to predict the impact of climate change on marine ecosystems. By analyzing data on ocean temperature, acidity, and species distribution, AI algorithms can help scientists and policymakers understand the potential impacts of climate change on marine biodiversity and develop strategies to mitigate these impacts.

## **3. AI in Predicting Future Resource Availability**

One of the most promising applications of AI in natural resource conservation is its ability to predict future



resource availability. By analyzing historical data and identifying trends, AI algorithms can make predictions about future resource availability, enabling more informed decision-making.

### 3.1. Climate Change Predictions

Climate change is one of the most significant threats to natural resources, affecting water availability, agricultural productivity, and biodiversity. AI can help predict the impacts of climate change on natural resources by analyzing data on temperature, precipitation, and other climate variables. For example, AI algorithms can predict the likelihood of droughts, floods, and other extreme weather events, enabling policymakers and resource managers to take proactive measures to mitigate their impacts.

AI can also be used to model the long-term impacts of climate change on ecosystems and biodiversity. By analyzing data on species distribution, habitat conditions, and climate variables, AI algorithms can help scientists predict how ecosystems will respond to climate change and identify areas that are most vulnerable to biodiversity loss.

### 3.2. Resource Scarcity Predictions

AI can also be used to predict future resource scarcity, enabling more sustainable resource management. For example, AI algorithms can analyze data on water use, population growth, and climate conditions to predict future water scarcity in different regions. This information can be used to develop water management strategies that ensure sustainable water use and prevent water shortages.

Similarly, AI can be used to predict future energy demand and identify potential energy shortages. By analyzing data on energy consumption, population growth, and economic trends, AI algorithms can help policymakers and energy companies plan for future energy needs and develop strategies to ensure a stable and sustainable energy supply.

## 4. Challenges and Ethical Considerations

While AI has the potential to revolutionize natural resource conservation, its use also raises several challenges and ethical considerations. These include issues related to data privacy, algorithmic bias, and the potential for AI to be used in ways that harm the environment.

### 4.1. Data Privacy

The use of AI in natural resource conservation often involves the collection and analysis of large amounts of data, including data on land use, water use, and biodiversity. This raises concerns about data privacy, particularly when the data involves sensitive information about individuals or communities. For example, the use of AI to monitor water use in households could raise concerns about the privacy of individuals' water consumption data.

To address these concerns, it is essential to establish clear guidelines and regulations for the collection, storage, and use of data in AI applications. This includes ensuring that data is anonymized and that individuals' privacy rights are respected.

### 4.2. Algorithmic Bias

Another challenge associated with the use of AI in natural resource conservation is the potential for algorithmic bias. AI algorithms are only as good as the data they are trained on, and if the data is biased, the algorithms may produce biased results. For example, if an AI algorithm is trained on data that disproportionately represents certain regions or communities, it may produce biased predictions about resource availability or environmental risks.

To mitigate the risk of algorithmic bias, it is essential to ensure that AI algorithms are trained on diverse and representative data sets. This includes collecting data from a wide range of sources and ensuring that the data reflects the diversity of the communities and ecosystems being studied.

### 4.3. Environmental Impact of AI

While AI has the potential to contribute to natural resource conservation, it is also important to consider the environmental impact of AI technologies themselves. The development and deployment of AI systems require significant amounts of energy and resources, and the production of AI hardware can have a significant environmental footprint.

To minimize the environmental impact of AI, it is essential to develop more energy-efficient AI algorithms and hardware. This includes exploring the use of renewable energy sources to power AI systems and developing more sustainable manufacturing processes for AI hardware.

### 5. Conclusion

AI has the potential to play a transformative role in natural resource conservation, offering innovative solutions to some of the most pressing environmental challenges of our time. From optimizing resource use and monitoring environmental changes to predicting future resource availability, AI can help us manage and conserve natural resources more effectively and sustainably.

However, the use of AI in natural resource conservation also raises several challenges and ethical considerations, including issues related to data privacy, algorithmic bias, and the environmental impact of AI technologies. To fully realize the potential of AI in natural resource conservation, it is essential to address these challenges and ensure that AI is used in a way that is ethical, equitable, and sustainable.

As we continue to develop and deploy AI technologies, it is crucial to engage in ongoing dialogue and collaboration among scientists, policymakers, and communities to ensure that AI is used in a way that benefits both people and the planet. By harnessing the power of AI, we can work towards a more sustainable future, where natural resources are conserved and protected for generations to come.

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## DECLINING TREND IN NPAS OF INDIAN BANKS: A CATALYST FOR ACHIEVING VIKSIT BHARAT @ 2047

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### Abstract

This research paper aims to particularly focus on the recent significant decline in Gross Net Performance Assets (GNPAs) as of 31<sup>st</sup> March, 2024 across Indian banks and discusses how this milestone within the financial services sector of the Indian Economy is a crucial step towards achieving Viksit Bharat 2047. This development is in positive contrast to the NPA crisis in the banking sector which existed during the mid-1990s and during 2014-2015. By using available data from the RBI website, the paper compiles and presents the declining trends in NPAs across public and private sector banks during the financial year 2019 to 2024. Additionally, the paper identifies the key drivers and causes of the improving NPA situation from the data and concludes by mentioning how these reforms can be crucial in improving the Indian Banking system as part of the broader economic goals to achieve Viksit Bharat@2047.

**Keywords:** Gross Non-Performing Assets(GNPAs),GNPA Ratio, Viksit Bharat 2047, IBC(2016), Asset Quality Reviews (AQRs), Prompt Corrective Action (PCA) Framework.

### Introduction

Non-Performing Assets or NPAs are loans and advances given by banks from which income cannot be collected because the borrower has not made payments for interest or principal amount for a specified period. As per the Reserve Bank of India, NPAs are those loans and advances whose principal or interest remains overdue for over 90 days or more. Non-performing Assets are a key indicator of a bank's profitability, financial health, stability and thus a low NPA of a bank is desired. A low NPA allows the bank to preserve capital which can be utilised for lending, investments, expanding operations because the bank then does not need to lock its funds for provisions of bad loans which results in improved credit flow to the economy, on the other hand, a bank's high NPA reduces its capital base, since losses must be covered from the bank's reserves. The Reserve Bank of India (RBI) has defined asset classification norms that categorized loans based on their performance:

1. **Standard Assets:** Standard assets refer to loans where borrowers make timely payments, ensuring no risk of default. These loans are stable and consistently generate income for the bank, reflecting their strong performance and reliability.
2. **Sub-standard Assets:** These are loans that have been non-performing for up to 12 months. While they carry a higher risk of loss compared to standard assets, there is still a fair chance of recovery, making them less critical than doubtful or loss assets.
3. **Doubtful Assets:** Doubtful assets are loans that have been non-performing for over 12 months. Their recovery is uncertain, posing a higher risk to the bank. As a result, banks are required to set aside greater provisions to cover potential losses from these assets.
4. **Loss Assets:** Loss assets are bad loans identified by the bank, auditors, or RBI inspections, where recovery is deemed impossible. Although these loans haven't been entirely written off, they hold no realistic chance of repayment, making them a significant liability for the bank.

High NPAs of banks is detrimental to an economy like India where reduced amount of credit available (caused due to bad loans) to lend for consumers, businesses, the MSMEs (medium, small micro-enterprises) sector can lead to disruption in public finances, banks' profitability, eroding investor confidence, ultimately resulting in hindered economic activity, investment and reduced credit supply. This would be a significant deviation from the aim of achieving Viksit Bharat-2047.

Viksit Bharat-2047 is a visionary initiative laid down by the Government of India to transform India into a developed country from a developing country by targeting a 30 trillion USD economy by the year 2047, marking the centenary of India's Independence. It was officially launched by the Prime Minister of India, Shri Narendra Modi on 11<sup>th</sup> December, 2023, as 'Viksit Bharat@2047: Voice of Youth Program' which aims to actively involve the youth of the country to achieve this vision and for shaping the nation's future.

### Review of Literature

1. (Mohan, S., 2022). This paper examines how high NPAs negatively impact bank profitability, particularly through reduced ROA and ROE. It highlights that public sector banks face higher NPAs than private ones, limiting their ability to strengthen operations. Systemic issues like low efficiency and loan evergreening are identified as major causes of financial instability. The study also points to operational inefficiencies and macroeconomic shocks as key drivers of rising NPAs, offering insights into strategies for improving operational performance and ensuring financial stability.
2. (Mani, N., Mishra, A. K., & Pandikasala, J., 2023). This paper uses a Structural Satellite Financial Macroeconomic Model to explore the factors behind rising NPAs. It finds that the surge in NPAs after 2015 was driven more by improved loan classification and balance sheet clean-ups than by macroeconomic shocks. The study highlights weaknesses in the infrastructure sector, which significantly impacted public sector banks. It also introduces an innovative econometric model that links macroeconomic shocks to NPAs, showcasing the resilience of Indian banks in navigating these challenges.
3. (Gupta, O. P., & Dongre, N., 2024). This paper examines the relationship between Gross and Net NPA ratios and ROA over a five-year period and highlights how high NPAs in public sector banks significantly hinder profitability, emphasizing the urgent need for effective NPA management strategies. By analysing trends from 2018 to 2023, the study offers valuable insights for policymakers to focus on reducing NPAs, which is essential for improving bank profitability and supporting economic growth.
4. (Das, S. K., 2023). This study explores post-crisis trends in NPAs, focusing on factors like lending practices, earnings management, and inefficiencies. It reveals that public sector banks are more affected by poor credit allocation and rising NPAs. The research highlights the need to enhance lending quality and address inefficiencies, especially in PSBs, to improve outcomes.
5. (Raghunandan, S. N., 2023). This study evaluates NPA resolution mechanisms like the Insolvency and Bankruptcy Code (IBC), Debt Recovery Tribunals (DRTs), and the SARFAESI Act. It highlights the IBC's effectiveness in speeding up recovery processes and stresses the need for proactive measures to reduce NPAs, offering a unique analysis of these mechanisms' impact.
6. (Srivastava, S., 2024). This paper highlights the IBC as a transformative tool in managing NPAs, achieving higher recovery rates compared to other mechanisms. It also discusses initiatives like the Indradhanush Scheme and the creation of a "bad bank" to tackle structural challenges, emphasizing policy reforms that have played a key role in reducing NPAs.
7. Das, S. K. (2021). This paper compares two phases of the NPA crisis in India, highlighting the persistent challenges faced by public sector banks due to their exposure to large industrial and infrastructure loans. It provides sector-wise insights into NPA distribution and offers a historical perspective on the evolution of NPAs in PSBs and private banks.

### Objectives of the Study:

1. To examine the trends in Gross NPAs and NPA ratios across public and private sector banks in India from FY 2019 to 2024, indicating steady decline since FY 2018-19 and coming to a 12-year low 31<sup>st</sup> March, 2024.
2. To explore the impact of key reforms, like the Insolvency Bank Code (IBC, 2016), Asset Quality Review (AQR), Prompt Corrective Action, bank mergers, recapitalization and other reforms in driving the reduction of NPAs.

**Scope of the Study:**

1. Data taken to observe the recent decline in banks' NPAs has been taken for five financial years from 2019 to 2024 sourced from the RBI website under the Bank Performance Indicator category of the Statistics menu.
2. This study takes into account only the Public and Private Sector Banks under the Scheduled Commercial Banks of India excluding the GNPA levels and GNPA ratio of the Foreign Banks and Small Finance Banks because the latter category of banks operate on a niche scale catering to specific segments whereas the former category of banks constitute the bulk of India's banking system which will give a clear picture of the overall declining NPA trends across Indian banks

**Research Methodology**

This research study is basically descriptive in nature. Secondary data sourced from the RBI website has been used to visualise the NPA trends of Indian banks for the said period. Data used for depicting the downward trend of NPAs has been adjusted for the financial years FY 2019-20 and FY 2018-19 because the merger of public sectors took place effective from 1st April 2020. For this, the value of GNPA and total advances of the merging banks have been added to the value of GNPA and total advances of the surviving public sector bank which continue to operate today. Calculation of GNPA ratio is also done accordingly. <sup>10</sup>

**GNPA and GNPA Ratio Data Analysis & Interpretation**

**Table 1: Bank wise and Bank group-wise GNPA's, Gross Advances and GNPA ratio of Scheduled Commercial Banks (SCBs)- Public and Private Sector Banks**

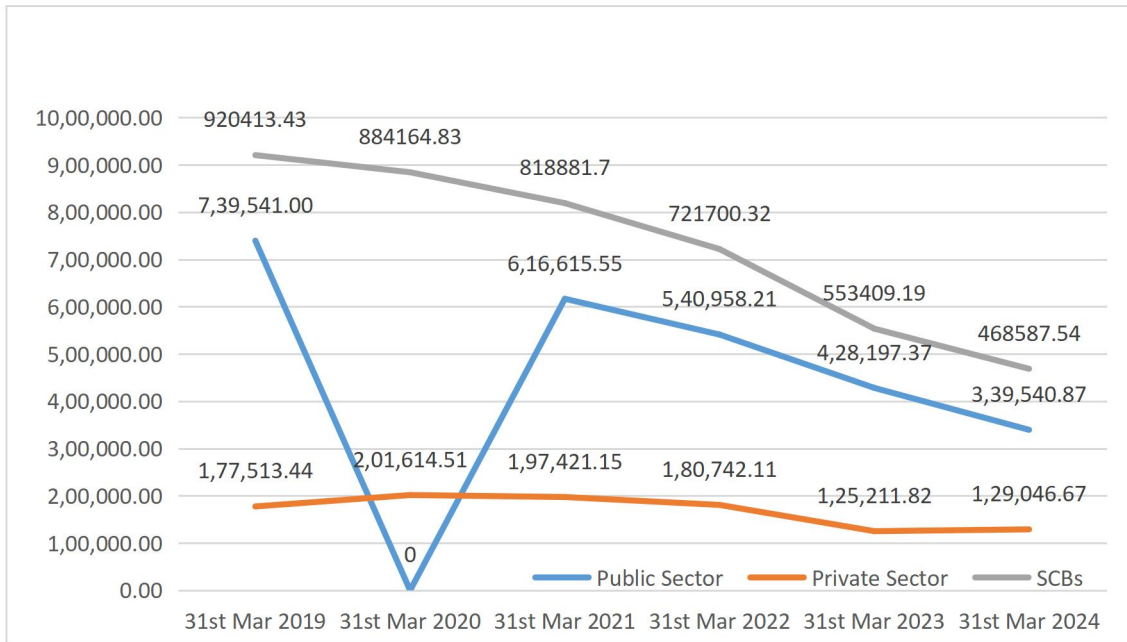
(Amount in ₹ Crores)		Public Sector Banks - Gross Advances	Public Sector Banks - GNPA Ratio (%)	Private Sector Banks - Gross NPAs	Private Sector Banks - Gross Advances	Private Sector Banks - GNPA Ratio (%)	Scheduled Commercial Banks - Gross NPAs	Scheduled Commercial Banks - Gross Advances	Scheduled Commercial Banks - GNPA Ratio (%)
2019	7,39,541.00	63,82,460.85	11.59	1,80,872.43	34,42,346.66	5.25	9,20,413.43	98,24,807.51	9.37
2020	7,39,541.00	63,82,460.85	11.59	1,80,872.43	34,42,346.66	5.25	8,84,164.83	1,03,91,342.86	8.51
2021	6,16,615.55	67,70,362.52	9.11	2,02,266.15	40,97,039.53	4.94	8,18,881.70	1,08,67,402.05	7.54
2022	5,40,958.21	74,33,006.34	7.28	1,80,742.11	47,00,911.86	3.84	7,21,700.32	1,21,33,918.20	5.95
2023	4,28,197.37	86,10,114.69	4.97	1,25,211.82	54,62,976.19	2.29	5,53,409.19	1,40,73,090.88	3.93
2024	3,39,540.87	97,73,487.66	3.47	1,29,046.67	69,59,146.28	1.85	4,68,587.54	1,67,32,633.94	2.80

Source: Statistical Tables relating to Banks in India:2023-24, RBI (26 December, 2024), data collated in word

<sup>10</sup> PSB Mergers: Allahabad Bank merged with Indian Bank; Oriental Bank of Commerce and United Bank of India merged with Punjab National Bank; Andhra Bank and Corporation Bank merged with Union Bank of India; Syndicate Bank merged with Canara Bank effective with effect from 1<sup>st</sup> April 2020 whereas Vijaya Bank and Dena Bank merged with Bank of Baroda with effect from 1<sup>st</sup> April 2021.

**GNPA Ratio is calculated as: (Gross NPAs/Gross Advances) \* 100**

**Figure 1: GNPA Levels across Indian Banks from FY 2018-2019 to FY 2023-24**



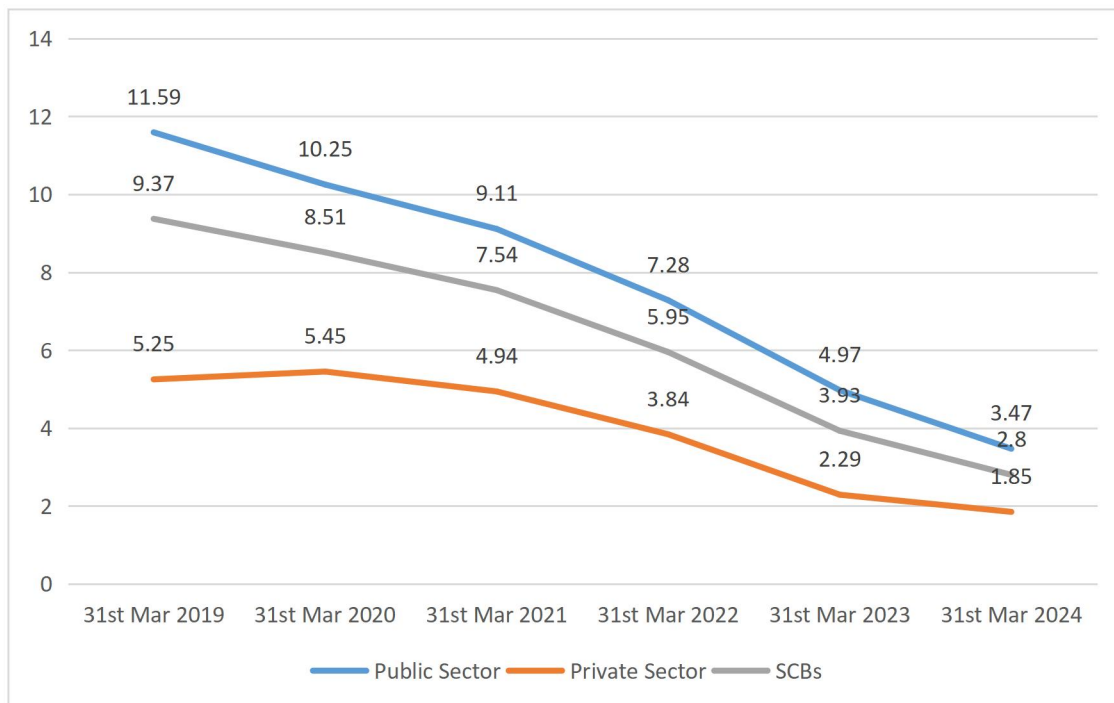
Source: Statistical Tables relating to Banks in India:2023-24, RBI (26 December, 2024); Graph made on excel by taking the data.

**Public Sector Banks (PSBs):** In 2019, PSBs recorded a staggering ₹7,39,541 crore in GNPA in 2019, constituting the majority of stressed assets in the banking sector. One can clearly observe a sharp decline in GNPA level by 2024, amounting to ₹3,39,540.87 crore, which is a 54.1% reduction over six years.

**Private Sector Banks (PVBs):** Private Sector Banks on the other hand demonstrated a lower GNPA burden compared to PSBs, starting at only ₹1,80,872.43 crore in 2019. While there was a slight increase to ₹2,02,266.15 crore in 2021, this was followed by a decline to ₹1,29,046.67 crore in 2024, representing a 28.6% reduction from the peak in 2021.

**Scheduled Commercial Banks (SCBs):** SCBs which comprise the combined values of GNPA of Public and Private sector banks, saw a drastic decline from ₹9,20,413 crore in 2019 to ₹4,68,587.54 crore in 2024 reflecting a 49.1% reduction over the period. As one can clearly observe from the illustration, this downward trend of GNPA levels across both public and private sector banks indicate the positive impact of policy reforms introduced by RBI and through the Insolvency and Bankruptcy Code (IBC, 2016).

**Figure 2: GNPA Ratio of Indian Banks from FY 2018-2019 to FY 2023-24**



Source: Statistical Tables relating to Banks in India:2023-24, RBI (26 December, 2024); Graph made on excel by taking the data

**Public Sector Banks:** PSBs had an initial GNPA ratio of 11.59% in 2019, reflecting the large volume of stressed assets accumulated during the years of indiscriminate lending and macroeconomic challenges. This ratio had fallen sharply to 3.47% in 2024, achieving a nearly 70% improvement.

**Private Sector Banks:** PVBs started with a relatively low GNPA ratio of 5.25% in 2019, reflecting their traditionally cautious approach to lending and stronger credit monitoring mechanisms. We can observe a sharp decline in the GNP ratio to 1.85% in 2024, showing a 65% reduction over six years.

**Scheduled Commercial Banks:** The NPA ratio for SCBs has shown a consistent decline from 9.37% in 2019 to 2.80% in 2024, marking a significant improvement of nearly 70% over six years. This decline highlights better asset quality, improved loan recovery mechanisms, and enhanced credit discipline across the banking sector thus positively aligning with the goals of Viksit Bharat@2047 if the reforms taken over the years is maintained.

### Conclusion

While PSBs had the highest GNPA levels in 2019, they achieved the most significant reduction, with their GNPA ratio improving from 11.59% to 3.47% achieving a nearly 70% improvement which can be attributed to the impact of stricter provisioning norms in the form of Asset Quality Reviews (AQRs), Prompt Corrective Action framework (PCA), bank mergers and recapitalization efforts. The GNPA ratio for PVBs followed a steady downward trend, improving from 5.25% in 2019 to an impressive 1.85% showing a 65% reduction over six years in 2024, indicating robust risk management practices and a focus on quality lending. PVBs consistently showed lower GNPA ratios compared to PSBs, reflecting their traditionally stronger focus on retail lending and efficient credit risk management. The GNPA ratio across SCBs overall has shown a consistent decline from 9.37% in 2019 to 2.80% in 2024, marking a remarkable improvement of nearly 70% over six years indicating a systemic recovery in the Indian banking sector, driven by policy interventions, technological adoption, and robust recovery mechanisms. The sustained reduction in NPAs allows for greater credit flow to productive sectors, contributing to economic stability

and growth. This trend aligns with India's broader vision of achieving Viksit Bharat 2047 by building a robust financial foundation for long-term development.

The 4Rs strategy- Recognition, Resolution, Recapitalization and Reforms implemented by the Government of India by introducing laws like the Insolvency and Bankruptcy Code (IBC, 2016), The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act (SARFAESI Act, 2002), Debt Recovery Tribunals (DRTs) and initiatives by the RBI like the Asset Quality Reviews (AQRs) and Prompt Corrective Action Framework (PCA) have transformed India's banking landscape by enabling early recognition of NPAs, facilitating faster resolutions and enhancing overall governance. This approach has been pivotal so far in achieving the current decline in NPAs and paving the way for sustaining financial stability, aligning with the broader economic goals of Viksit Bharat@2047.

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## AI-POWERED STARTUPS: FOSTERING INNOVATION IN INDIA BY 2047.

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### Abstract

The rapid advancement of Artificial Intelligence (AI) has significantly transformed global economies, and India stands at the forefront of this revolution. AI-powered startups in India are reshaping traditional business models, revolutionizing industries, and driving innovation across multiple sectors, such as healthcare, agriculture, fintech, and education. This paper explores the evolving landscape of AI startups in India, highlighting key sectors where AI is being implemented and the government initiatives aimed at fostering AI research and development. Despite the growing potential, AI startups in India face several challenges, including limited access to funding, inadequate infrastructure, and an evolving regulatory environment. The study further examines how AI is transforming business models, making operations more efficient, providing personalized services, and enabling data-driven decision-making. Additionally, the paper explores the economic and social impacts of AI startups on India's growth, job creation, and innovation ecosystem, especially in light of the country's goal to become a global leader in AI by 2047. The paper concludes by discussing the need for strengthening AI education, improving the regulatory framework, and increasing support for AI startups to unlock their full potential in India's rapidly changing technological landscape.

**Keywords:** AI, Innovation, Economic Growth, Technology, Entrepreneurship

### Introduction

India has emerged as a global hub for innovation and entrepreneurship, fueled by a rapidly growing startup ecosystem. Over the past decade, India has seen an explosion in the number of startups across sectors, with more than 50,000 startups registered in the country by 2024. These startups are increasingly leveraging cutting-edge technologies like artificial intelligence (AI) to disrupt traditional industries and create innovative solutions for some of the world's most pressing challenges. AI, with its potential to process vast amounts of data and make intelligent decisions, is fast becoming a cornerstone of India's entrepreneurial landscape.

AI's transformative power lies in its ability to enhance efficiency, improve decision-making, and create personalized user experiences across diverse sectors, from healthcare and agriculture to finance and education. Indian startups are using AI to build smarter products, optimize operations, and deliver services that were once thought to be beyond reach, especially for underserved markets. With a large and diverse population, India offers unique opportunities for AI applications that can drive both economic growth and social impact. However, challenges such as talent shortages, inadequate infrastructure, and a lack of adequate regulatory frameworks remain barriers to the full realization of AI's potential.

As India celebrates its 100th year of independence in 2047, there is a vision for the country to emerge as a global leader in AI technology and innovation. The Indian government has laid the groundwork through initiatives like the National AI Strategy, but achieving this ambitious goal requires a concerted effort from all stakeholders: government, academia, private industry, and startups themselves. This paper explores how AI-powered startups can contribute to India's technological advancement, economic growth, and global competitiveness by 2047. By examining the current state of AI in India, the challenges faced by AI startups, and the opportunities ahead, this paper offers insights into how India can foster a thriving AI-driven innovation ecosystem that drives progress for years to come.

### Objectives

1. Explore how AI is driving innovation in key sectors like healthcare, education, and agriculture.
2. Analyze contributions of AI-powered startups in solving socio-economic challenges.
3. Examine the effectiveness of initiatives like the National AI Strategy and Atal Innovation Mission.
4. Investigate funding, skill gaps, and ethical issues faced by AI startups.

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## Sources of Data Collection

The source of Data Collection is based on Secondary Data through Books, Newspaper, Articles, Journals & Internet.

## The State of AI in India

### AI Landscape in India

AI research and development in India have seen rapid growth, with applications spanning multiple sectors. In **agriculture**, AI is used for precision farming and crop monitoring (e.g., **Fasal**), while in **fintech**, AI helps with fraud detection and automated financial advice (e.g., **Razorpay**). In **healthtech**, AI-driven diagnostics and telemedicine are improving access to healthcare (e.g., **Niramai**).

### Government Initiatives

The Indian government has launched several initiatives to foster AI innovation. The **National AI Strategy** aims to make AI a key driver of economic growth, focusing on sectors like healthcare, agriculture, and education. **AIREN** (AI Research and Development Network) encourages collaboration between academia, industry, and government to develop AI technologies and solutions.

### Challenges Faced by AI Startups in India

AI startups in India face several challenges:

- **Funding:** Access to venture capital remains limited, especially for early-stage startups.
- **Infrastructure:** Insufficient computational resources and poor internet connectivity in rural areas hinder the growth of AI technologies.
- **Regulatory Issues:** The current regulatory environment is not fully adapted to the fast pace of AI development, leading to uncertainties around data privacy and ethical concerns.

### Role of AI in Startup Innovation

#### Business Model Transformation

AI is transforming traditional business models in India by enabling startups to streamline operations, offer personalized services, and make data-driven decisions. For instance, AI helps businesses in **e-commerce** like **Myntra** personalize product recommendations, while **swiggy** uses AI for efficient logistics and delivery optimization.

#### Emerging Sectors for AI Startups

AI is gaining traction in key sectors:

1. **Healthcare:** AI-powered diagnostics, such as **Niramai**, are improving early detection of diseases.
2. **E-commerce:** AI enhances customer experience by personalizing recommendations and predicting trends.
3. **Agritech:** Startups like **Fasal** are using AI for smart farming and better crop management.
4. **Edtech:** AI is personalizing learning through platforms like **BYJU's**, adapting courses to student needs.

#### AI-driven Product Innovation

Indian AI startups are at the forefront of product innovation:

- **SigTuple** uses AI for automated medical diagnostics, revolutionizing healthcare delivery.
- **Playment** offers AI-powered data annotation, enabling faster training of machine learning models. These startups have redefined customer experience, service delivery, and product design by embedding AI deeply into their offerings.

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## The Startup Ecosystem and AI Collaboration

### Building AI Communities

Fostering innovation in the AI ecosystem requires a robust network of communities, including incubators, accelerators, and research partnerships. These entities play a crucial role in nurturing startups, providing mentorship, and enabling collaboration.

### Role of Incubators and Accelerators

- **Incubators:** Offer startups early-stage support, such as workspace, mentorship, and networking opportunities. For example, **T-Hub** in Hyderabad has supported several AI startups by providing resources for scaling operations and connecting them with investors.
- **Accelerators:** Help mature startups grow quickly through mentorship and access to funding. Programs like **Microsoft ScaleUp** in Bengaluru focus on AI startups, providing technical support and connections to global markets.

### Successful AI Startup Hubs in India

- **Bengaluru:** Known as India's Silicon Valley, Bengaluru hosts a vibrant ecosystem of AI-driven startups like **Niramai** and **SigTuple**. The city benefits from its strong IT infrastructure, research facilities, and global tech companies.
- **Hyderabad:** Emerging as an AI hub, Hyderabad is home to **T-Hub** and government-backed initiatives like the Telangana AI Mission (T-AIM), which aims to make the city a leader in AI innovation.
- **Pune and Chennai:** Growing AI ecosystems focusing on niche areas like manufacturing AI and data analytics.

### Collaboration with Academia and Industry

Collaboration between academic institutions and industries is a cornerstone for advancing AI research and applications. These partnerships enable startups to leverage cutting-edge research and apply it to real-world problems.

### Academic Partnerships

- Institutions like **IITs**, **IIT Hyderabad**, and **IISc Bengaluru** actively collaborate with AI startups and corporations to conduct research and develop innovative solutions.
- **Example:** IIT Madras partnered with Robert Bosch to establish the **Robert Bosch Centre for Data Science and AI (RBCDSAI)**, focusing on areas like healthcare and financial technology.

### Industry Collaboration

- Tech giants like Google, Microsoft, and IBM partner with startups and academic institutions to develop AI solutions.

**Example:** Microsoft's AI for Good initiative works with Indian startups to develop socially impactful solutions, such as AI-driven tools for agricultural productivity.

### Public-Private Partnerships

The government collaborates with industry leaders and academic institutions to create frameworks and resources for AI growth. **NITI Aayog's AI initiative** is a prime example of such collaboration, aiming to integrate AI into healthcare, education, and agriculture.

## Investment in AI Startups

Investment plays a pivotal role in scaling AI-driven startups and fostering innovation. Venture capital (VC) and private equity (PE) firms have shown significant interest in funding AI startups due to their potential for high returns and societal impact.

### Overview of AI Investments in India

- According to a NASSCOM report, AI startups in India raised over \$1 billion in 2022, marking a significant growth trajectory.
- **Sectors Attracting Investment:** Healthtech, fintech, and agritech dominate AI funding, with startups like **Uniphore** (conversational AI) and **Fasal** (agritech) receiving substantial VC support.

### Notable Investors in AI Startups

- **Sequoia Capital India:** Invested in AI-driven startups such as **Razorpay** and **Cure.fit**.
- **Accel Partners:** Provided funding to startups like **Playment**, specializing in AI-driven data annotation services.

### Future Outlook

- Increasing interest in AI for social impact and commercial success is likely to boost investments further.
- Initiatives like the **AI Venture Fund** by the Indian government are expected to provide financial backing to early-stage startups focusing on critical areas like healthcare and agriculture.

## Vision 2047: AI-Powered Innovation in India's Economic Growth

### India's Technological Vision by 2047

India aspires to become a global leader in artificial intelligence (AI) technology by 2047, coinciding with the country's centenary of independence. This vision aligns with the goal of leveraging AI to transform industries, drive economic growth, and solve societal challenges.

### AI Startups and Their Contribution

- **Innovation Powerhouses:** AI startups are driving innovation by developing solutions tailored to India's unique challenges, such as rural healthcare access, precision agriculture, and financial inclusion.
  1. **Example:** Startups like **CropIn** and **Niramai** are addressing key issues in agriculture and health, contributing to the larger technological vision.
- **Global Competitiveness:** Startups are positioning India as a hub for AI research and development, attracting international collaborations and investments.
  1. **Example:** Bengaluru and Hyderabad are emerging as global AI hubs, hosting innovation centers and fostering cross-border partnerships.
- **Policy Support:** Government initiatives like the **National AI Strategy** and **Digital India** aim to create a supportive ecosystem for startups, enabling them to scale and innovate.

### Economic Impact of AI Startups

AI startups are poised to significantly impact India's economy by driving growth, creating jobs, and fostering entrepreneurship.

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## Increase in GDP

According to NASSCOM, AI has the potential to add \$500 billion to \$1 trillion to India's GDP by 2035. Sectors like healthcare, fintech, and retail are expected to benefit from AI-driven efficiencies and innovation, contributing to economic growth.

- **Job Creation**

1. AI startups will create millions of direct and indirect jobs, from AI development roles to positions in sectors benefiting from AI integration.

**Example:** Startups like **GreyOrange**, specializing in robotics, are creating high-skill jobs in AI and automation while transforming traditional roles.

- **Entrepreneurial Culture**

1. AI startups encourage entrepreneurship by creating opportunities for innovation in untapped sectors.
2. Government-backed incubators like **T-Hub** and **Atal Innovation Mission** provide platforms for aspiring entrepreneurs to enter the AI domain.

## Social Impact of AI Startups

AI-driven innovation holds immense potential to improve the quality of life in India, especially in critical areas like healthcare, education, and agriculture.

- **Healthcare**

- AI is revolutionizing diagnostics, treatment planning, and patient monitoring.
- **Example: Niramai** uses AI-based thermal imaging for early cancer detection, making diagnostics affordable and accessible in rural areas.
- AI-powered telemedicine platforms are bridging healthcare gaps in underserved regions, improving access to quality care.

- **Education**

- AI enables personalized learning and skill development, addressing disparities in access to quality education.
- **Example: Byju's** uses AI to track student performance and customize learning modules, ensuring improved outcomes.
- AI tools like virtual labs and AI tutors enhance learning experiences, particularly in remote areas with limited infrastructure.

- **Agriculture**

- AI is empowering farmers with precision agriculture techniques, optimizing resource usage, and increasing productivity.
- **Example: Fasal** provides real-time data on weather, pest control, and irrigation, helping farmers make informed decisions and reduce crop loss.
- AI-powered marketplaces connect farmers directly to buyers, ensuring fair prices and reducing waste in supply chains.

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## Challenges and Barriers to AI Startup Growth

### Talent Gap

India faces a shortage of skilled AI professionals due to limited specialized education and practical training. Many institutions lack AI-focused programs, and access to quality education is concentrated in top-tier cities.

- **Solution:** Initiatives like NASSCOM FutureSkills, online platforms (Coursera, edX), and industry-academia collaborations can bridge this gap through upskilling and democratized learning.

### Regulatory and Ethical Issues

AI adoption raises concerns around data privacy, algorithmic bias, and lack of governance. Current laws are insufficient to address these challenges, potentially stifling innovation.

- **Solution:** Implement robust data protection laws (e.g., Digital Personal Data Protection Act, 2023), create ethical AI frameworks, and promote public-private partnerships to establish balanced regulations.

### Infrastructure and Connectivity

Inconsistent digital infrastructure, particularly in tier-2 and tier-3 cities, hinders AI deployment. Challenges include limited internet access, inadequate cloud resources, and lack of smart infrastructure.

- **Solution:** Expand initiatives like BharatNet for rural connectivity, subsidize cloud resources for startups, and develop regional AI hubs to promote inclusive growth.

### Policy Recommendations

#### Strengthening AI Education and Talent Development

To bridge the AI skill gap, both government and private sector initiatives are critical. The **government** is launching programs like **NASSCOM FutureSkills** and **Digital India** to upskill the workforce in AI technologies. Similarly, **private companies** are partnering with universities to offer specialized courses in machine learning, data science, and AI.

- **Example:** Institutions like **IITs** and **IIITs** are offering AI-focused degree programs and research opportunities. Online platforms such as **Coursera** and **edX** are also expanding access to AI learning, providing certifications and specialized courses to a global audience.

#### Creating a Pro-Innovation Regulatory Framework

An adaptive legal framework is essential to support AI innovation while ensuring responsible and ethical use of AI technologies. This involves:

1. **Data Privacy:** Strengthening data protection laws, such as the **Personal Data Protection Bill**, to ensure that user data is securely handled.
  2. **Ethical Guidelines:** Establishing regulations to avoid biases in AI algorithms, ensuring fairness and transparency in decision-making processes.
  3. **AI-Specific Laws:** Introducing AI-specific regulations to address issues like algorithmic accountability, liability, and transparency without stifling creativity.
- **Example:** The EU's **AI Act** is a good model, providing clear guidelines for the use of AI while balancing innovation and risk.

#### Incentives for AI Startups

To nurture AI startups, the government and private sectors must offer a range of incentives:

1. **Tax Breaks:** Offering tax incentives to AI startups for research and development (R&D) can help lower operational costs and encourage innovation.
  2. **Funding Opportunities:** Creating government-backed funds or collaborating with venture capitalists to offer accessible funding for early-stage AI startups.
  3. **Infrastructure Development:** Ensuring access to high-speed internet, data centers, and cloud computing resources in tier-2 and tier-3 cities to help startups scale.
- **Example:** The **Startup India** initiative already offers tax breaks and funding to young tech startups, which can be expanded to AI-focused companies.

## Conclusion

### Key Findings

AI is significantly shaping India's startup ecosystem, driving innovation across sectors like **agriculture, healthcare, fintech, and e-commerce**. AI solutions are improving efficiency, personalizing services, and creating new business models. However, challenges such as the **talent gap, limited funding, and evolving regulations** remain. Despite these, AI has great potential to drive economic growth, create jobs, and enhance sectors like **education, agriculture, and healthcare**.

### Future Directions

For India to lead in AI by 2047, action is needed from the **government, industry, and academia**. The government must invest in AI education, promote AI innovation, and implement policies that balance growth with ethical standards. Public-private collaborations will help address funding gaps and accelerate R&D. The private sector should support AI talent development and invest in startups, particularly in underserved regions. **Industry-academia** partnerships will drive real-world AI solutions.

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## IMPACT OF THE COVID-19 OUBREAK ON BUSINESS

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### Abstract:

The COVID-19 pandemic has devastated the world economy and businesses in various industries and geographic areas struggling with testimony. India, one of the world's largest economies, suffered severely pandemic as businesses face various challenges such as supply chain disruptions and workforce shortage and reduced demand. The purpose of this study is to examine the impact of COVID-19 on business in India, focusing on the challenges facing various sectors and the opportunities for recovery and growth. The study concludes with policy recommendations that may assist the Government of India and other stakeholders for businesses during and after the pandemic. These measures include financial support for SMEs, regulation simplification, fostering innovation and technology adoption, and facilitating market access and supply chains In addition, the document emphasizes the government, companies, and civil society to build a resilient and sustainable economy for a post-pandemic world.

**Keywords:** Covid-19, Indian Business, Employees, Impact, Survey

### Introduction

The pandemic had a negative impact on business. The three biggest challenges seem to be interrelated with customers, reduces company expenses and productivity due to remote work. Travel restrictions, social distance, restrictions on the sale of certain goods and customers use budget reductions and the delay of projects caused a sharp decline in sales. Companies find it difficult to cover fixed costs lack of income due to a significant decline in sales. The increase in costs is due to the digital platform increased freight and transportation costs and increased raw material costs. The new normal is focus existing customers and create collaborative relationships. Face-to-face communication gave way to online communication calls, video conferencing, social media and virtual platforms. Virtual methods of communication seem insufficient create a new business. Companies seem to require at least one face-to-face interaction to build trust and commitment going forward, it seems that companies and their stakeholders will have to face and prepare some hard realities. Operations and supply chain managers should plan for potential increases in raw material costs and consider new distribution models. HR managers must prepare for layoffs and train employees for them to work remotely. Businesses reported that active employment increased by 39 percent compared to January. It was a special bill strong in the mid-Atlantic region (which includes New York) where 54% of businesses closed and employment fell by 47 percent. Retail, arts and entertainment, personal services, catering and hospitality businesses some reported job losses exceed 50 percent; instead, financial, professional services and real estate businesses experienced less disruption because they were better able to transition to remote production. Disturbing discoveries are made on patterns between gender, race and immigration status. African Americans suffer the greatest loss, accounting 41% of active entrepreneurs. Latinx also suffered major losses, with 32% of business owners quitting between February and April 2020. Business activity among immigrant business owners fell by 36%. the number of female business owners decreased by 25 percent. Before the COVID-19 pandemic, India was one of the fastest growing economies in the world. The state did significant progress in infrastructure development, technological development and attracting foreign investment. India was known for its diverse and vibrant business environment, which included a large number of small and medium-sized companies. The Government of India implemented several reforms to encourage entrepreneurship and facilitates the activities of companies in the country.

### Business impact

The after spread of COVID-19 has become one of the biggest threats to the global economy and financial markets. To contain the impact of the coronavirus outbreak, India, like many countries across the globe, is taking several measures, including a nationwide lockdown; limiting movement of the entire population; shutting down public places and transport; and urging the public to stay indoors, maintain social distance, and work from home. The



resulting economic disruption is huge and the short-term decline in activity for businesses, both large and small, considerable.

With economic growth expected to be severely hit, the financial outlook of the digital payments sector is no different and will follow a similar trajectory, at least in the short term. But the industry’s stability and potential for innovation will play an invaluable role in rebooting the economy in the new normal.

The adverse effects of the COVID-19 pandemic are trickling down to major sectors of the Indian economy, with manufacturing, auto, retail, aviation and hospitality bearing the brunt of the lockdown. This in turn has affected fast-growing digital payments which are closely linked to the aforementioned sectors. Shut shops, travel bans and reduced discretionary spends by consumers (on dining out, movies and entertainment and so on) are further negatively impacting digital payments.

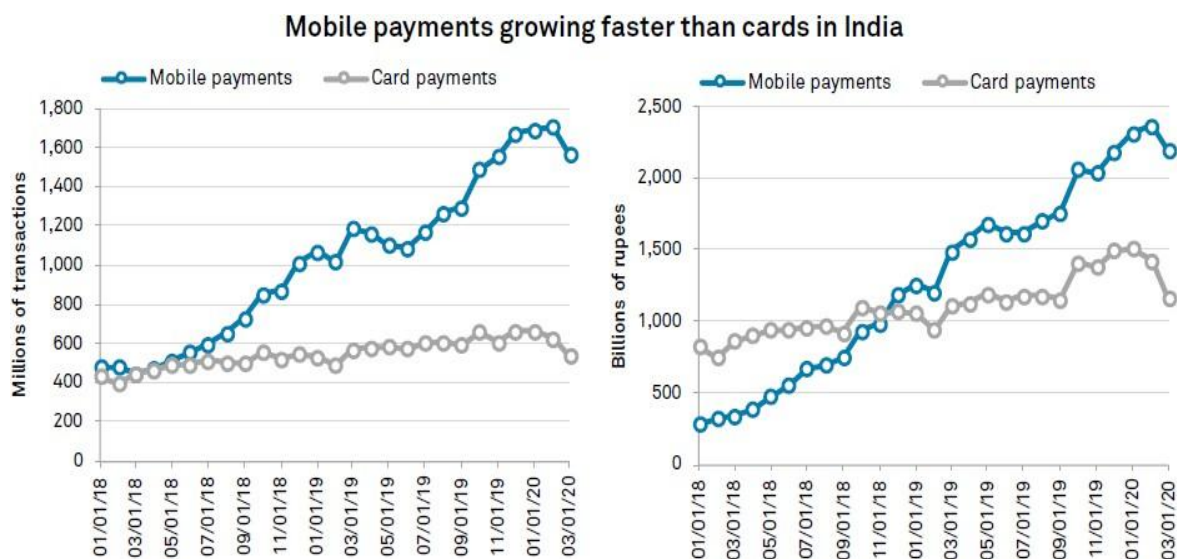
Digital payment volume declines are seen in airlines, tourism, hospitality, hotels, entertainment, e-commerce (non-essentials) and restaurants, among other sectors. Further, cross-border payments, be they B2B or C2B, have significantly declined owing to the temporary shutting down of borders further, resulting in restricted movement of goods. International remittances too have been affected and have reduced.

However, there are also a few areas that are seeing an uptick in digital payments by way of increased adoption during the lockdown. These include online grocery stores, online pharmacies, OTT players (telecom and media), EdTechs, online gaming, recharges and utility/bill payments. Digital payment volumes are also receiving a boost through the Government, which has pledged monetary assistance to the poor via direct transfers to bank accounts. The finance minister and the CEO of the National Payments Corporation of India have also urged people to increase the use of digital payments in order to make payments contactless.

Digital payments, once a convenience, have become a necessity in these times. With a majority of the sectors that contribute to digital payments still in a state of flux, it is still too early to ascertain the long-term impact of COVID-19 on digital payments.

### Objectives of the study

- 1) A Study of impact of the covid-19 on Business.
- 2) A study of covid-19 impact on Medical sector & Small Business.



Sources: 2020 India Mobile Payments Market Report, spglobal.com/market intelligence, Reserve Bank of India; National Payments Corp. of India.

Various important sectors in the economy of the Indian have been adversely affected due to COVID-19 pandemic. The affected sectors were like automotive, manufacturing, retail, airline and hospitality industry. The effects are

also seen on digital payments, one of the fastest growing things that are linked to the above areas. Shutdown of shops, trips and decrease in the spending of the consumer (e.g. spending on the various outdoor food, movies and entertainment, etc.) had brought the negative impact on digital payments. In some categories, a decline in digital pricing is evident in travel, airlines, hotels, hospitality, restaurants, entertainment and e-commerce (non-essential). During the appropriate time the Digital payment has become necessary. With many areas participating in the digital payment revolution, it is still too early to realize the long-term impact of COVID-19 on digital payments.

### Cashless After Covid-19?

Electronic Payments Seem To Be More Attractive As People Fear That Money Can Spread the Coronavirus

(Rooney, 2020) highlights the key points as:

- Seeing money as a coronavirus vehicle can change how consumers choose to pay in person.
- Critics say that the "psychological factor" of people who think money is "dirty" can spur more adoption of things like Apple Pay and Venmo.
- "People default to normal, unless something pushes you away," said Jodie Kelley, manager of the Electronic Transaction Association. "Wireless billing has been considered as something new for consumers who know what they're up to."

### Cumulative Payment Transactions in the last 12 months

	<b>No. of Transaction (in Crore)</b>	<b>Growth in % (month on month)</b>
Jan 2020	436.43	
Feb 2020	847.44	94.17 %
March 2020	1,262.84	49.02%
April 2020	1,566.22	24.02%
May 2020	1890.23	20.69%
June 2020	2,298.85	21.62%
July 2020	2,699.06	17.41%
August 2020	3,132.43	16.06%
Sept 2020	3,620.51	15.58%
Oct 2020	4,108.29	13.47%
Nov 2020	4,623.25	12.53%
Dec 2020	4,764.28	03.05%

Source: <https://research.vit.ac.in>

It is been seen that there is been rise in the digital payment transaction from January 2020. From January 2020 to February 2020 it was almost doubled by 94.17% rise i.e. 436.43 crore transaction to 847.44 crore transaction. Further the percentage of rise was diminishing. From February 2020 to March 2020 was 49.05%. It raises percentage decrease to 03.05% from November 2020 to December 2020. In the month of December the number of transaction went to 4764.28 crore.

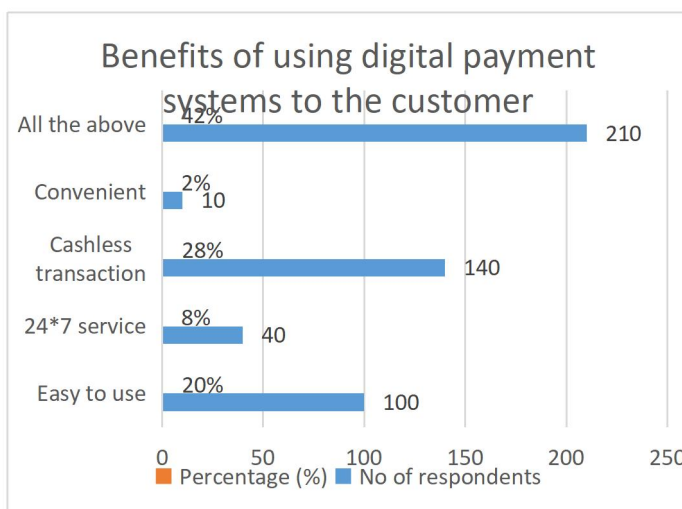
### Impact on COVID-19 – medical Sector

The COVID-19 pandemic has arisen as a global health outbreak without precedent. While the level of implications remains to be measured, the effect on the global exchange in the near and in the distance future is apparent. The worldwide medicines supply chain will probably be disrupted, and the effect on global availability to medicine, notably in low- and medium-income countries (LMICs), will face profound effects. During 2018–2019, India supplied around \$19 billion in medicines to more than 200 countries, from the highly controlled marketplaces of North America and European countries with minimal resources in the medical industry, including sub-Saharan Africa (SSA). The Indian Ministry of Medicine estimated that formulation and biologics contain 77% of all Indian sales, and that Indian companies offer 20% of global generic supplies. Indian companies hit 40% generic competition in the USA and a quarter of that in Europe. Indian companies supply around 70% of their large quantities of medicines from China, where the manufacturing of active pharmaceutical ingredients (APIs) and supply chain service have been affected by the current COVID-19 epidemic. The Indian Government has limited export of 26 large quantities of medicine and their formulas. Global reliance on India’s generic products is expected to be a complex international challenge in the context of the COVID-19 outbreak. There is no suitable replacement for API supplies or sufficient productive capacity, and more notably, any country capable of producing is probably to be centered on regional needs and not trade and growth support. Control and monitoring of COVID-19 outbreaks in India are of utmost concern for both India and the world. The potential to acquire manufactured goods, produce and sell drugs not only defines how the significant proportion of LMICs will respond to the epidemic but also influences middle-income countries. To be a significant part of India’s growth, the condition of its medical industry will decide its effect on the 1:5 of the global population. COVID-19 outbreak in India.

India has demonstrated its importance in ensuring the safety of millions of people all over the world in the competitive and sustainable medical industry. Exceptional steps to improve and preserve the operation of the production facilities should be implemented. Governments and foreign entities relying on India for production would take into consideration of the Indian medical supply chain across their specific necessities. Detailed plans are needed to ensure worldwide connections to Antiphospholipid antibody syndrome (APIs) and medicines. In a few months, medical regulatory agencies are required to approve testing devices, drugs and vaccination to detect, treat and prevent COVID-19 pathogens. A substantial scale development of certain pharmaceuticals will allow and provide complete support to the world medical industry. By taking the output capacity of Indian companies into consideration, their role in a transition to some modernity after the outbreak will be vital for the rest of the globe and also for India.

#### Benefits of using digital payment systems to the customer.

Particulars	No of respondents	Percentage (%)
Easy to use	100	20%
24*7 service	40	8%
Cashless transaction	140	28%
Convenient	10	2%
All the above	210	42%
<b>Total</b>	<b>500</b>	<b>100%</b>



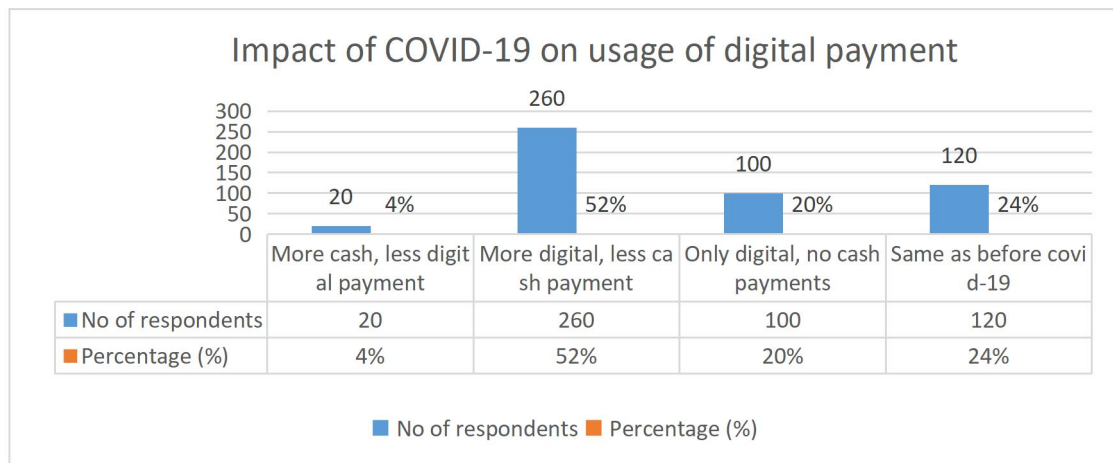
Source: Primary Data 2023-24

From the above table & chart no. 4.17 it can be analyzed that, out of 500 respondents.20% of respondents using digital payment for the benefit of easy to use, 8% of respondents using this digital payment for benefit of 24\*7 services, 28% of respondents having benefit of cashless transaction, 2% respondents using for the benefit of convenient, 42% of respondents using digital payment for all the above benefits.

**Impact of COVID-19 on usage of digital payment.**

Particulars	No of respondents	Percentage (%)
More cash, less digital payment	20	4%
More digital, less cash payment	260	52%
Only digital, no cash payments	100	20%
Same as before covid-19	120	24%
<b>Total</b>	<b>500</b>	<b>100%</b>

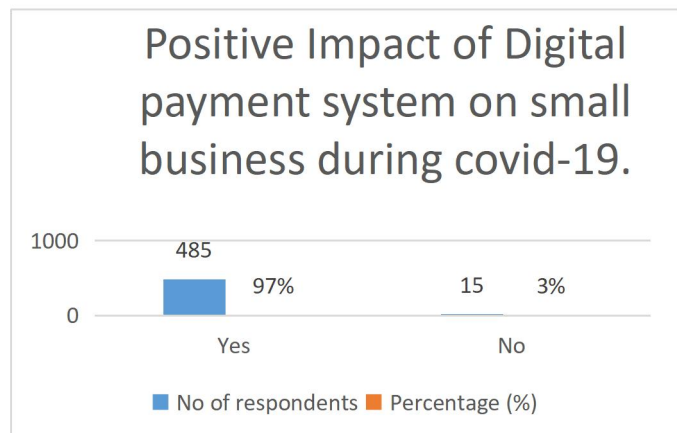
Source: Primary Data 2023-24



From the above table & chart no.4.18 shown Impact of COVID-19 on usage of digital payment. it can be analyzed that, out of 500 respondents.COVID-19 impacts on digital payment so, 4% of respondents go through more cash, less digital payment, This pandemic impacts on digital payment, 52% of respondents go through more digital, less cash payment, 20% respondents preferred only digital, no cash payment, 24% respondents choose same as before COVID-19 because this pandemic not impact on digital payment system.

**Positive Impact of Digital payment system on small business during covid-19.**

Particulars	No of respondents	Percentage (%)
Agree	485	97%
Disagree	15	03%
<b>Total</b>	<b>500</b>	<b>100%</b>



Source: Primary Source 2023-24

From the above table & chart no. 4.19 shown Positive Impact of Digital payment system on small business. It can be analyzed that, out of 500 respondents. 97% of respondents are said Agree, positive impact on small business & only 3% of respondents said Disagree. It means digital payments system are most important role on small business during covid-19.

### Test and CI for One Proportion Method

p: event proportion

Exact method is used for this analysis.

#### Descriptive Statistics

N	Event	Sample p	95% CI for p
500	485	0.970000	(0.951002, 0.983114)

#### Test

Null hypothesis  $H_0: p = 0.5$

Alternative hypothesis  $H_1: p \neq 0.5$

#### P-Value

0.000

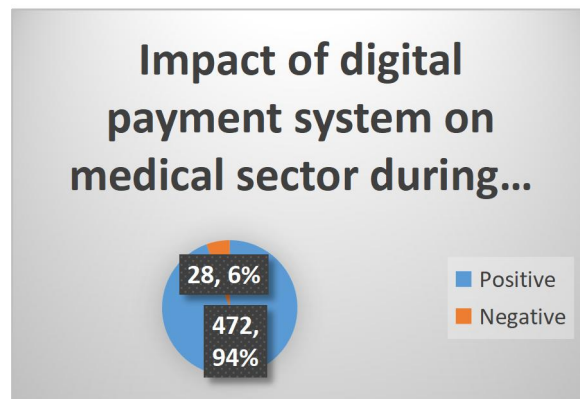
So the Null Hypothesis proportion value  $p=0.5$  and alternative hypothesis proportion values is  $p \neq 0.5$  it means greater than null hypothesis proportion values.

**H1: Digital payment has a great impact on small business during Covid-19 outbreak.**

**Therefore by rejecting Null Hypothesis & Alternative Hypothesis (H1) is accepted.**

Impact of digital payment system on medical sector during Covid-19.

Particulars	No of respondents	Percentage (%)
Positive	472	94%
Negative	28	06%
<b>Total</b>	<b>500</b>	<b>100%</b>



From the above table & chart no. 4.20 shown Impact of digital payment system on medical sector during Covid-19. It can be analyzed that, out of 500 respondents. 94% of respondents are said Positive impact on medical sector & only 6% of respondents said Negative. It means digital payments system are most important role on medical sector during covid-19.

### Test and CI for One Proportion

#### Method

p: event proportion

Exact method is used for this analysis.

### Descriptive Statistics

N	Event	Sample p	95% CI for p
500	472	0.944000	(0.920079, 0.962470)

### Test

Null hypothesis Ho:  $p = 0.5$

Alternative hypothesis H<sub>1</sub>:  $p \neq 0.5$

### P-Value

0.000

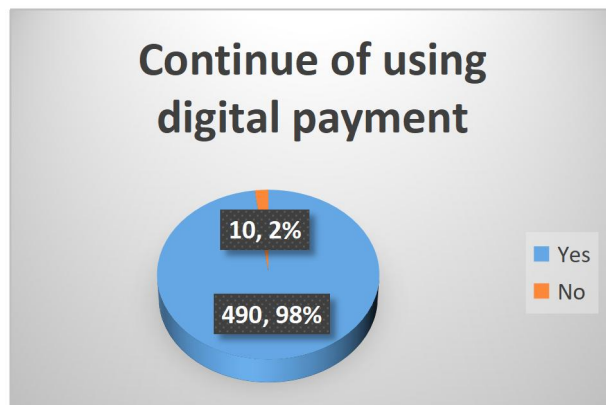
So the Null Hypothesis proportion value  $p=0.5$  and alternative hypothesis proportion values is  $p \neq 0.5$  it means greater than null hypothesis proportion values.

**H1: Digital payment has a significant impact on medical sector during Covid-19.**

Therefore by rejecting Null Hypothesis & Alternative Hypothesis (H1) is accepted.

Continue of using digital payment.

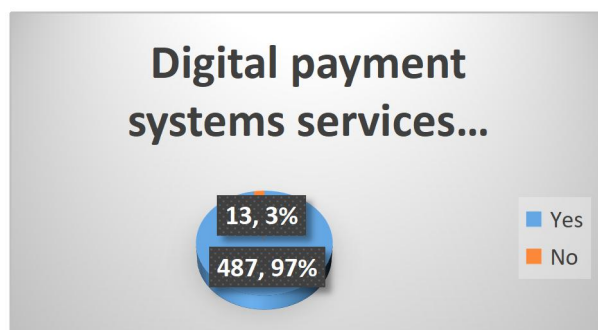
Particulars	No of respondents	Percentage (%)
Yes	490	98%
No	10	02%
<b>Total</b>	<b>500</b>	<b>100%</b>



From the above table & chart no. 4.21 shown Continue of using digital payment. It can be analysed that, out of 500 respondents. 98% of respondents want to continue using digital payment system & only 2% of respondents don't want to continue using digital payment.

**Digital payment systems services generally faster than traditional payments.**

Particular	No. of Respondents	% of Respondents
Yes	487	97%
No	13	03%
<b>Total</b>	<b>500</b>	<b>100%</b>



Source: Primary Data 2023-24

From the above table & chart no.4.22 shown Digital payment systems services generally faster than traditional payments. So most of the respondents gave yes responds. Out of 500 respondents, 487 respondents are yes and only 13 respondents are no option choose.

### Suggestions

- Embrace digitalization: The pandemic has accelerated the transition to digitalization and agile businesses adaptation was more successful. Consider investing in digital tools and platforms to make your business more nimble and agile customer friendly.
- Diversify your offer: Even companies with travel and mobility restrictions that have diversified their offer was able to generate income during the pandemic. Consider adding bespoke products or services delivered remotely.
- Cut costs: One of the most effective ways to deal with the consequences of the pandemic is to cut costs. Look for areas where you can cut costs without compromising quality, such as by renegotiating vendor contracts or reducing office space.
- Study of Government Assistance Programs: Government of India has announced several assistance programs and support programs for companies affected by the pandemic. Check if you are eligible for any of them programs and then apply.
- Build your resilience: The pandemic has highlighted the importance of being prepared for unexpected disruptions. Create contingency plans and diversify your supply chain to increase the resilience of your business model

### Conclusion

The COVID-19 pandemic has had a major impact on Indian businesses. Many companies have struggled Stay afloat amid restrictions, travel restrictions and reduced spending. Those who were able to adapt and change their strategies, on the other hand they were able to mitigate the effects of the pandemic. In India, business owners have had to embrace digitization, diversify their offerings, cut costs and do research government aid programs, communicate effectively with customers and integrate sustainability into their operations business models. Although the pandemic has caused major challenges, it has also accelerated the transition to digitization and emphasized the importance of being prepared for unexpected disruptions. As India grapples with the pandemic, businesses must remain adaptable and flexible and ready to pivot quickly. Changes Companies can weather the storm and come out stronger on the other side by adopting a proactive approach and implementing strategies to mitigate the consequences of the pandemic.

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