

# STUDENT'S MAGAZINE

# OPTIMUM

**NINTH EDITION 2024-2025**

# KAIZEN

## The Commerce Society



# SHIVAJI COLLEGE

## NAAC Accredited Grade “A”

UNIVERSITY OF DELHI



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# MESSAGE FROM THE PRINCIPAL

It gives me immense pleasure to note that the Department of Commerce has successfully released the ninth edition of its magazine, OPTIMUM. This achievement is the result of the dedicated efforts of both faculty members and students, whose hard work and commitment have brought this publication to life.

The magazine serves as a valuable platform for students to express their innovative ideas and insights on a range of contemporary business and economic issues with both national and international significance. This edition features the theme- **Viksit Bharat @2047: A Vision for Inclusive and Sustainable Development envisions a progressive India through inclusive growth, social equity and environmental sustainability.**

I believe its mission to drive growth, bridge the digital divide, and empower citizens is truly commendable. Such initiatives help students grow intellectually and face real-world challenges with confidence. The department continues to host numerous activities, all of which play a vital role in enhancing students' skills and competencies. Moreover, renowned speakers in the fields of commerce and business are regularly invited to deliver insightful talks on socially relevant topics.

Lastly, I extend my heartfelt congratulations to the faculty members of the Commerce Department and the editorial team of Kaizen for their dedication and efforts in shaping OPTIMUM into its current form.

With my best wishes,

**Prof. Virender Bhardwaj**  
Principal, Shivaji College  
University of Delhi





## NOTE FROM EDITOR-IN-CHIEF

Dear Readers,

"Shivraj 350" marked a historic milestone in the previous edition of our magazine. Continuing our tradition of excellence, it gives me immense pleasure to introduce you to the 9th Edition of Optimum – Commerce Department Magazine. This magazine remains a platform for sharing the latest insights and developments in the fields of commerce and economics.

This year's theme, **"Viksit Bharat: Bharat@2047,"** envisions **India's journey towards becoming a global powerhouse by its 100th year of independence.**



This edition once again highlights the outstanding research and analytical skills of our students and faculty. From emerging trends in finance and business technology to transformative forces reshaping industries, this edition reflects deep research and fresh perspectives.

I extend my heartfelt gratitude to our esteemed Principal, Prof. Virender Bhardwaj, for his unwavering support, and I congratulate the editorial team for their dedication in bringing this publication to life.

I am confident that the articles and research presented here will provide valuable insights and learning opportunities for all our readers.

Thank you for your continued support and readership.

Warm regards,

**Mr. Ramesh Kumar Malik**  
Editor-in-Chief



## EDITOR's NOTE

Dear Readers,

With immense excitement and a deep sense of fulfillment, I present to you the **NINTH EDITION of OPTIMUM – Student's Magazine by KAIZEN, The Commerce Society of Shivaji College**. Each year, this magazine has been a canvas for ideas, a space where knowledge meets curiosity, and where words hold the power to challenge, inspire, and transform perspectives.

This year, as our country envisions **Viksit Bharat @ 2047**, we dedicate this edition to exploring strategies for an inclusive and sustainable future in a globalized world. Commerce has always been a bridge between innovation and progress, and through this theme, we aim to unravel the blueprint of India's growth story—one that thrives on equity, sustainability, and resilience.

We've packed this edition with compelling discussions on Gen Z's approach to startups, real estate investment strategies, the evolving gig economy, and the impact of AI on business operations. Each article is crafted not just to inform but to spark curiosity and invite conversations beyond this magazine's pages.

A heartfelt thank you to our mentors for their unwavering support and wisdom, and to my incredible editorial team—this magazine is a testament to your hard work, late-night brainstorming sessions, and passion for storytelling.

As you flip through the pages, I hope you find inspiration, new perspectives, and maybe even that one article that sticks with you long after you've put this magazine down. Your thoughts, feedback, and insights are always welcome—they help us grow, evolve, and make OPTIMUM better every year. Here's to learning, unlearning, and reimagining the future together.

Happy reading! :)

Warm regards,

**Rekha Saini**

Editorial Head





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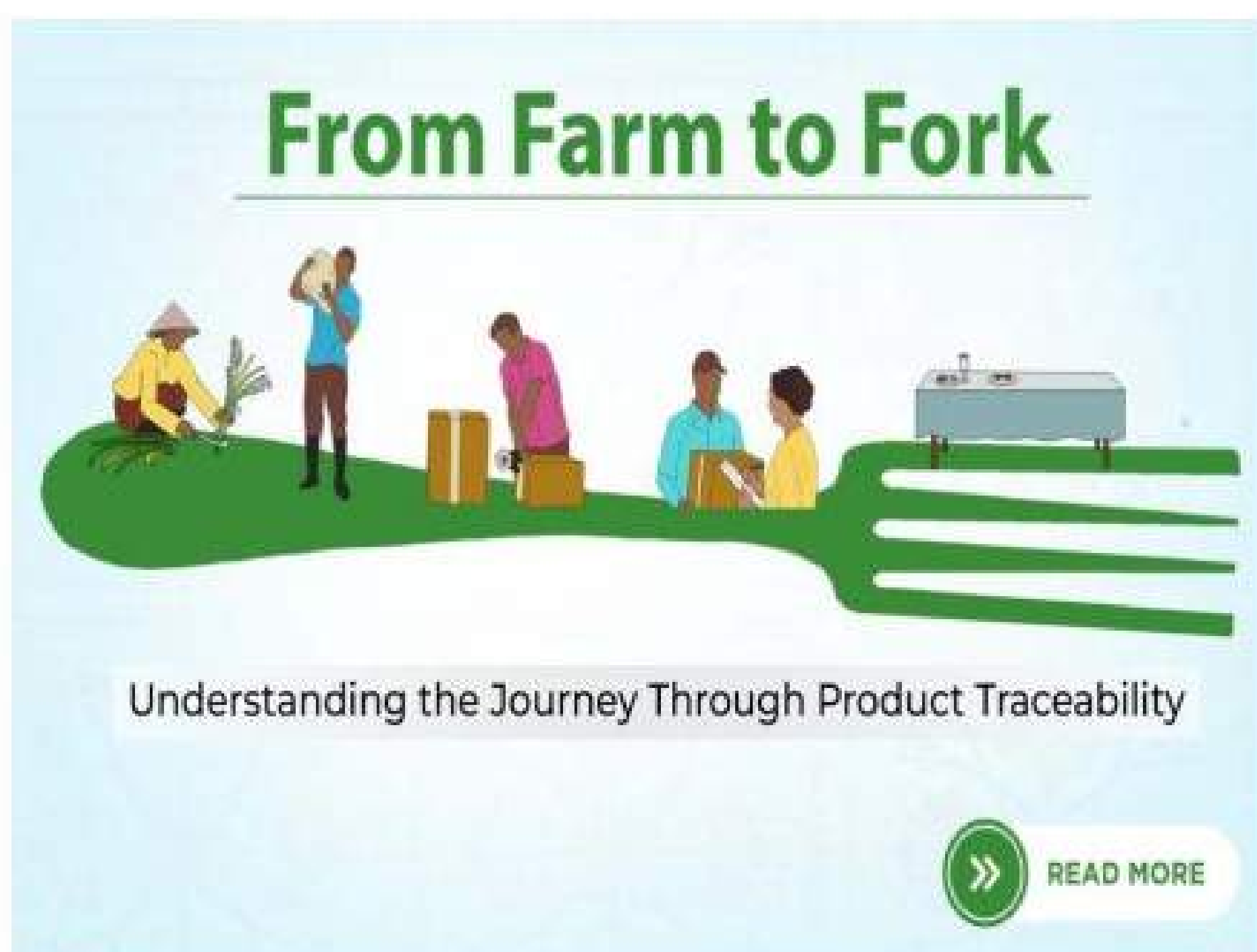
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# FROM FARM TO FORK: TRANSFORMING INDIA AGRICULTURE

*-Megha, B. Com (Hons), 1st year*

Agriculture in India involves a multitude of stakeholders, including farmers, policymakers, researchers, and consumers, thus constituting a complex system. These individuals collectively contribute to addressing challenges and capitalising on opportunities that promote a sustainable and prosperous future for the nation. In order to establish equitable and sustainable agricultural systems, it is imperative that India focuses on revitalizing its agricultural sector through productivity enhancements and loss reductions. Central to this revitalization is modernization, as a significant number of Indian farmers continue to depend on traditional methods that tend to be inefficient and susceptible to the effects of climate fluctuations.



## CHALLENGES FACING INDIAN AGRICULTURE

Low productivity persists as a significant concern in Indian agriculture, particularly among small and marginal farmers who frequently lack access to quality seeds, fertilizers, and irrigation. The pace of adopting modern agricultural technologies has been insufficient, a situation exacerbated by limited awareness, inadequate financial investment, and ineffective extension services. Consequently, India's crop yields per

hectare fall short of international benchmarks, despite the country being one of the leading producers of staple crops such as rice and wheat. This disparity in productivity highlights the necessity for accessible and cost-effective solutions for the majority of the agricultural workforce, comprised of small farmers.

Furthermore, climate change has complicated the agricultural landscape in India, resulting in irregular rainfall patterns, elevated temperatures, and extreme weather events that disrupt farming practices. These climatic changes have led to crop failures, diminished soil fertility, and decreased water availability, thereby jeopardizing the livelihoods of farmers and threatening national food security. The unsustainability of water-intensive crops, such as rice and sugarcane in specific regions, underscores the necessity for adaptive strategies to foster agricultural resilience in the context of climate variability.

## POTENTIAL SOLUTIONS

In Indian agriculture, technology has brought about exciting changes. One such development is the e-AM scheme, which offers software and financial support to Agriculture Produce Market Committees (APMCs). Drones and artificial intelligence are now being used to create models that predict crop yields and keep an eye on soil and crop health. The government is actively encouraging digital solutions that focus on the needs of farmers. According to the Economic Survey of India for 2022-23, the agricultural sector has seen a 4.6% growth over the last six years, and more than 1,000 agri-tech startups have emerged during this time.

## TECHNOLOGY ADOPTION

Addressing these challenges necessitates the



adoption of advanced technologies, including precision agriculture, blockchain, artificial intelligence (AI), and machine learning (ML). Precision agriculture employs tools such as sensors, GPS, and drones, facilitating more effective monitoring and management of crops by farmers. This method optimizes resource utilization, including water and fertilizers, minimizes waste, and enhances crop yields. Moreover, it promotes sustainable agricultural practices by tailoring interventions to the unique conditions of each field.

Blockchain technology offers the potential to improve transparency and traceability within the agricultural supply chain by documenting every step from production to distribution. This fosters consumer confidence in the quality and origin of food products while safeguarding farmers from exploitation by intermediaries. In addition, blockchain can streamline logistics and payment systems, thereby mitigating inefficiencies in the supply chain. Similarly, AI and ML possess transformative capabilities, allowing for the analysis of extensive datasets to provide actionable recommendations to farmers. These technologies facilitate the prediction of weather patterns, the detection of pest infestations, and assessments of soil health, empowering farmers to enact preventive measures. Furthermore, automation of tasks such as planting and irrigation decreases labour expenses and enhances efficiency, while AI-driven platforms establish direct connections between farmers and markets, thereby improving prices and reducing post-harvest losses.

## SUSTAINABLE PRACTICES

Sustainability represents another fundamental aspect of the transformation of Indian agriculture. Practices such as organic farming, agroforestry, and water conservation can significantly bolster the resilience and productivity of the sector. Organic farming prioritises natural inputs and eschews harmful chemicals, thereby enhancing soil health and catering to the rising consumer demand for environmentally friendly produce. Agroforestry, which integrates trees and shrubs with crops and livestock, promotes biodiversity, improves soil fertility, and provides

supplementary income sources for farmers.



This strategy also contributes to climate change mitigation by sequestering carbon and creating favourable microclimates for crops. Water conservation techniques, including rainwater harvesting, drip irrigation, and watershed management, are essential to addressing the challenges of water scarcity in India, reducing waste, and preserving groundwater resources.

## MARKET ACCESS

Additionally, enhancing market access is vital for the transformation of agriculture in India. E-commerce platforms facilitate direct connections between farmers and consumers, thereby eliminating intermediaries and ensuring fair pricing for agricultural products. These platforms also equip farmers with market intelligence, enabling them to align production with prevailing demand trends. Value addition through processing, packaging, and branding can generate new revenue opportunities for farmers while enhancing the competitiveness of Indian agricultural goods in both domestic and international markets. The establishment of cold chain infrastructure is crucial for maintaining the quality of perishable products and minimizing post-harvest losses, as proper storage and transportation systems guarantee that fresh produce reaches consumers in optimal condition, benefiting both farmers and consumers alike.





CONCLUSION

In conclusion, agriculture in India constitutes a multifaceted system influenced by a diverse array of stakeholders, each contributing to the resolution of challenges and the advancement of the sector. The successful transformation of agriculture necessitates modernization, the integration of technology, the implementation of sustainable practices, and improved market access. Through the application of these strategies, India can enhance agricultural productivity, resilience, and sustainability, thereby securing a promising future for its farmers and the nation as a whole.



# PRESERVING CULTURAL HERITAGE IN A MODERNIZING BHARAT

- Rekha Saini, B com Hons, 3rd year

In the heart of Bharat, a land steeped in ancient wisdom and timeless traditions, modernization has brought forth a dynamic transformation. Skyscrapers now rise where once only temples and age-old bazaars stood, and digital screens capture the attention of a generation that was once mesmerized by folk performances. As the country races toward becoming a global economic powerhouse, one pressing question emerges: How do we preserve our rich cultural heritage while embracing modernity?

Cultural heritage is not merely a relic of the past. It is a living testament to our identity, values, and collective memory. It encompasses everything from classical dance forms like Bharatanatyam and Kathak to architectural marvels such as the Taj Mahal, to intangible practices like yoga, traditional crafts, and oral storytelling traditions passed down through generations. To lose this heritage in the name of progress would be to sever the very roots that define us.



## WHY CULTURAL HERITAGE MATTERS?

Cultural heritage provides a sense of belonging and continuity, connecting individuals and communities to their shared history. It fosters

pride and helps build a collective identity. Beyond its emotional and societal importance, heritage has practical implications too. Tourism driven by historical sites and traditional festivals contributes significantly to India's economy. Handicrafts and indigenous arts provide livelihoods for countless artisans, particularly in rural areas.

Moreover, in an increasingly globalised world, cultural diversity is a treasure. It enriches the human experience, offering different perspectives and ways of living. By preserving our cultural heritage, we ensure that future generations inherit a Bharat that is both modern and deeply rooted in its traditions.

## THE IMPACT OF MODERNIZATION ON CULTURAL HERITAGE

Modernisation brings with it both opportunities and challenges. On the positive side, technology has made it easier to document, share, and revive cultural practices. Traditional musicians can now reach global audiences through streaming platforms, and artisans can sell their crafts online.

However, modernisation also poses significant threats to cultural heritage. Urbanisation often leads to the demolition of historic buildings to make way for modern infrastructure. The younger generation, influenced by global pop culture, may drift away from traditional practices. Fast-paced lifestyles leave little time for the appreciation of classical arts and crafts.

## STRATEGIES FOR PRESERVING CULTURAL HERITAGE



**1.Promoting Cultural Education:** One of the most effective ways to preserve cultural heritage is through education. Schools and universities should integrate the study of traditional arts, literature, and history into their curricula. Extracurricular activities can include workshops on folk music, dance, and crafts.

**2.Leveraging Technology:** Technology can be a powerful ally in preserving cultural heritage. Virtual tours of historical sites, digital archives of manuscripts, and online platforms for traditional art forms can make heritage accessible to a wider audience. Social media can be used to create awareness and appreciation for cultural practices.

**3.Supporting Artisans and Cultural Practitioners:** Artisans and cultural practitioners are the custodians of our heritage. Providing them with financial support, training, and market access can help sustain their livelihoods and keep traditional crafts alive. Initiatives such as "Make in India" and "Vocal for Local" have the potential to promote indigenous crafts and products.

**4.Heritage Conservation Projects:** Conservation of tangible heritage, such as monuments and historic sites, is crucial. This requires collaboration between the government, private sector, and local communities. Scientific restoration techniques and regular maintenance can help preserve these treasures for future generations.

**5.Community Involvement:** Local communities are often the best custodians of cultural heritage. Empowering them to take ownership of heritage conservation projects ensures that preservation efforts are meaningful and sustainable.

**6. Legal Protection:** Laws and regulations play a critical role in heritage preservation. Strict enforcement of heritage protection laws and penalties for illegal encroachments or demolitions are essential.

## CHALLENGES IN HERITAGE PRESERVATION

**1.Balancing Development and Conservation:** Striking a balance between development and conservation is a complex challenge. Infrastructure projects often clash with the need to protect heritage sites.

**2.Lack of Awareness:** Many people, particularly in urban areas, are unaware of the cultural heritage around them. This lack of awareness leads to indifference and neglect.

**3.Funding Constraints:** Heritage preservation requires significant financial resources. Limited funding often hampers conservation efforts.

**4.Commercialisation of Culture:** While tourism can promote heritage, excessive commercialisation can lead to the dilution of cultural practices and the exploitation of local communities.

## THE ROLE OF THE YOUTH

The youth of Bharat have a crucial role to play in preserving cultural heritage. Their energy, creativity, and technological prowess can be harnessed to revive and promote traditional practices. Young entrepreneurs can create startups that blend traditional crafts with modern design sensibilities. Social media influencers can use their platforms to showcase and celebrate cultural heritage.

Moreover, participating in cultural festivals, learning traditional art forms, and volunteering for heritage conservation projects can help young people connect with their roots.

## STORIES OF SUCCESS: INSPIRATION FROM THE GROUND

There are heartening examples of individuals and communities working tirelessly to preserve cultural heritage. In Rajasthan, traditional puppet shows have seen a revival thanks to



digital storytelling initiatives. In Tamil Nadu, a group of volunteers restored an ancient temple using crowdfunding. Across Bharat, local artisans are finding new markets for their crafts through e-commerce platforms.

These success stories remind us that preserving cultural heritage is not only possible but also immensely rewarding.



## A CALL TO ACTION

Preserving cultural heritage in a modernizing Bharat requires a collective effort. Governments, businesses, civil society, and individuals must come together to safeguard our rich legacy. This is not about resisting change or romanticizing the past; it is about integrating the best of tradition and modernity to create a vibrant and inclusive society.

As we navigate the complexities of modernization, let us remember that our cultural heritage is a source of strength and inspiration. It connects us to our ancestors, guides us in the present, and provides a foundation for the future. By preserving it, we honour our past and ensure that future generations can experience the beauty and wisdom of Bharat's timeless traditions.

In the words of Mahatma Gandhi, "A nation's culture resides in the hearts and in the soul of its people." Let us keep that culture alive, vibrant, and relevant in the ever-evolving landscape of modern Bharat.



# CLIMATE CHANGE AND INDIA'S PATH TO SUSTAINABILITY: CHALLENGES AND SOLUTIONS

*-Khushi Halder, B com Hons, 2nd Year*

The threat posed by climate change has evolved from a remote menace to an urgent global one. The effects of climate change are evident and catastrophic, ranging from previously unheard-of heat waves to increasingly frequent natural disasters, melting glaciers, and rising sea levels. These issues are especially pressing for India, a country with a sizable population and a vast geographic diversity. Being reliant on agriculture, monsoon rains, and natural resources, the nation is extremely susceptible to the consequences of climate change. For India, nevertheless, this dilemma also offers a chance to rethink its growth trajectory and move toward a sustainable model that strikes a balance between environmental preservation and economic development. India not only needs to address climate change, but it also has the chance to take the lead in the global effort for a sustainable future.

## CHALLENGES OF CLIMATE CHANGE IN INDIA

Due to its geographic location and socioeconomic makeup, India is particularly vulnerable to the negative consequences of climate change. For example, more frequent and intense heat waves have resulted from rising temperatures, which has affected public health and raised energy demand. Extreme temperatures have been recorded in cities like Delhi, putting a burden on infrastructure and disproportionately harming vulnerable groups. Similarly, unpredictable monsoon patterns- whether arriving late, bringing

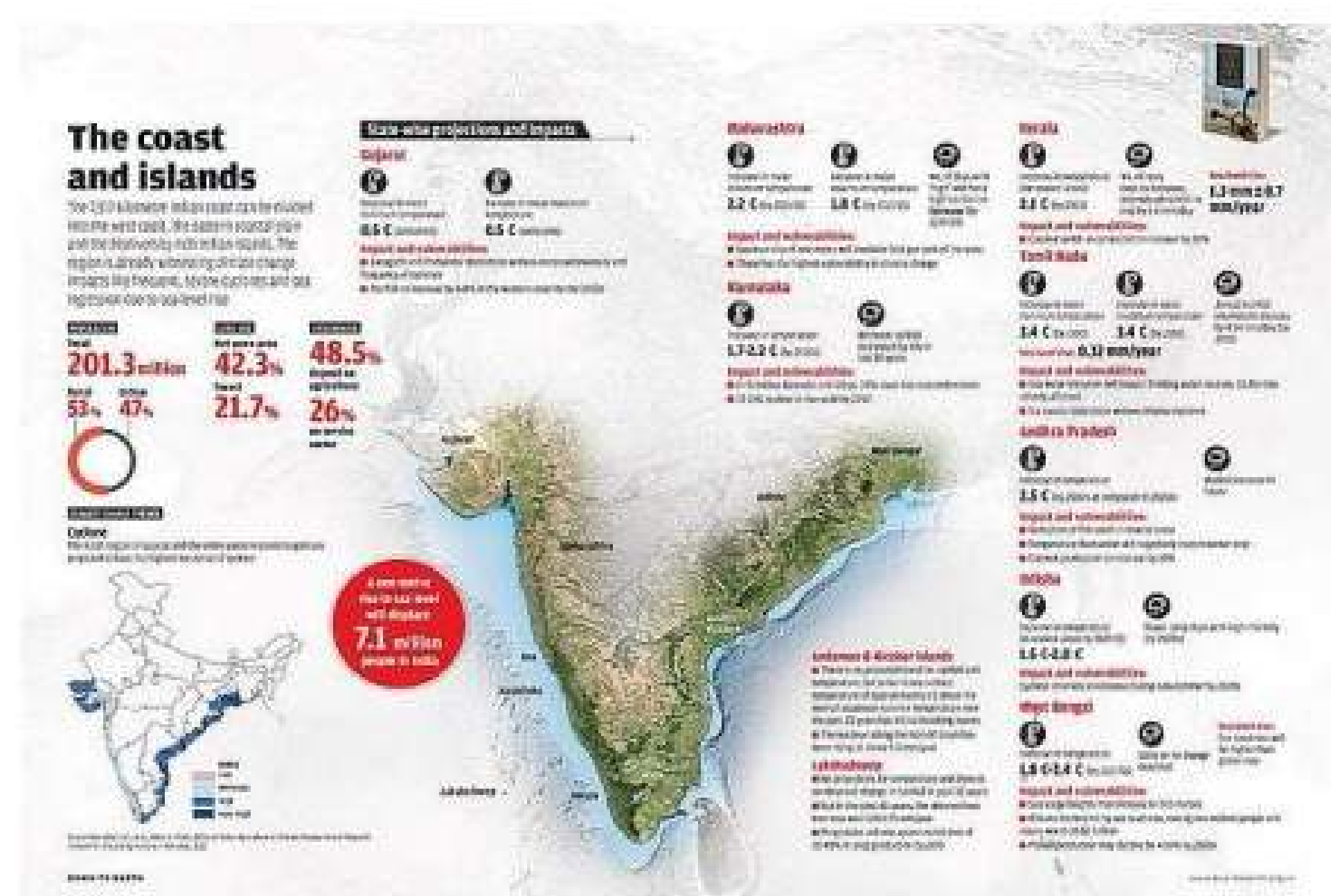
excessive rainfall, or failing altogether- disrupt the agricultural calendar and negatively impact rural livelihoods. Nearly 50% of the workforce is employed in agriculture, which is especially susceptible to disruptions brought on by climate change because it is still largely dependent on the monsoon season.

Melting Himalayan glaciers, which serve as a lifeline for India's river systems, such as the Ganga, Yamuna, and Brahmaputra, present another significant obstacle. Through agriculture, hydroelectric power, and drinking water, these rivers sustain millions of people. Water security is in jeopardy for a significant portion of the population as a result of glaciers retreating due to rising global temperatures. Rising sea levels and storm intensification pose serious threats to coastal regions as well. Destructive storms are common in states like Gujarat, West Bengal, and Odisha; they uproot communities, destroy infrastructure, and cause economic disruption. For coastal populations, the problems are made worse by seawater intrusion into agricultural areas and coastal erosion.

Despite being necessary for economic advancement, urbanization and industrial expansion have come with their environmental drawbacks. Inadequate drainage systems and the loss of wetlands cause major flooding in cities like Chennai, Bengaluru, and Mumbai during periods of intense rainfall. Urban areas have dangerously high amounts of air pollution, and Delhi frequently tops international rankings for



the worst air quality. Since India's reliance on coal to generate power contributes significantly to greenhouse gas emissions, the country's carbon footprint must be reduced by switching to greener energy sources.



## INDIA'S RESPONSE: PROGRESS TOWARD SUSTAINABILITY

India has made admirable efforts to fight climate change and advance sustainability despite these formidable obstacles. India has pledged to achieve net-zero carbon emissions by 2070 and reduce the carbon intensity of its economy by 33–35% by 2030 as a signatory to the Paris Agreement. The quick growth of renewable energy is essential to achieving these objectives. India is already among the world's top producers of solar energy, thanks to programs like the National Solar Mission. The capacity for renewable energy has been greatly expanded by large solar farms, rooftop solar projects, and decentralized solar power systems. Wind energy also helps the nation's shift to green energy, especially in places like Gujarat and Tamil Nadu.

India is also making progress in the area of urban sustainability. By emphasizing effective energy use, trash management, and public transit, the Smart Cities Mission seeks to turn metropolitan areas into liveable and sustainable places. To lessen reliance on fossil fuels and minimize automobile emissions, electric vehicles, or EVs, are being encouraged. Although obstacles like exorbitant prices and inadequate charging

infrastructure still exist, the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) program, in addition to subsidies and incentives, has fuelled the expansion of the EV market.

An essential part of India's climate plan is afforestation and forest conservation. Forests provide vital ecological services while acting as carbon sinks, absorbing greenhouse gasses. The Green India Mission is one initiative that aims to repair degraded ecosystems and increase the amount of forest cover. The strength of grassroots involvement is exemplified by community-led conservation initiatives, including mangrove restoration and the preservation of biodiversity hotspots. But striking a balance between conservation and development demands is still a major problem, particularly in ecologically delicate places.

Another crucial area of attention is water management. In India, flooding and water scarcity are paradoxical, frequently occurring in the same areas. Alarming levels of groundwater depletion have resulted from excessive groundwater extraction for irrigation and wasteful water consumption. Meanwhile, urban flooding has gotten worse due to deforestation and bad urban design. Rejuvenating traditional water bodies, managing watersheds, and collecting rainwater are some of the solutions that are becoming more popular. Water conservation and availability are the goals of programs like the Jal Shakti Abhiyan, but their success depends on improved execution and community involvement.

## THE PATH AHEAD: OPPORTUNITIES AND SOLUTIONS

India has an opportunity as well as a need to make the shift to sustainability. The nation is well-positioned to lead the world in combating climate change because of its abundant natural resources, advanced technology, and creative workforce.



Renewable energy continues to be key to this shift. India can lessen its reliance on fossil fuels and provide for its expanding energy demands sustainably by increasing investments in solar, wind, and hydroelectric power. In addition to providing electricity to isolated and underserved communities, expanding localized renewable energy systems can promote equitable development.

Technological innovation is essential to India's quest for sustainability. Clean technologies can lessen the environmental impact of cities and companies. Examples of these technologies include waste-to-energy systems, green building materials, and energy-efficient appliances. AI and IoT are examples of digital technologies that can maximize resource utilization in urban planning, transportation, and agriculture. These innovations are largely driven by the private sector, with both huge firms and start-ups creating answers to climate concerns.

For India to meet its climate targets, international cooperation is also necessary. Developed nations must fulfil their pledges to support developing nations like India financially and technologically. Large-scale renewable energy projects and climate adaptation initiatives can be funded using green finance methods like climate funds and green bonds. India's dedication to cultivating international collaborations for sustainable development is demonstrated by its leadership in international projects such as the International Solar Alliance.

Education and awareness are essential at the community level. Promoting environmentally friendly practices, cutting back on energy use, and minimizing trash can have a group effect. The strength of local action is exemplified by grassroots groups like those that oppose single-use plastics or work to clean up waterways. Progress can also be accelerated by government regulations that encourage sustainable activities,

such as tax cuts for eco-friendly companies or subsidies for the installation of renewable energy.

## CONCLUSION

In addition to presenting some of the biggest obstacles India has ever seen, climate change presents a singular chance to re-evaluate its development priorities. The nation's susceptibility to the effects of climate change emphasizes how urgent it is to implement sustainable practices, and its aggressive policies and lofty objectives show that it can take the lead in international initiatives. India can lessen the effects of climate change and create a more resilient future by giving priority to renewable energy, sustainable urbanization, water management, and biodiversity conservation. Governments, corporations, communities, and individuals must work together to realize this vision.

India is at a turning point in its history, where achieving sustainability is both a problem and a beacon of hope. A greener, more egalitarian future—one in which environmental stewardship and economic advancement coexist—can be paved by the country with perseverance, creativity, and teamwork. Being a global leader in sustainability, India may serve as an example for other countries, demonstrating that combating climate change is not only necessary but also an opportunity to improve the planet for the coming generations.



# SELF-RELIANCE AND ITS IMPACT ON INDIA'S ECONOMIC GROWTH

- Shagun Bhardwaj, B.com Prog, 1<sup>st</sup> year

## INTRODUCTION

Self-reliance, or “Atmanirbharta” in Hindi, is more than just an idea; it is a roadmap for a nation’s progress. For India, self-reliance is a guiding principle that can transform its economy, enhance global competitiveness, and ensure resilience in the face of global challenges. This concept doesn’t mean isolating ourselves from the world but focuses on building domestic capabilities, reducing dependency on imports, and strengthening local industries while maintaining global partnerships. It ties in perfectly with initiatives like "Make in India," which aims to boost local manufacturing and innovation.

## WHY IS IT IMPORTANT?

Self-reliance is essential for ensuring the long-term economic stability and sovereignty of a nation. When a country becomes self-reliant, it minimizes its dependence on foreign imports, thereby safeguarding itself against global market fluctuations and supply chain disruptions. For instance, during the COVID-19 pandemic, nations with robust local industries managed to sustain themselves better. Self-reliance also fosters job creation by boosting domestic industries and encouraging entrepreneurship. Additionally, it builds a nation’s global stature, as a self-reliant country is seen as strong, capable, and independent. For India, achieving self-reliance is crucial not just for economic growth but also for reducing the trade deficit, empowering citizens, and strengthening its position on the world stage.



## CHALLENGES IN ACHIEVING SELF-RELIANCE

The journey toward self-reliance is not without its challenges. One significant hurdle is the lack of advanced technology and infrastructure in many sectors, which limits domestic industries from achieving global competitiveness. High dependence on imports for critical components, such as semiconductors and advanced machinery, further complicates this goal. Another challenge lies in creating a skilled workforce that can drive innovation and meet the demands of a rapidly evolving global market. Additionally, limited access to capital for small and medium enterprises (SMEs) hinders their ability to scale up and compete with global players. Addressing these challenges requires a focused approach, including increased investment in research and development, robust policy support, and fostering public-private partnerships. The government has taken several steps to support self-reliance. The Atmanirbhar Bharat Abhiyan



is a comprehensive initiative designed to boost local production and make our economy more resilient. This plan includes measures to support MSMEs, attract investments, and encourage domestic manufacturing. Startup India is another fantastic initiative, fostering innovation and entrepreneurship among young Indians. Similarly, the Digital India campaign is driving the adoption of technology across the country, empowering businesses and citizens alike. Together, these initiatives create an environment where self-reliance can thrive.



## STRATEGIES TO ACHIEVE SELF-RELIANCE

Achieving self-reliance requires a multi-pronged strategy that addresses various facets of economic and industrial development. First, investing in research and development (R&D) is paramount. Encouraging innovation through increased funding for R&D and fostering collaborations between academia, industry, and government can accelerate technological advancements. Second, prioritizing education and skill development is crucial. By reforming the education system to emphasize vocational training and practical skills, India can create a workforce equipped to meet the demands of emerging industries. Third, enhancing infrastructure is essential to support industrial growth. Modernizing transportation networks, improving logistics, and expanding digital infrastructure can make industries more efficient and globally competitive. Fourth, promoting entrepreneurship and supporting

small and medium enterprises (SMEs) is vital. Providing easier access to credit, reducing bureaucratic hurdles, and creating a startup-friendly ecosystem can enable these businesses to thrive.

Fifth, India must focus on reducing import dependency in critical sectors. By developing domestic capabilities in areas like electronics, defence, and energy, the country can secure its supply chains and reduce vulnerability to global disruptions. Lastly, strengthening public-private partnerships can be a game-changer. Collaborative efforts between the government and private sector can drive innovation, increase investments, and accelerate progress toward self-reliance.

## GOVERNMENT POLICIES SUPPORTING SELF-RELIANCE

Over the years, the Indian government has introduced several policies to promote self-reliance, also known as "Atmanirbhar Bharat." These policies aim to strengthen domestic industries, reduce dependency on imports, and boost local production. Initiatives such as Make in India encourage companies to manufacture their products domestically by offering tax benefits and simplified compliance procedures. Similarly, the Production Linked Incentive (PLI) Scheme has been instrumental in boosting manufacturing in key sectors like electronics, pharmaceuticals, and textiles by providing financial rewards linked to production output.

**VOCAL FOR LOCAL**





The Startup India program plays a significant role in fostering innovation and entrepreneurship by offering funding support, tax exemptions, and streamlined patent processes. Additionally, schemes like the Emergency Credit Line Guarantee Scheme (ECLGS) have provided much-needed assistance to micro, small, and medium enterprises (MSMEs), which form the backbone of the Indian economy. The Vocal for Local campaign has also encouraged consumers to prioritize locally-made products, thereby strengthening domestic markets and supporting small businesses.

## CONCLUSION

Self-reliance is not just a goal but a pathway to economic resilience and global competitiveness. With supportive government policies, a strong entrepreneurial spirit, and collective consumer effort, India is on its way to becoming a hub of innovation and production. While challenges remain, the progress made so far indicates a promising future where India can achieve sustained growth and assert its position as a global leader.



# ECONOMY AND INDUSTRY: THE ROLE OF MSMEs IN BUILDING A STRONG ECONOMY

*-Saloni Gandhi, B com Hons, 1st Year*

Micro, Small, and Medium Enterprises (MSMEs) are the backbone of any thriving economy. They are pivotal drivers of the industrial revolution, technological advancement, and employment generation, fostering holistic economic growth worldwide. These businesses are known for their relatively small size and localized operations. With the global economy witnessing rapid transformations due to technological advancements, supply chain disruptions, and climate change challenges, MSMEs have become critical in fostering resilience and adaptability.

MSMEs contribute immensely to a robust economy. In countries like ours, MSMEs account for 90% of the businesses responsible for generating 50% of the employment opportunities due to their labour-intensive nature. They absorb a significant portion of the workforce, reducing unemployment rates and contributing to poverty reduction. Beyond providing jobs, MSMEs also play a crucial role in skill development. They

often operate near local communities, enabling them to tailor workforce training to specific regional needs. This decentralized skill development contributes to a more robust, diversified labour market. Due to their presence in large numbers in the economy, MSMEs significantly contribute to GDP, this contribution ranges from 35% to 60% depending upon the region, scalability, adaptability, and growth prospects.

MSMEs contribute significantly to employment generation, but this traditional focus often overlooks a critical aspect: Their function as incubators of disruptive innovation, especially in sectors that demand localized solutions. While large corporations often prioritize incremental advancements, MSMEs, unburdened by legacy systems and risk aversion, are uniquely positioned to pioneer emerging technologies. From artificial intelligence to biotechnology and renewable energy to space exploration, MSMEs are increasingly at the forefront of cutting-edge research and development.

## PROBLEM SOLVING

Due to their resource constraint and limited financial accessibility, MSMEs are focused on unique problem-solving and feasible solutions through technology and innovation.

One great example will be the adoption of green technology by MSMEs, as now small-scale industries are increasingly leveraging renewable





energy solutions and energy-efficient practices to be cost-effective and align with global sustainability goals. Their innovations often act as an inspiration for large-scale corporations.

MSMEs are a face of resilience at times of destruction. As the COVID-19 pandemic highlighted the fragility of global supply chains with affected industries worldwide, MSMEs, with their localized operations and agile structures, tested tremendous resilience. Their ability to quickly adapt to changing market needs, pivot to new services and products, and leverage local sources proved priceless in navigating the crisis. This resilience underscores the need to foster a greater different and decentralized economic landscape in which MSMEs play an important position.



Micro, small, and medium enterprises not only foster economic boom but inclusive economic boom by developing employment opportunities in diverse sectors and regions. MSMEs contribute to poverty reduction and social equality. Moreover, they regularly prioritize nearby sourcing and community engagement, strengthening social capital and fostering an experience of shared prosperity. By fostering economic activity in rural and semi-urban areas,

MSMEs shift the crooked regional divide, unlike big corporations that clutter themselves in metropolitan cities. Government policies such as financial incentives for rural entrepreneurship have further amplified the impact of MSMEs in bridging the rural-urban divide. This, in turn, reduces the migration pressure on urban areas.

MSMEs serve as a great export potential for any nation as they produce niche products with high-value additions. Be it handicrafts, textiles, handmade ornaments, artisanal goods, or speciality food products, they have great demand in the foreign market, and MSMEs, being the drivers of these sectors, exhibit great export potential that can cater to the international market. Another reason why MSMEs would outperform in international markets is because of its cost advantage, and affordable cost structures making it a win-win in the global cost-sensitive market.

MSMEs are now shaping the future with their leading role in building a strong economy. Having access to technology has led to a massive digital transformation, enhancing efficiency and customer reach. With increased connectivity and inclusivity, MSMEs are fostering growth through collaboration with other small and large corporations. It is due to the growth of micro, small, and medium enterprises that women entrepreneurs have increased in number, rapidly contributing to gender diversity and inclusion.

## CONCLUSION

To conclude the aforesaid, MSMEs are the economy's bright future, its backbone, lifeblood, and flesh. The future of our global economy depends on our ability to unleash the full potential of MSMEs. By recognizing their unique strengths, abilities, and resilience, addressing the constraints that hinder their growth, and providing an ecosystem that nurtures innovation,



we can build a more resilient, inclusive, sustainable, and prosperous future for all.

The government, policymakers, and industry leaders must recognize the potential of various sectors under MSME and work toward their empowerment, contributing to the nation's well-being. MSMEs are vital to the dream of Viksit Bharat and building an India that's true to its motive of self-reliance. The time for incremental changes is over; we need a bold, transformative approach that empowers MSMEs to become the driving force of a new era of economic growth and social progress.



# SUSTAINABLE INFRASTRUCTURE: BUILDING A RESILIENT FUTURE FOR INDIA

*-Isha Tiwari, B com Hons, 1<sup>st</sup> year*

India ranks amongst the fastest-growing economies and is experiencing rapid urbanization and industrialization. An ever-increasing demand for infrastructure development surfaces the challenge of balancing economic growth with environmental sustainability in the country. Sustainable infrastructure is the cornerstone to long-term development; it can be achieved along with minimizing adverse changes in the environment, enhancing resilience to climate change, and promoting social well-being.

## WHAT IS SUSTAINABLE INFRASTRUCTURE?

Sustainable infrastructure is planning, designing, constructing, and operating infrastructure projects in a manner that considers economic, social, and environmental factors. It involves using eco-friendly materials, energy-efficient technologies, and nature-based solutions to reduce carbon footprints and ensure long-term viability. Sustainable infrastructure includes green buildings, renewable energy projects, efficient transportation systems, water management, and waste disposal mechanisms.



## THE NEED FOR SUSTAINABLE INFRASTRUCTURE IN INDIA

Rapid population growth and rapid urbanization have really pressed India's infrastructure to the limit. Some key reasons for sustainable infrastructure in India include the following:

**Environmental Concerns** - The country ranks third in emitting greenhouse gases into the atmosphere. A sustainable infrastructure can reduce pollution as well as mitigate climate change's effects.

**Urbanization and Population Growth** – Over 40% of India's population is expected to live in urban areas by 2030. Cities need sustainable housing, transportation, and sanitation solutions.

**Climate Resilience** – India is vulnerable to climate change-induced disasters such as floods, droughts, and cyclones. Sustainable infrastructure enhances resilience and disaster preparedness.

**Energy Efficiency** – Increasing energy demands creates a need of sustainable energy solutions like solar and wind power to reduce dependency on fossil fuels.

**Economic Growth and Employment** – Sustainable infrastructure projects create jobs in the green economy, which boosts economic growth while promoting environmental responsibility.

## KEY SECTORS FOR SUSTAINABLE INFRASTRUCTURE

1. Sustainable Transportation



India's transport sector is a significant contributor to air pollution and carbon emissions. Sustainable transportation solutions include:

Extension of metro rail systems and electric buses in cities

Promotion of electric vehicles with appropriate charging infrastructure

Pedestrian-friendly and cycling-friendly urban planning

Investment in high-speed rail and efficient logistics networks

## 2. Green Buildings and Smart Cities

The construction industry is the largest consumer of energy and resources. Green buildings include:

Energy-efficient designs such as passive cooling and natural lighting

Use of renewable energy sources such as solar panels

Rainwater harvesting and effective waste management

## 3. Renewable Energy and Power Generation

India aims to add 500 GW of non-fossil fuel-based installed power capacity by 2030. Key initiatives are:-

Expansion of solar and wind energy projects

Green hydrogen as a future alternative fuel

Battery and pumped hydro storage

Promotion of rooftop solar and decentralised grid end

## 4. Water Management and Conservation

Sustainable water infrastructure is highly in demand with rising water scarcity. The key focus areas are as follows:

- Restoration of lakes, rivers, and groundwater recharge programs
- Wastewater treatment and reuse for irrigation and industrial uses

- Smart water meters and leakage detection systems
- Implementation of drip irrigation and rainwater harvesting in agriculture

## 5. Sustainable Waste Management

India produces 62 million tons of waste every year. Much of the waste remains un-treated. Sustainable waste management includes:

- Source segregation
- Expansion of the recycling industries and waste-to-energy projects
- Reduce usage of single use plastics and encouraging biodegradable alternatives
- Government Initiatives and Policies

Some of the major initiatives of the Indian government related to sustainable infrastructure include:

**Smart Cities Mission** : It aims at developing 100 smart cities by providing sustainable solutions for urban spaces.



**Faster Adoption and Manufacturing of Electric Vehicles (FAME)** – Provides incentives for electric mobility.

**National Solar Mission** – It aims to reach 280 GW of solar energy capacity by 2030.

**Atal Mission for Rejuvenation and Urban Transformation (AMRUT)** focuses on sustainable urban development.

**Swachh Bharat** Mission has tackled waste management and sanitation.

**National Adaptation Fund for Climate Change (NAFCC)** is the finance disbursed for climate resilience projects.



## CHALLENGES FOR THE DEVELOPMENT OF SUSTAINABLE INFRASTRUCTURE

- i. Despite these giant strides, numerous challenges face sustainable infrastructure in India:
- ii. High Initial Costs – Most green technologies are expensive to acquire.
- iii. Limited Awareness and Expertise – Most stakeholders lack knowledge pertaining to green practices.
- iv. Gaps in Policy Implementation – Bureaucratic inefficiencies keep policies at delayed execution.
- v. Urban-Rural Divide: Infrastructure development is very uneven, and rural areas are behind the curve in accessing sustainable solutions.
- vi. Land Acquisition and Regulatory Hurdles – Large projects face legal and regulatory issues

## ROLE OF TECHNOLOGY AND INNOVATION

Technology and innovation play a major role in transforming India's sustainable infrastructure. Some such innovations are:

Green Construction Materials - Recycling materials, bamboo, and fly ash bricks.

AI and IoT for Smart Cities – Data-driven city management for traffic, energy, and waste systems.

Blockchain for Energy Trading – Peer-to-peer energy trading for decentralized renewable power.

Drones and GIS Mapping – Monitoring deforestation, water levels, and infrastructure planning.

Vertical Farming and Hydroponics – Sustainable agriculture solutions in urban areas.



## THE WAY FORWARD

To ensure a resilient and sustainable future, India must adopt a multi-pronged approach:

Stronger Policy Frameworks – Clearer regulations and incentives for sustainable development.

Public-Private Partnerships (PPPs) – Encouraging private sector investments in green projects.

Education and Skill Development: Training professionals and students in sustainable technologies.

Community Engagement: Involving local communities in sustainability initiatives.

## CONCLUSION

Sustainable infrastructure is the cornerstone of the future economic and environmental well-being of India. As a country that is aspirational for the \$5 trillion economy, it should incorporate sustainability in its infrastructure plans and projects to stay on the high road to success. Through the use of technology, government initiatives, and community participation, India can build a resilient future balancing growth with environmental responsibility. As students and future leaders, we should advocate for and actively contribute to sustainable development in creating a greener and more sustainable India.



# FROM JUGAAD TO INNOVATION: HOW INDIA CAN LEAD IN TECH

-Megha, B com Hons, 1<sup>st</sup> year

There is not a single urban household in India that does not embrace jugaad, a does-all solution that is connoted with a sense of frugality, presence of mind, and cashless innovation. But over the past two decades India has evolved from a place of bottoms-up tinkering to a now-world-leading technology innovation ecosystem. As the startup ecosystem, talent pool, and government initiatives continue to expand, India is ready to assume a leadership position in global technology.

This article further examines how Indian innovation can be changed both through success stories that demonstrate this evolution, and how education, research and government support can play an instrumental role in sustaining this growth.

## THE PROMISE OF INDIAN INNOVATION

India's innovation potential is driven by its unique mix of demographics' youth, inventive mindset, and scalable problem solving. It's home to the 3rd largest startup ecosystem in the world, 90,000+ startups and 100+ unicorns across sectors such as fintech, edtech, agritech and healthtech.

India's unique strength lies in working within constraints. Whether it is affordable healthcare solutions or cost-effective space exploration, Indian innovators always provide better results in a budget-friendly manner. Frugal innovation is hence hyper-relevant to other developing economies.

India's digital revolution has fueled an unparalleled burst of innovation as well. With well over 800 million internet users, the country has become a petri dish for new fintech, e-commerce and digital services. Initiatives like the Unified Payments Interface (UPI) and

Aadhaar have transformed public services, making them more accessible and efficient.



## SUCCESS STORIES OF INDIAN INNOVATION

India's global tech ascendance is marked by phenomenal success stories, which embody its spirit of innovation.

### 1 ISRO's Space Exploration

The epitome of cost-effective innovation is India's space agency the Indian Space Research Organisation (ISRO). Missions such as Chandrayaan and Mangalyaan have demonstrated that big ticket items can be realised with very little spend. For example, the Mars Orbiter Mission cost only \$74 million — cheaper than many Hollywood movies — earning India global praise for how efficient its space program was.

### 2 Digital payment revolution

It has made India one of the largest markets for real-time payments globally, all thanks to the UPI platform. In December 2023, UPI processed a staggering 14 billion plus transactions, demonstrating the ability of



homegrown technology to propel financial inclusion and digital adoption at scale.

### 3 Biotechnology and pharmaceutical

During the COVID-19 pandemic, India emerged as a key player, manufacturing vaccines at unprecedented speed and scale. Companies such as the Serum Institute of India provided billions of vaccine doses to countries around the world, further entrenching India's image as the "pharmacy of the world".

### 4. Startups Driving Changes

Traditional industries continue to be disrupted, not just in India but worldwide as we have seen with startups like Byju's (edtech), Ola (mobility), Zomato (foodtech) and Zerodha (fintech). Applications like DeHaat, Ninjacart, etc are using AI, IOT, and blockchain to tech-empower agriculture and make farmers live better.

## THE ROLE OF EDUCATION IN DRIVING INNOVATION

Education is the bedrock of the Indian innovation ecosystem. Over the years, some of the brightest minds in the world have emerged from India's premier institutions like the Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs), and Indian Institute of Science (IISc). Leaders like Sundar Pichai (CEO of Google) and Satya Nadella (CEO of Microsoft) are products of this robust educational system.

In late class, online see political platform like Byju's, Unacademy, and Coursera have democratise educational activity, enabling millions to upskill in areas like coding, AI, and data science. Enterprise like Skill India are also bridge the break between traditional teaching and industry need, ensuring that India's workforce remains competitive in emerging technologies.

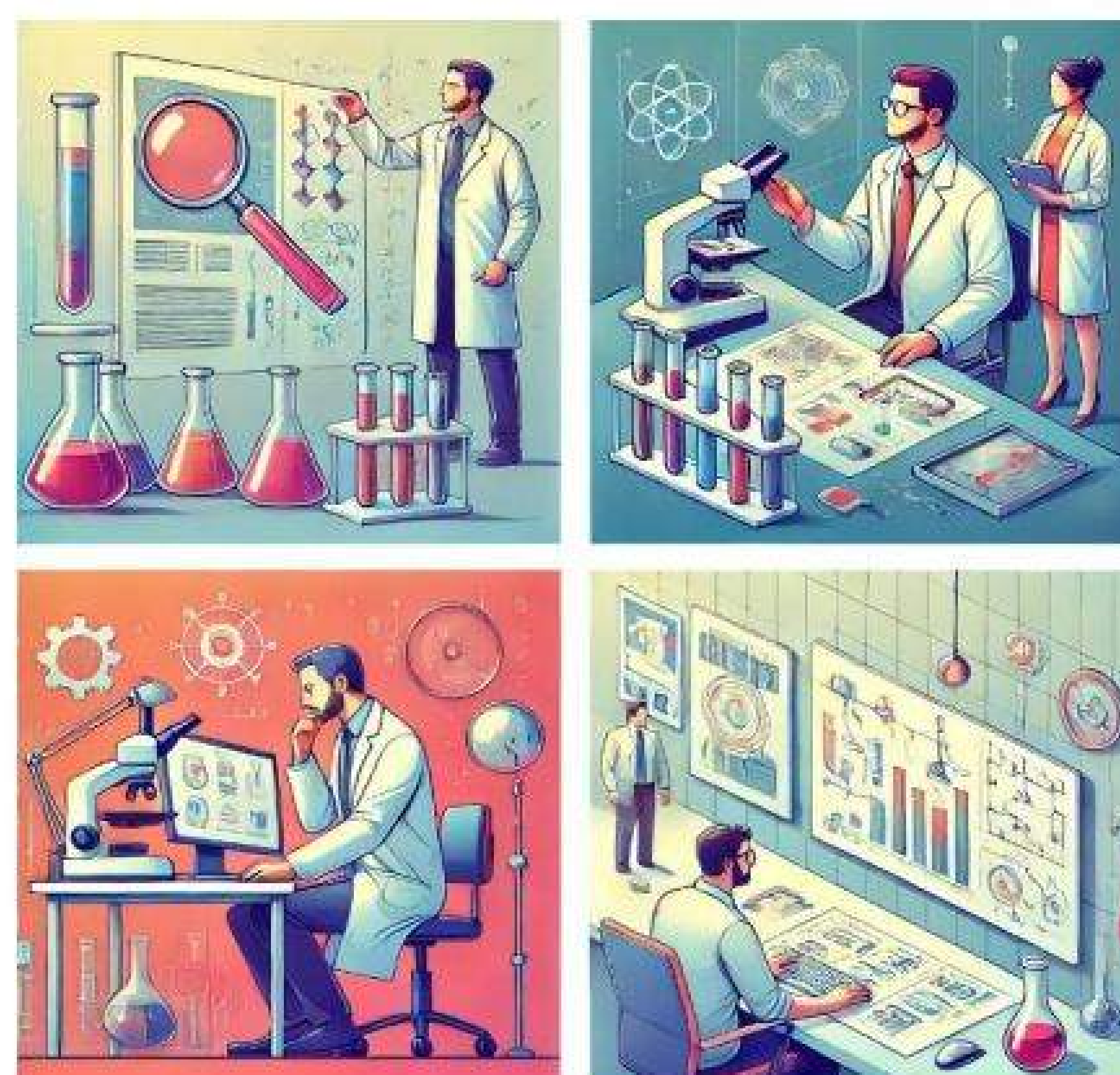
However, challenges stay on. The focus on rote learning in many schools needs to shift towards fostering creativity, problem-resolution, and collaboration. Increased collaboration between

academia and industry can guarantee that inquiry is align with real-man challenges, produce an innovation grapevine from classrooms to startups.

## THE IMPORTANCE OF RESEARCH AND DEVELOPMENT

India's investment in research and development (R&D) currently stands at around 0.7% of GDP, lagging behind global leaders like the United States (2.8%) and China (2.4%). To maintain its innovation momentum, India must prioritize R&D funding and infrastructure.

Several promising steps are already underway. The National Research Foundation (NRF), launched by the governing, aims to hike research spending and encourage collaboration between donnish asylum and industries. Meanwhile, sector like AI, quantum computing, and biotechnology are receiving increased attending from both public and secret thespian. Indian startups and tummy are also step up. Fellowship like Infosys and TCS are place heavily in burn-edge research, while startups are research AI-driven solutions for sectors like healthcare, agriculture, and education.



## THE ROLE OF GOVERNMENT IN FOSTERING INNOVATION

The Indian government has played a critical role in bringing up the land's innovation ecosystem. Initiatives like Startup India and



Digital India have created fertile surroundings for entrepreneurs and technologists to thrive.

Startup India: Offers tax exemptions, backing, and mentorship to inaugurate, and promote conception across industries.

Digital India: Has transformed governance and public Robert William Service through digital infrastructure, further a more connected and empowered society.

PLI Outline: The Production Linked Incentive (PLI) schemes incentivize manufacturing in high-technical school spheres such as electronics and semiconductor unit, reducing India's dependence on imports.

To Boot, the push for a National AI Strategy and investments in 5G and semiconductor unit production designates that India is gearing up to lead in egress technologies.

## CHALLENGES AND THE ROAD AHEAD

Despite its achievements, India faces several challenges that must be turned to to earn its full potential:

1. Rural-Urban Divide: Bridge the crack in access to engineering, the Department of Education, and infrastructure between urban and rural areas is crucial.
2. Brain Drain: Many of India's shining minds

migrate abroad for better opportunities. Creating a contributing environment for design at households can reverse this trend.

3. Regulatory Vault: Simplifying bureaucratic processes and guaranteeing informality of execute business organisation is vital for keeping up the startup boom.

Addressing these challenges will involve a multi-bifurcate approach, combining insurance reforms, increase R&D expenditure, and efforts to foster a culture of institution at all levels of society.

## CONCLUSION

India's journey from jugaad to origination symbolizes its ability to turn constraints into opportunities. With a robust education system, a thriving startup ecosystem, and regime initiatives that encourage technological growth, India is well on its direction to becoming a spherical tech drawing card. By nurturing collaboration between academe, industry, and policymakers, and by inducting research and development, India can not only lead in engineering science but also create solutions that address global challenges. The reality is watching as India transforms its creative ingenuity into groundbreaking inventions that mould the future.



# THE IMPACT OF AI ON BUSINESS GROWTH & INNOVATION

-Mehul Thapar, B Com Prog, 2<sup>nd</sup> year

Artificial Intelligence (AI) is redefining the business landscape by enhancing efficiency, driving innovation, and unlocking new growth opportunities. In 2024-25, AI adoption has accelerated across various industries, with businesses leveraging AI for automation, predictive analytics, and personalized customer experiences. This article examines AI's impact on business growth and innovation, highlights the latest AI advancements, and presents statistical insights from 2024-25. It also mentions the challenges businesses face in AI integration and references to support key findings.

## INTRODUCTION

AI has evolved from being a futuristic concept to a fundamental driver of business success. A report by PwC (2024) suggests that AI will contribute \$15.7 trillion to the global economy by 2030, with businesses across all sectors integrating AI into their operations. AI enhances productivity, reduces operational costs, and fosters innovation in products and services. This article explores AI's transformative impact on business growth, the latest AI tools, statistical data, and the challenges companies must address to maximize AI's potential.



## AI's ROLE IN BUSINESS GROWTH

**Enhancing Operational Efficiency:** Business operations have been enhanced by AI-driven automation to reduce costs

and increase efficiency. According to McKinsey (2024), AI-powered automation reduces operational costs by 30% and increases productivity by 40%. Some of the key AI tools that improve operational efficiency include:

- **Robotic Process Automation:** Automates repetitive tasks such as invoice processing and data entry.
- **AI-Powered Customer Support:** Chatbots like OpenAI's GPT-5 Turbo (2025) and Google's Gemini Ultra enhance customer interactions, reducing response times by 60%.
- **Predictive Maintenance:** AI-driven analytics in manufacturing predict machinery failures, reducing downtime by 50% (Deloitte, 2024).

**AI-Driven Decision-Making:** AI enables businesses to leverage data-driven insights, improving strategic decision-making. By 2025, 85% of business executives will use AI analytics for decision-making (Gartner, 2024).

AI applications in decision-making include:

- **Predictive Analytics:** AI models predict market trends, consumer behavior, and sales patterns.
- **Sentiment Analysis:** NLP-based AI tools analyse customer feedback to help brands change their strategies.

**Personalization and Customer Experience:** Personalization is an essential aspect of customer engagement, and AI has revolutionized this domain. A Salesforce (2024) study showed that 76% of consumers



expect personalized experiences, and AI-powered personalization has increased customer retention rates by 25%.

- Recommendation Engines: Companies like Amazon, Netflix, and Spotify use AI-driven recommendations to enhance user experience.
- AI in E-Commerce: Platforms like Shopify AI (2025) offer personalized product recommendations, improving conversion rates.

## AI AS A CATALYST FOR INNOVATION

### 1. AI in Product and Service Development

AI-driven innovation is changing industries. In healthcare, AI has delivered spectacular breakthroughs, including: AI-Powered Drug Discovery: DeepMind's AlphaFold 3 (2025) accelerates drug development by predicting protein structures with 99% accuracy. AI Diagnostics: AI models now detect cancer with a 92% accuracy rate, reducing diagnostic errors (WHO, 2024).

### 2. AI in Financial Services

AI is transforming banking and finance. According to JP Morgan, the adoption of AI in fraud detection has reduced financial fraud by 70% (2025). Main applications are: Algorithmic Trading: AI-based models predict the trends of the stock markets, which in turn improves the trading efficiency. Fraud Detection: AI analyses different transaction patterns and detects anomalies in cybercrime, thus preventing fraud.

### 3. AI in Supply Chain and Logistics

AI is optimizing supply chain management by improving demand forecasting, logistics, and inventory management. According to DHL (2024), AI-driven supply chain optimization has reduced delivery delays by 35% and improved logistics efficiency by 40%.

## CHALLENGES OF AI INTEGRATION

Despite the benefits of AI, businesses face several challenges in its adoption:

### 1. High Implementation Costs

AI implementation is very capital-intensive. According to a Forrester (2024) report, 60% of small businesses are unable to adopt AI due to its high cost.

### 2. Data Privacy & Security Risks

Since AI works on humongous datasets, there is a growing concern about GDPR compliance and cyber security threats. In 2024, IBM reported a 25% increase in AI-related data breaches, which indicates the need for stronger security frameworks.

### 3. AI Skill Gap

There is a shortage of AI professionals, with 78% of businesses citing a lack of AI expertise as a major challenge (MIT Technology Review, 2024). Companies are investing in AI training programs to bridge this gap.

## Emerging AI Technologies in 2025

Several cutting-edge AI technologies have been launched in 2025, revolutionizing industries: OpenAI's GPT-5 Turbo: A more advanced AI model with real-time learning capabilities. Google Gemini Ultra: The latest multimodal AI for better reasoning and image recognition. Tesla's AI-Powered Autopilot: Enhanced self-driving with 98% accuracy in the urban environment. Amazon's AI Shopping Assistant: Applying generative AI for hyper-personalized shopping experiences.

## FUTURE OF AI IN BUSINESS

AI in business has an exciting future with the following major trends that shape the next decade:

- AI-Powered Sustainability: AI is optimizing energy consumption, reducing carbon footprints by 20% (IEA, 2024).
- Generative AI in Content Creation: AI tools like Adobe Firefly and ChatGPT are revolutionizing digital content generation.
- AI and Human Collaboration: Instead of replacing jobs, AI will augment human intelligence, improving workplace productivity.



## CONCLUSION

AI has proved to be one of the best drivers of business growth and innovation through efficiency, effective decision-making, and customer experiences. The current AI advancements include GPT-5 Turbo to AI-

driven supply chain optimization, where it has transformed itself in 2024-25. However, there are significant challenges such as high costs, data privacy issues, and an AI skill gap to be addressed. The future is bright for AI in business and companies that can embrace AI will take the lead to drive the next wave of innovation and economic growth.



# THE IMPACT OF TECHNOLOGICAL ADVANCEMENTS ON WORKFORCE DYNAMICS

*-Shagun, B Com Prog, 1<sup>st</sup> year*

The evolution of technology has drastically transformed how humans work and interact in professional environments. From the Industrial Revolution to the current age of artificial intelligence (AI) and automation, technology continues to redefine workforce dynamics globally. While these advancements have created opportunities for growth, they have also introduced new challenges, such as job displacement and skill gaps. This article explores seven key ways in which technological advancements are impacting the workforce, providing a deeper understanding of the changes reshaping industries and careers today.

## AUTOMATION AND ITS CONSEQUENCES

Automation is one of the most significant outcomes of technological advancement. Machines and algorithms can now perform repetitive and manual tasks with remarkable speed and accuracy, leading to increased efficiency for businesses. However, this efficiency often comes at the cost of job displacement for workers in low-skill roles. Automation is particularly prevalent in manufacturing, logistics, and customer service, where routine tasks can be easily handled by robots or software systems.

While automation eliminates some jobs, it also reduces the operational costs for companies, allowing them to reinvest in innovation. However, workers in roles susceptible to automation may face job insecurity and financial instability if they lack the necessary skills to transition to new roles.

**Example:** Automated warehouse robots, like those used by Amazon, have replaced many human workers in packaging and sorting tasks. Although these systems improve productivity, they also reduce the demand for human labor in similar roles.

## CREATION OF NEW JOB OPPORTUNITIES

While automation displaces certain jobs, it also creates new roles, particularly in industries driven by innovation. Fields such as artificial intelligence, cybersecurity, digital marketing, and data science are rapidly expanding, offering lucrative career opportunities. These jobs often require specialized skills, which can be acquired through education and training.

Emerging technologies also foster the development of entirely new industries. For example, the rise of electric vehicles (EVs) has created demand for battery engineers, EV maintenance specialists, and renewable energy researchers. Similarly, advancements in biotechnology and healthcare are creating jobs for genetic counsellors, bioinformaticians, and pharmaceutical developers.

**Example:** The global rise of e-commerce has led to a surge in demand for web developers, logistics managers, and digital marketing experts, creating opportunities that didn't exist a decade ago.

## THE EVOLVING SKILL SET FOR THE MODERN WORKFORCE

As technology becomes central to nearly every industry, the demand for specific skill sets is evolving rapidly. Workers are now required to possess not only technical expertise but also soft skills like adaptability, critical thinking, and creativity. For instance, many employers expect candidates to be familiar with data analytics tools, coding languages, and project management software.

Additionally, lifelong learning has become essential. With industries evolving quickly, professionals must constantly update their skills to remain competitive. Online platforms such as Coursera, edX, and LinkedIn Learning have made it easier for individuals to acquire



new competencies, enabling them to transition into emerging roles.

**Example:** In the marketing industry, professionals who can leverage platforms like Google Analytics, HubSpot, and AI-powered tools for targeted campaigns are far more valuable than those relying on traditional methods.

## REMOTE WORK AND DIGITAL CONNECTIVITY

One of the most significant impacts of technology on workforce dynamics is the rise of remote work. Tools like Zoom, Slack, and Microsoft Teams have enabled employees to work from anywhere, providing greater flexibility and work-life balance. Remote work has also allowed companies to tap into a global talent pool, fostering diversity and inclusivity in the workforce.

However, this shift comes with challenges. The absence of physical office spaces can lead to feelings of isolation and make it harder for teams to build strong relationships. Additionally, the blending of work and personal life can lead to burnout, as employees struggle to set boundaries.

**Example:** A content writer in India can now collaborate seamlessly with a marketing team in the United States, thanks to cloud-based tools and virtual communication platforms. This global connectivity has redefined traditional workplace structures.



## PRODUCTIVITY GAINS THROUGH AI AND DATA-DRIVEN INSIGHTS

this issue by investing in education and infrastructure to ensure equal opportunities.

Technological advancements, particularly in artificial intelligence and machine learning, have revolutionized how businesses operate. AI can process vast amounts of data quickly, identify patterns, and provide actionable insights, enabling organizations to make informed decisions. Automation further enhances productivity by reducing human error and streamlining processes.

For instance, AI-powered systems can analyze customer behaviour, helping businesses tailor their offerings to meet specific needs. Predictive analytics is another tool that allows companies to forecast market trends and make proactive decisions.

**Example:** Banks use AI-driven chatbots to handle customer inquiries, saving time and resources while improving service quality. Similarly, AI tools in healthcare assist doctors in diagnosing diseases more accurately.

## WORKFORCE INEQUALITY AND THE DIGITAL DIVIDE

While technology creates opportunities, it also deepens inequality within the workforce. Workers who can adapt to technological advancements thrive, while those who cannot face challenges. The gap between skilled and unskilled workers is widening, particularly in developing countries where access to quality education and training is limited.



This inequality is further exacerbated by the digital divide. Many individuals, particularly in rural or underserved areas, lack access to the internet and digital tools, leaving them at a disadvantage in the modern workforce. Governments and organizations must address

**Example:** In urban areas, students with access to high-speed internet and advanced learning resources have a competitive edge over those in



rural areas, who may rely on outdated materials. This disparity impacts their ability to secure high-paying jobs in technology-driven fields.

### **CHANGING WORKPLACE CULTURE AND EMPLOYEE EXPECTATIONS**

Technology has not only transformed how work is done but also reshaped workplace culture. Digital tools have streamlined communication and collaboration, enabling teams to work more efficiently. However, the rise of virtual work environments has reduced face-to-face interactions, impacting team dynamics and organizational culture.

Employees today expect more flexibility and autonomy, thanks to advancements in technology. Companies are adopting hybrid work models, allowing employees to balance in-office and remote work. Additionally, younger generations entering the workforce prioritize job satisfaction, work-life balance, and opportunities for growth, leading organizations to rethink traditional practices.

**Example:** Companies like Google and Microsoft have implemented flexible work policies and introduced wellness programs to meet the changing expectations of their

employees. These efforts enhance productivity and employee retention.

### **CONCLUSION**

Technological advancements are reshaping workforce dynamics in profound ways. Automation is revolutionizing industries, while new technologies create opportunities for innovation and growth. However, these changes also bring challenges, such as skill gaps, workforce inequality, and cultural shifts.

To thrive in this ever-changing environment, workers must embrace lifelong learning and adaptability. Governments, businesses, and educational institutions must collaborate to address inequalities and ensure that technological progress benefits everyone. By doing so, we can build a workforce that is not only resilient but also prepared to harness the opportunities of the future.

Through proactive measures and a focus on inclusivity, the impact of technological advancements can be turned into a driving force for global economic and social progress. The future of work is not just about technology—it's about how humanity adapts to it.

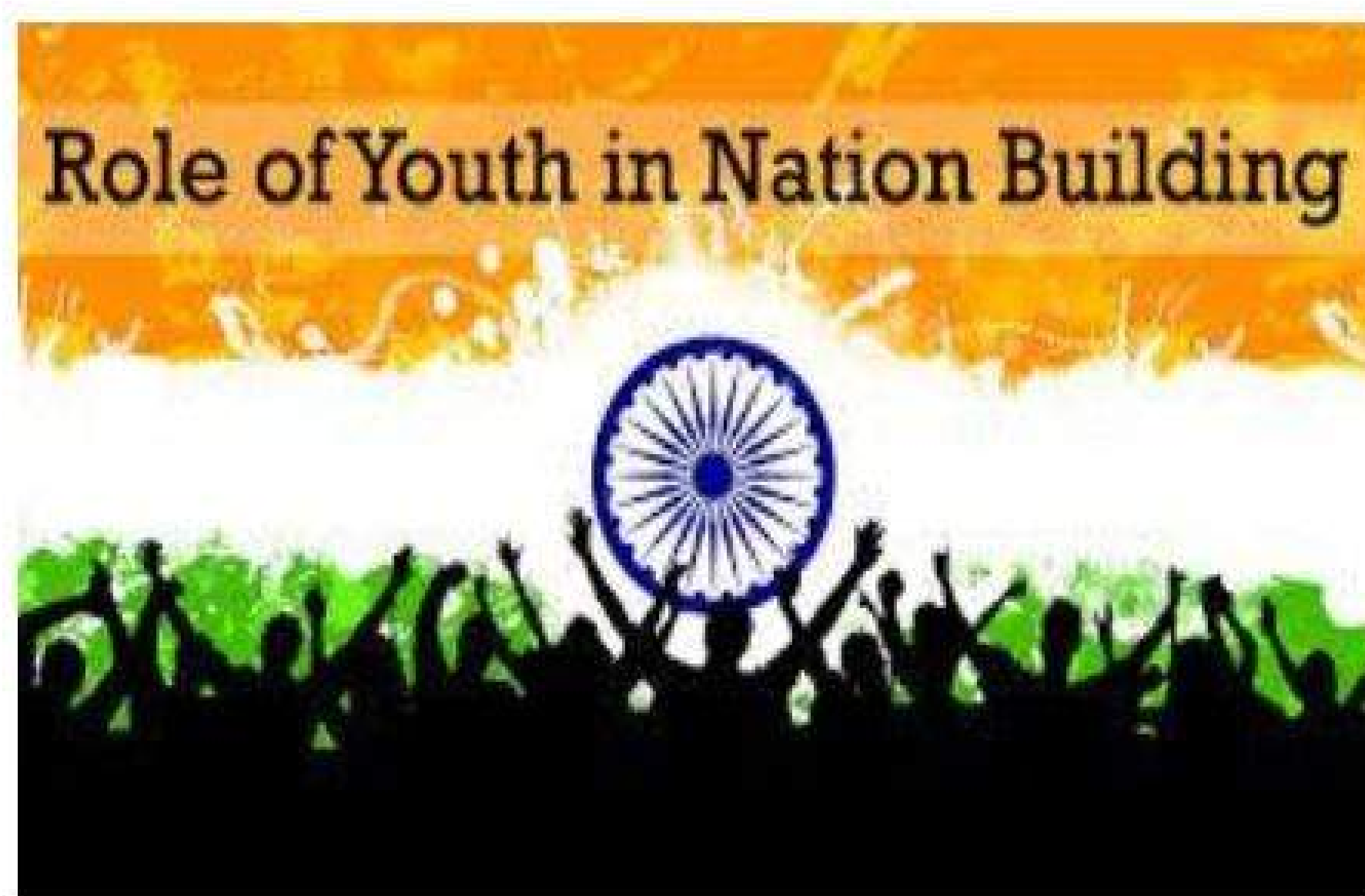


# YOUTH LEADERSHIP AND NATION BUILDING VOLUNTEERISM: HOW STUDENTS CAN CONTRIBUTE TO NATION-BUILDING

*-Harsh Singhal, B com Hons, 3rd Year*

## INTRODUCTION

Imagine a world where every young person felt empowered to make a difference. That's the incredible potential of youth volunteerism. It's more than just helping out; it's about unlocking a wave of energy, creativity, and compassion that can truly transform our communities. Young people are bursting with ideas and a desire to make the world a better place. Volunteering isn't just about doing good, infact it's about learning and growing. It's where they discover their strengths, build confidence and understand that their actions have a real impact. Students can contribute to nation building through volunteerism by actively engaging in community service activities like environmental clean-ups, tutoring underprivileged children, participating in health awareness campaigns, supporting local NGOs, organizing blood donation drives, and promoting civic engagement, effectively utilizing their skills and time to address societal issues and foster positive change within their communities.



**YOUTH LEADERSHIP -THE POWER OF  
YOUNG HANDS:**

Youth leadership is when young people take on leadership roles and develop skills to influence others. Youth leadership can help young people become change makers who can address real-world challenges. Power of Young Hands refers to the idea that children and young people, through their actions and creativity, have the potential to significantly impact the world around them, often bringing fresh perspectives, boundless energy, and a willingness to take action on important issues

When students step outside their classrooms and into the real world to help others, amazing things happen:

- Skills that last a lifetime: they learn to work together, communicate to clear and solve problems, and critically think – skills that will benefit them in every aspect of their lives, from college applications to their future careers.
- Real world learning: whether its tutoring kids, cleaning up a park, or helping at a local animal shelter, students gain valuable experience and a deeper understanding of the challenges facing their communities
- Building confidence and self-esteem: Successfully completing a volunteer project gives young people a huge sense of accomplishment. It shows them that they can make a difference and empowers them to tackle even bigger challenges.
- A sense of purpose: Volunteering helps young people understand their role in society. It fosters a deep sense of responsibility and a desire to make a positive impact



- Developing empathy and compassion: By working alongside people from different backgrounds, students learn to see the world through a different lens. They develop empathy and compassion and become more understanding and inclusive individuals



## THE POWER OF PARTICIPATION AND VOLUNTEERISM:

“Volunteering is a great way of fostering a culture of service and strengthening society. It is both disciplining and empowering, and therefore a practice that must be introduced early in the lives of our youth. In the same way as children go to school, they should be encouraged to volunteer. Grassroots experiences will help to build the foundation of an inclusive and progressive nation. The Youth hold the key to a developed India.”

Volunteering is a powerful strategy to do so. It is a vehicle for self- and social growth, especially for the youth in countries like India. As a developing nation with a rich history of community engagement, India is uniquely placed to benefit from volunteering. Communities can benefit directly from the act of volunteering, while the experience of volunteering can make youth more empathetic citizens and leaders of the future

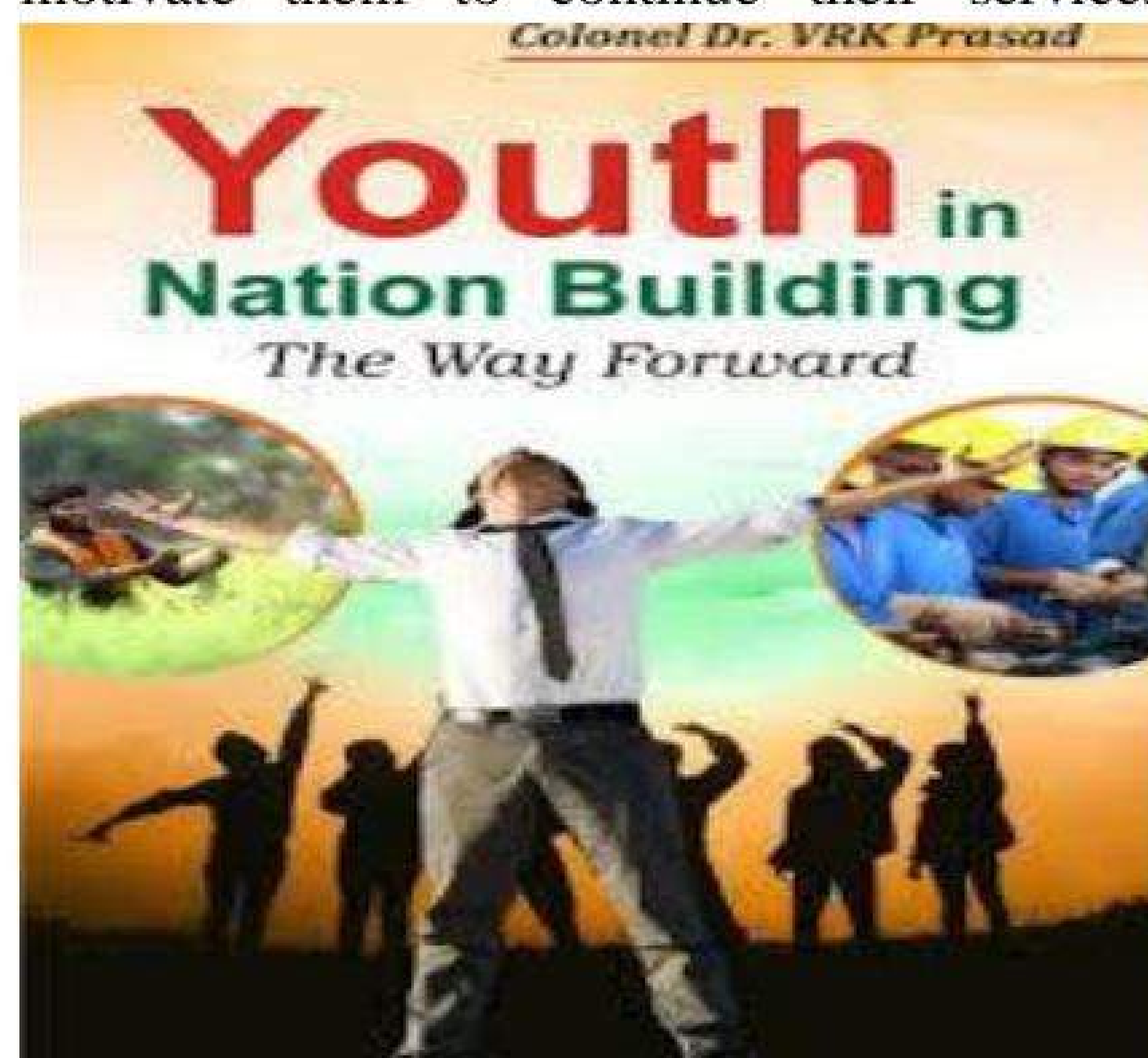
## HOW STUDENTS CAN CONTRIBUTE TO NATION-BUILDING THROUGH VOLUNTEERISM?

The possibilities for student volunteerism are endless.

- Education: Tutoring younger students, organizing literacy drives, or helping at a local school.
- Healthcare: Assisting at a hospital, organizing a blood drive, or raising awareness about important health issues.
- Environment: Planting trees, participating in clean-up campaigns, or promoting sustainable living.
- Social Welfare: Helping at a food bank, supporting senior citizens, or assisting with disaster relief efforts.
- Community Development: Participating in local projects, promoting local art and culture, or organizing community events.

## CREATING A CULTURE OF VOLUNTEERISM

To encourage widespread student participation in volunteerism, it is essential to cultivate a culture of giving back within educational institutions. Integrating volunteerism into the curriculum and incorporating community service projects into the academic curriculum can make volunteerism an integral part of the educational experience. Organizing regular volunteer drives, Schools can organize regular volunteer drives and encourage student participation in various community service activities. Recognizing and rewarding student volunteers, Acknowledging and appreciating the efforts of student volunteers through awards, certificates, and public recognition can motivate them to continue their services.





Partnering with NGOs and community organizations, Collaborating with local NGOs and community organizations can provide students with a wide range of volunteer opportunities and connect them with those in

### CONCLUSION

Youth leadership and volunteerism are indispensable for the progress and development of any nation. By actively engaging in community service, students can not only make a significant contribution to their society but

need. Promoting the importance of volunteerism, Organizing workshops, seminars, and awareness campaigns can help students understand the importance of volunteerism and its impact on society

also develop essential life skills, foster a sense of civic responsibility, and become responsible and compassionate citizens. Let us encourage and empower our youth to embrace the spirit of volunteerism and contribute to the building of a stronger, more just, and equitable nation.



# HARNESSING RENEWABLE ENERGY FOR A SUSTAINABLE FUTURE: A Leap Toward Viksit Bharat 2047

-Joel Chamathil Mohan, B Com Hons, 3rd year

Energy has always been the cornerstone of human civilization. From the early days of discovering fire to the rise of industrial revolutions, energy has shaped societies, powered industries, and driven technological progress. Today, as we face the dual challenges of climate change and dwindling natural resources, the world is looking towards renewable energy as a solution for a sustainable future. This shift not only aims to mitigate environmental damage but also to secure energy for future generations. To truly grasp the magnitude of this transition, we must consider humanity's potential to harness energy on a cosmic scale, using a fascinating concept called the Kardashev Scale.

## THE KARDASHEV SCALE: MAPPING CIVILIZATIONS' ENERGY CONSUMPTION

Introduced by Soviet astrophysicist **Nikolai Kardashev** in **1964**, the Kardashev Scale categorizes civilizations based on their energy consumption and capabilities. The scale is divided into three primary types:

**Type I Civilization:** A civilization that can efficiently harness and store all the energy available on its home planet. This includes utilizing renewable sources like solar, wind, geothermal, and tidal energy to meet the needs of its entire population.

**Type II Civilization:** A civilization that is capable of capturing and using the energy of its star, such as by constructing large-scale structures like Dyson spheres to harvest the full power of its sun.

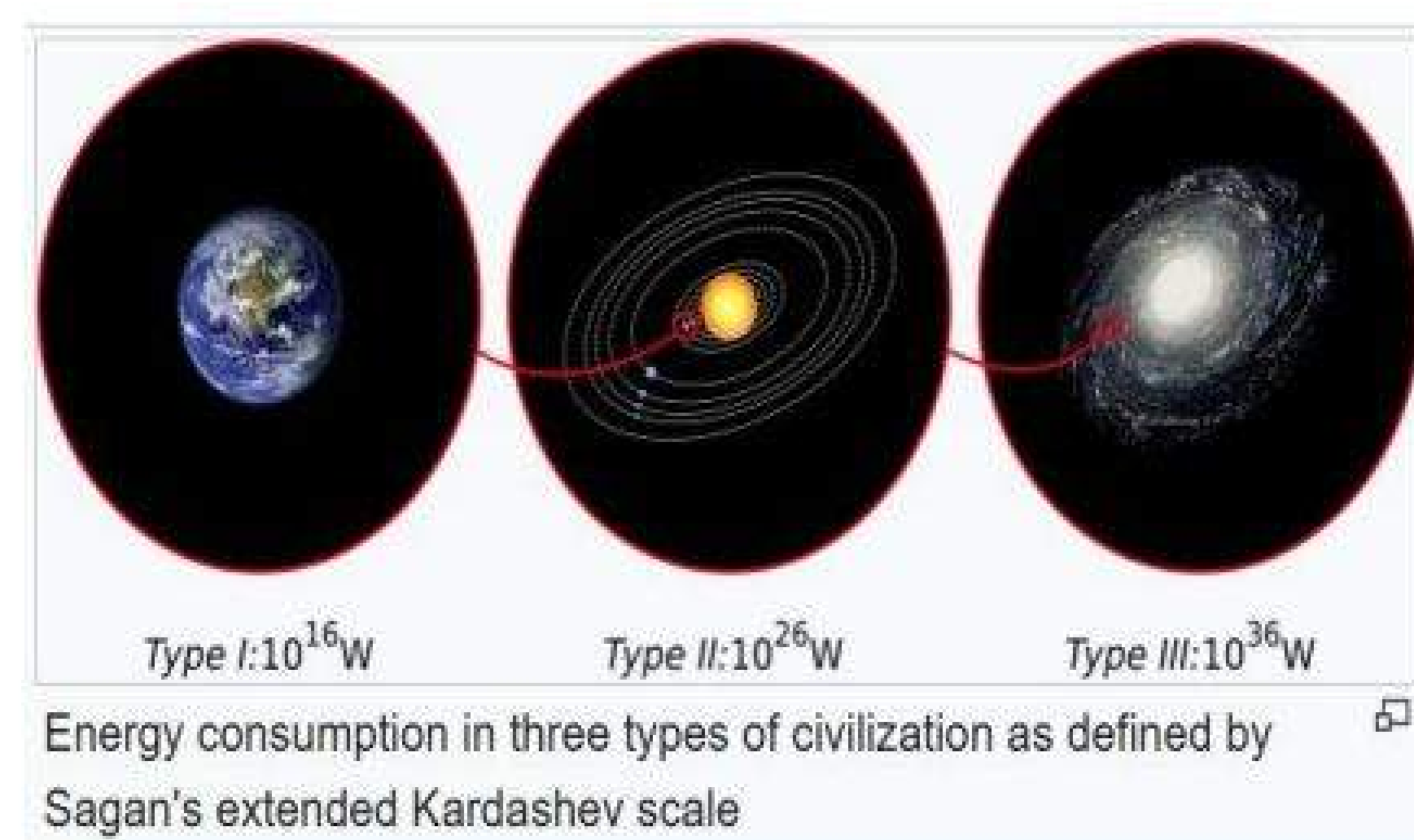
**Type III Civilization:** A galactic civilization with the power to control the energy of an entire

galaxy, tapping into the energy of billions of stars.

According to the Kardashev Scale, humanity is currently considered to be around a **"Type 0.7" civilization**, meaning we are not yet at a Type 1 level where we fully utilize all the energy available on Earth, but are significantly beyond a purely "Type 0" civilization which harnesses only a small fraction of planetary energy. While we have made significant strides, we still have much to accomplish in mastering all the energy resources available on Earth. The transition to renewable energy is a critical step in this process and will be key to achieving long-term energy security.

## THE SHIFT TOWARD RENEWABLE ENERGY

For centuries, human progress has been fueled by fossil fuels—**coal, oil, and natural gas**. While these resources powered industrial revolutions and technological advancements, they also brought about significant environmental challenges, such as air pollution,



greenhouse gas emissions, and global warming. The time has come to move beyond these finite and harmful sources of energy. Renewable energy, derived from natural processes like



sunlight, wind, and water, offers a clean, sustainable alternative to fossil fuels. Solar power, for instance, is abundant, *with the sun providing more energy to Earth in one hour than all of humanity consumes in a year*. Wind power and hydropower are similarly renewable and abundant, helping to reduce our reliance on polluting energy sources.

However, the transition to renewable energy is not without its challenges. The intermittent nature of wind and solar power requires the development of effective energy storage solutions, grid integration technologies, and infrastructure improvements. As we move towards a future powered by renewable resources, these technological innovations will play a crucial role in overcoming barriers to a stable, sustainable energy system.

### INDIA'S PIVOTAL ROLE IN GLOBAL ENERGY TRANSITION

India, with its rapidly growing population and economy, is at the forefront of the global push toward renewable energy. As the world's third-largest emitter of greenhouse gases, India faces unique challenges in balancing economic growth with environmental sustainability. Yet, India has made remarkable strides in adopting renewable energy, positioning itself as a leader in the global clean energy race.

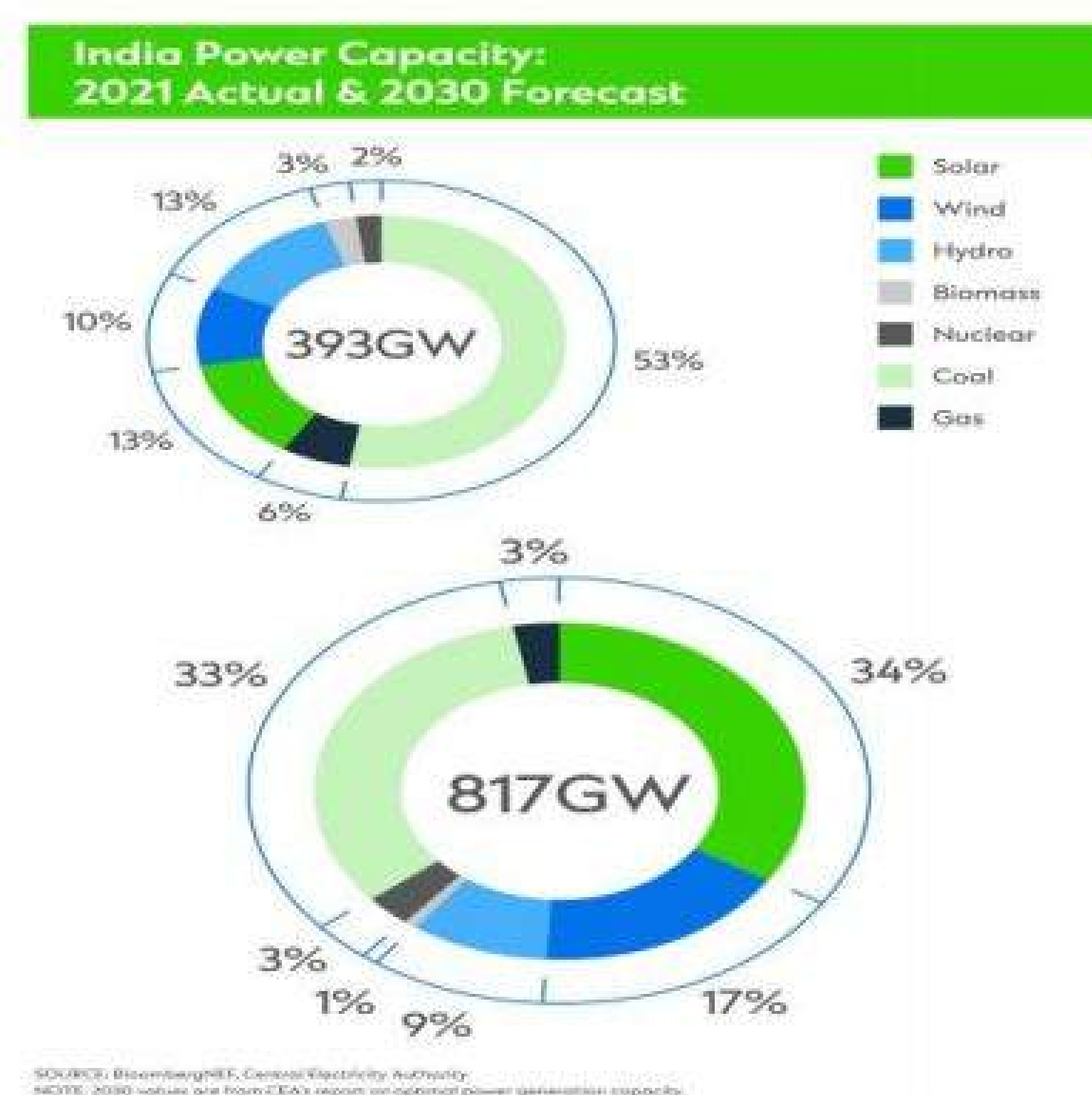
In 2015, India committed to generating 175 GW of renewable energy capacity by 2022. By the end of 2020, the country had exceeded this target, reaching 190 GW, primarily from solar and wind energy. Building on this success, *India set an even more ambitious target of 500 GW of renewable energy capacity by 2030*. These efforts reflect the nation's commitment to reducing its reliance on fossil fuels and contributing to a greener, more sustainable world.

India's vast solar potential is a key driver of its renewable energy push. The country enjoys nearly 300 days of sunshine annually, making it an ideal location for solar power generation. Major solar parks like **Pavagada** in **Karnataka** and **Bhadla** in **Rajasthan** are among the largest

in the world, showcasing India's determination to harness solar power on a massive scale. Additionally, India is working on improving energy storage solutions and grid infrastructure. The development of pumped hydro storage, advanced battery technologies, and smart grid systems are essential for overcoming the challenges of renewable energy intermittency and ensuring a reliable energy supply.

### ENERGY SECURITY AND INDIA'S ROLE IN THE GLOBAL RACE

The shift to renewable energy is not only about addressing environmental issues—it is also about ensuring energy security for future generations. Energy security means having access to reliable, affordable energy to meet societal needs. As countries strive to reduce their dependence on fossil fuels, they must also secure sustainable, indigenous sources of energy.



In the global race for energy security, nations are increasingly recognizing the strategic importance of renewable energy. China has made substantial investments in solar, wind, and electric vehicles, aiming to dominate the clean energy sector. Similarly, the European Union has set ambitious targets for reducing carbon emissions, with many countries aiming for net-zero emissions by 2050. India's commitment to renewable energy is crucial not only for its domestic energy security but also for its role in global climate agreements. As a signatory to the Paris Agreement, India is



dedicated to reducing its carbon footprint and contributing to the global effort to limit global warming to **1.5°C** above pre-industrial levels. India's renewable energy targets and initiatives will be instrumental in shaping the global response to climate change.

### **INDIA'S EMERGING ROLE AS A GLOBAL LEADER IN RENEWABLE ENERGY AND ECONOMIC GROWTH (Viksit Bharat 2047)**

India's progress in renewable energy is not just a national concern—it is part of the larger vision of **Viksit Bharat 2047**, a developed India in the next **25 years**. In this vision, India aims to be an economic powerhouse, leading global efforts toward sustainability and innovation.

By prioritizing clean energy, India is not only addressing climate change but also laying the groundwork for economic growth. The renewable energy sector has the potential to create millions of jobs, boost domestic industries, and enhance India's position as a key player in the global economy. The development of renewable infrastructure, from solar parks to advanced battery storage systems, will stimulate local economies and foster innovation, aligning perfectly with the vision of a Viksit Bharat. Moreover, as India becomes more energy-independent, it will reduce its reliance on foreign energy imports, making the nation more self-sufficient and resilient. This shift towards renewable energy aligns with India's ambition to be a global leader in clean energy technology, driving trade, investment, and collaboration with other nations.

### **THE PATH FORWARD: WHAT LIES AHEAD FOR HUMANITY?**

Looking ahead, the transition to renewable energy represents humanity's next monumental leap. The Kardashev Scale reminds us that we are still in the early stages of mastering our

planet's energy resources. Moving toward a Type I civilization will require groundbreaking innovations, global cooperation, and a long-term commitment to sustainability.

In addition to focusing on renewable energy, humanity will need to explore new frontiers in energy production. Technologies like space-based solar power, asteroid mining, and even the harnessing of energy from other planets could propel humanity toward becoming a Type II civilization. While these ideas may seem like science fiction today, advancements in space exploration and energy technology suggest that the potential to unlock the universe's energy resources is closer than we think.

### **CONCLUSION: A FUTURE FULL OF POSSIBILITIES**

The journey to a sustainable, energy-secure future is just beginning. As India and other nations ramp up their efforts to adopt renewable energy, the challenges we face today are outweighed by the vast opportunities ahead. The potential to harness the energy of the sun, wind, oceans, and even outer space holds the key to a future filled with limitless possibilities.

India's ambitious renewable energy targets are a testament to its resolve to build a greener, more prosperous future. As we move closer to becoming a Type I civilization, the lessons learned today will shape the energy systems of tomorrow—systems that will not only power our homes and industries but also drive space exploration, technological breakthroughs, and perhaps even the colonization of other planets.

The question is no longer if we can transition to renewable energy, but how quickly we can do it. The answers to this question will determine whether we unlock humanity's full potential as a **sustainable, energy-secure civilization**, capable of mastering the vast resources of our planet—and beyond.



# THE ROLE OF EDUCATION IN SHAPING INDIA'S ECONOMIC AND SOCIAL FUTURE

*-Chehak Jain, B Com Hons, 3rd year*

## INTRODUCTION

Education is often referred to as the cornerstone of any nation's progress. In India, a country with a rich cultural heritage and a diverse population, education plays a crucial role in shaping the future of society. As the world's largest democracy and a rapidly growing global power, India's future depends on how effectively it equips its citizens with the knowledge, skills, and values required to meet contemporary challenges. This article delves into the role of education in shaping India's economic and social trajectory.

## EDUCATION AS A CATALYST FOR ECONOMIC GROWTH

Education is the foundation of economic prosperity. A well-educated workforce enhances productivity, fosters innovation, and attracts investments. In India, the rapid expansion of industries such as IT and healthcare is a testament to the role of education in driving economic progress. Initiatives like Start-Up India have further emphasized the need for skill-based education to address the demands of a dynamic global economy. Additionally, higher education institutions, particularly those focused on technical and management studies, play a critical role in preparing individuals for high-value industries.



Moreover, vocational education has emerged as a crucial element in creating employment

opportunities for the semi-skilled population. Programs that focus on developing job-specific skills can significantly reduce unemployment, particularly in rural areas. By investing in quality education across all levels, India can unlock its demographic dividend- a young and vibrant workforce- ensuring long-term economic growth and global competitiveness.

## BRIDGING SOCIOECONOMIC AND GENDER DISPARITIES

Education has the power to break the cycle of poverty and inequality. In India, access to education has enabled marginalized communities to rise above their circumstances, contributing to societal equity. Programs like the Right to Education Act (RTE) and mid-day meal schemes have significantly improved school enrollment rates, especially among economically weaker sections. These initiatives have not only increased access but also improved retention rates, reducing dropout levels among vulnerable groups. However, while progress has been made, challenges persist in achieving universal access to quality education. One of the most pressing issues is the digital divide, which became evident during the COVID-19 pandemic. Students from low-income households faced significant barriers in accessing online education. Addressing these challenges through initiatives like affordable internet access, distribution of digital devices, and localized e-learning content can help bridge the gap.





Similarly, the empowerment of women through education has emerged as a crucial driver of social and economic progress. Initiatives like Beti Bachao Beti Padhao have contributed to increased female literacy rates. An educated woman not only uplifts her family but also contributes to the broader community by participating in the workforce and making informed choices. Tackling issues like early marriages and high dropout rates among girls requires sustained policy focus and community engagement. Encouraging women to pursue undergraduate and postgraduate studies has a significant positive impact by promoting gender equality and empowering women through increased educational attainment and career opportunities.

### PREPARING FOR TECHNOLOGICAL AND ENVIRONMENTAL CHALLENGES

As the world moves toward the Fourth Industrial Revolution, education systems must evolve to keep pace with technological advancements. In India, integrating STEM (Science, Technology, Engineering, and Mathematics) education is crucial to creating a future-ready workforce. Fields like artificial intelligence, machine learning, and blockchain require a blend of technical expertise, problem-solving abilities, and creativity—skills that must be nurtured from an early age.

The National Education Policy (NEP) 2020 has laid a strong foundation for this transformation by emphasizing multidisciplinary learning and the inclusion of coding and computational thinking in the school curriculum. Partnerships between educational institutions and industries can further enhance this effort by offering internships, apprenticeships, and practical exposure to emerging technologies.

In parallel, education must also address pressing environmental concerns. India faces significant challenges such as climate change, pollution, and resource depletion. Environmental education, especially teaching the SDGs (Sustainability Development Goals), can empower students to adopt eco-friendly lifestyles and advocate for sustainable practices. Schools and universities can lead by example, integrating sustainability into their operations, from green infrastructure to waste management initiatives, and fostering a sense of environmental responsibility among students.



### FOSTERING SOCIAL RELATIONS AND NATIONAL UNITY

India's diversity is both its strength and its challenge. With its multiple languages, religions, and cultures, fostering social relations is critical to maintain national unity. By teaching students about India's rich history and cultural heritage, education can cultivate a sense of pride and shared identity.

Civic education is another essential component, emphasizing the importance of democratic principles, constitutional values, and active citizenship. It equips students with the knowledge and skills to engage in societal issues, encouraging them to participate in democratic processes and contribute to nation-building. Programs that encourage volunteerism and community service can further instill a sense of social responsibility.

In addition to fostering national unity, education can also serve as a bridge for international collaboration. With increasing globalization, exposure to diverse perspectives through exchange programs and international collaborations can prepare students to thrive in



a globalized world while retaining their cultural roots.

**CONCLUSION**

The role of education in shaping India's economic and social future cannot be overstated. It is the bedrock upon which a prosperous, equitable, and sustainable society is built. From driving economic growth and reducing inequalities to fostering technological innovation and environmental sustainability,

education touches every aspect of India's development.

As we look ahead, the collective efforts of policymakers, educators, and citizens will determine how effectively education can transform aspirations into achievements. By nurturing the potential of its 1.4 billion people through inclusive, innovative, and sustainable education systems, India can secure a brighter future for generations to come.



# BUILDING A STRONG NATION: THE ROLE OF YOUTH

*-Khushi Halder, B com Hons, 2<sup>nd</sup> Year*

A country's youth are frequently seen as its most vital and dynamic asset. They are the designers of the future as well as the heirs to the past. As change agents, young people's vitality, inventiveness, and fortitude can be used to create a more resilient and forward-thinking country. With the world's largest youth population, India's youngsters have enormous ability to influence the course of the nation. Indian youth have been instrumental in propelling growth and tackling the country's most critical issues, from leading technology innovations to taking part in social projects. However, understanding the role of the younger generation in nation-building and how their contributions can help India become a more developed and inclusive society is crucial to fulfilling this promise.

## THE ROLE OF YOUTH IN NATION-BUILDING

The process of nation-building is complex and includes social progress, cultural preservation, and economic expansion. It necessitates teamwork, creative thinking, and a dedication to the common good. Youth are particularly positioned to contribute to these aims because of their vigor, excitement, and creative mindset. Their capacity to question the status quo and adjust to change makes them ideal leaders in promoting reform and advancement.

Young people have long been at the vanguard of revolutionary movements in India. With their bravery and vision, leaders like Bhagat Singh, Subhas Chandra Bose, and innumerable other young revolutionaries inspired the country during the fight for independence. Millions were inspired by their dedication to freedom, equality, and justice, which also established the groundwork for a new India. Youth movements have remained vital in tackling problems, including environmental degradation, social

injustice, and corruption in the post-independence era.

Education is one of the main ways that young people support the development of their country. Young people who have access to high-quality education are better prepared to handle challenging situations. Young people with greater education are more inclined to think critically, take part in community service, and support economic development. Since a sizable section of India's population is of working age, the country's demographic dividend can only be fully realized if young people are empowered via education and skill development. The goal of programs like Digital India and Skill India is to give young people the resources they need to succeed in the global economy.



## YOUTH MOVEMENTS AND SOCIAL INITIATIVES

In India, social projects and youth movements have been crucial in tackling societal issues and advancing inclusive development over the years. These movements have significantly changed fields like education, gender equality, and environmental conservation. They are frequently motivated by a strong sense of duty and justice.



The Chipko Movement, which started as a grassroots initiative to stop deforestation in the 1970s, is one prominent example. Despite being predominantly driven by women, young people actively participated in the movement and were essential in raising awareness and inspiring communities. Youth activists who supported social justice and sustainable development also played a major role in the Narmada Bachao Andolan, a movement to defend the rights of tribal communities impacted by dam building.

Social media's ascent in recent years has made it possible for young groups to expand their audience and increase their influence. Social media sites like Facebook, Instagram, and Twitter have developed into effective instruments for promoting change, raising awareness, and planning protests. The transformative potential of youth-driven action is exemplified by movements such as #FridaysForFuture, a global climate-strike campaign led by young people, and #MeToo, which brought attention to the frequency of sexual harassment. Indian youth have taken an active part in major international movements, calling for greater social justice and responsibility.

Another field in which young Indians are making important contributions is social entrepreneurship. To tackle important social issues like poverty and education, organizations like Goonj, managed by Anshu Gupta, and Teach for India, founded by Shaheen Mistri, were launched. Numerous young people have been motivated to assume leadership positions in the social sector by these projects, proving the value of youth-driven innovation in developing long-lasting solutions to challenging issues.

## CONTRIBUTIONS TO A DEVELOPED INDIA

India's youth must actively participate in the political, social, and economic sectors if it is to fulfil its ambitions of becoming a developed country. Young inventors and entrepreneurs have already started using ground-breaking concepts and technologies to change the

country. India's start-up ecosystem, which is frequently referred to as the "third-largest start-up hub in the world," is evidence of the inventiveness and tenacity of its young people. Young entrepreneurs built businesses like BYJU'S, Zomato, and Ola that have not only upended established markets but also produced millions of employment and greatly boosted the nation's economy.



In the domains of science and technology, Indian youth have demonstrated exceptional aptitude and creativity. Young people are encouraged to research cutting-edge technologies and contribute to the growth of sectors like biotechnology, artificial intelligence, and space exploration by programs like the Atal Innovation Mission and the Indian Space Research Organization's (ISRO) Young Scientist Program. The Chandrayaan-3 mission, for instance, was led by a team of youthful engineers and scientists and successfully landed on the moon's south pole.

Involving young people in politics and governance is also essential to creating a robust and open democracy. Young people's increasing awareness of their role in influencing policies and guaranteeing responsibility is reflected in the rise of young leaders in both the political and social arenas. The goal of initiatives like Yuva and the Indian Youth Parliament is to develop young people's leadership abilities while motivating them to take part in decision-making and speak for their generation.



Furthermore, the social growth of India depends on the youth's involvement in advancing diversity and inclusivity. Young people are fighting against deeply rooted social conventions and promoting a more just and equitable society by supporting causes, including those against caste-based discrimination, gender equality, and LGBTQ+ rights. A greater sense of national identity based on respect and common values is a result of their attempts to heal divisions and promote unity.



### THE WAY FORWARD

India's youth have enormous potential, but overcoming significant obstacles is necessary to realize it fully. Uneven access to high-quality healthcare and education persists, especially in underserved and rural areas. To guarantee employability and professional advancement, skill development initiatives must be in line with the needs of a labour market that is changing quickly. To enable young people to realize their full potential, mental health issues—which are frequently disregarded—need to be addressed through accessible support networks and awareness campaigns.

Making political and social structures more inclusive and representational is another way to foster an atmosphere that encourages youth involvement. Fostering youth engagement requires lowering obstacles to entrance in politics, offering forums for discussion, and

making sure that young people's opinions are acknowledged during the decision process.

Research and development expenditures, as well as the establishment of ecosystems that assist start-ups and small enterprises, are also necessary to promote an innovative and entrepreneurial culture. To provide the financial and technical resources required to cultivate young talent and promote sustainable growth, public-private partnerships can be extremely important.

Young people must accept their responsibility as change agents on an individual basis by remaining informed, exercising initiative, and cooperating to solve society's issues. Youth may make significant contributions to nation-building through civic engagement, volunteer work, and involvement in community development initiatives.

### CONCLUSION

The youth of India hold the key to the nation's future. Their enthusiasm, ingenuity, and tenacity can turn obstacles into chances and advance India's development into an affluent, inclusive, and advanced country. Through engagement in education, entrepreneurship, activism, and government, youth can propel advancement throughout all domains of society.

It takes a team effort to build a strong nation, and the youth's active participation is essential. India can unleash the full potential of its youth by giving them the tools, chances, and assistance they require. The young people must step up to the plate as tomorrow's torchbearers, accepting their duties and putting in endless effort to create a better future. They may guide India on its path to greatness by being innovative, cooperative, and resilient, demonstrating that a country's power is found in the aspirations and tenacity of its youth.



# YOUTH AS CATALYSTS FOR CHANGE: SHAPING INDIA'S FUTURE BY 2047

-Esha Sahu, B com Prog, 1<sup>st</sup> Year

As India approaches the year 2047, the spotlight will rest firmly on the youth. By the year 2047, young Indians will be the driving force of the country's progress. India's youth are a vibrant and dynamic force in coming India. With access to education, technology, and a global perspective, they will bring innovation, adaptability, and resilience to the challenges of modern times. Empowering the youth to take charge as changemakers ensures that India's march toward 2047 is going to be inclusive, progressive, and sustainable.

"The youth of India are poised to play a transformative role in driving the nation's economic growth". With the government's push towards the **ATMANIRBHAR BHARAT**, i.e., self-reliant India, young entrepreneurs are stepping forward with innovative ideas, startups, and ventures that are redefining industries. The technology and digital sectors, in particular, have seen unprecedented growth, and the credit goes to the contribution of young minds.



Education is the bedrock of progress, and India's youth are actively working on it. By embracing digital tools, online learning platforms, and vocational training, the youth are bridging the gap between outdated curricula and modern-day workforce demand. Skill development is another critical area in which

the youth drive change with the rise of automation, artificial intelligence, and other emerging technologies. Young Indians are reskilling and upskilling themselves to remain competitive in the global job market. By 2047, the youth-led push for quality education and skill development can ensure that India boosts one of the most skilled workforces in the world.

India's youth are not just passive observers but active participants in social transformation. They are unafraid to challenge societal norms and injustices, making their voices heard on issues such as gender equality, caste discrimination, LGBTQ rights, and mental health awareness. One of the most significant contributions of the young Indians is embracing diversity, rejecting outdated prejudices, and working toward creating an equitable society. By 2047, this cultural shift could result in a nation where opportunities are accessible to all, irrespective of gender, caste, or socioeconomic status.

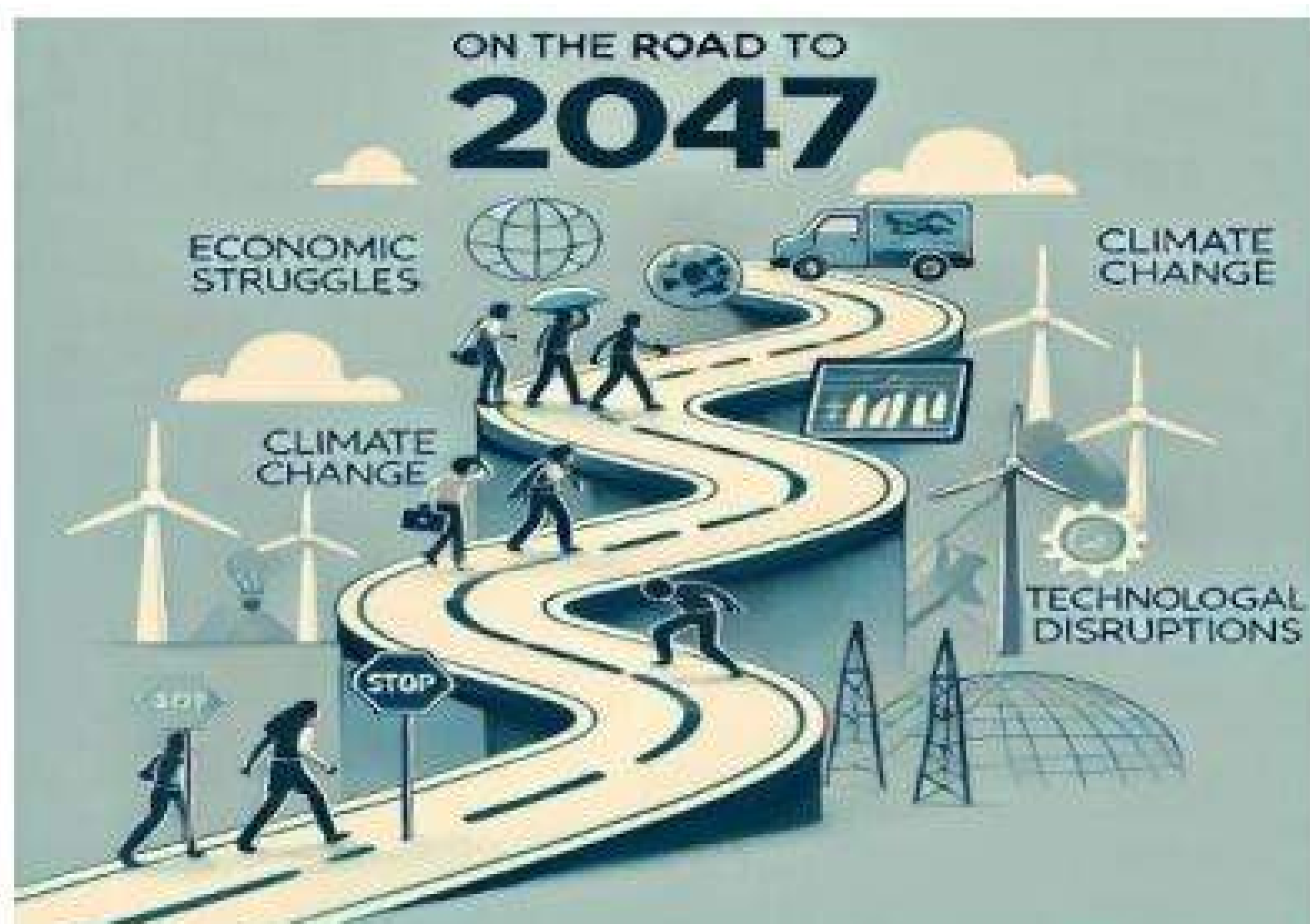
## YOUTH AS CATALYST FOR 2047 BUSINESSES

India's youth represent an unparalleled force of innovation, creativity, and ambition, holding the potential to transform the nation's business landscape by 2047. As the country advances towards the centenary of independence, the entrepreneurial energy of the youth, combined with technological advancement and global connectivity, will redefine industries and create a business ecosystem that is dynamic, sustainable, and inclusive. The youth are not only employees or consumers but also business leaders, innovators, and disruptors. Their unique perspective, adaptability, and risk-taking abilities make them the primary drivers of economic transformation. Here's how the youth are shaping the future of business in India and how their influence will grow by 2047.



## CLIMATIC CHANGE AND FOLLOWING CULTURAL HERITAGE IS ALSO AN ESSENTIAL ROLE TO BE PLAYED BY YOUTH.

Climate change poses one of the greatest challenges of the 21st century, and India's youth are at the forefront of the fight for environmental sustainability. From organising tree plantation drives to advocating for renewable energy and sustainable practices, we are leading by example. Organizations like 'Friday for Future India' and 'Local Community Initiative' showcase the dedication of the youth to safeguarding the planet for future generations. India's youth, by embracing modernization, are deeply committed to preserving the country's cultural heritage. Social media platforms have become a powerful tool for young Indians to share and celebrate the world. This blend of tradition and innovation ensures that India's cultural identity remains vibrant even as the nation progresses technologically and economically.



## CHALLENGES ON THE ROAD TO 2047

While the potential of India's youth is immense, several challenges need to be addressed to unlock their full potential.

1. **Unemployment:** Despite being highly educated, many young Indians struggle to find suitable employment opportunities. Addressing this issue requires robust job creation policies.
2. **Access to resources:** Socioeconomic disparities limit access to quality education, healthcare, and technology for many young Indians, particularly in rural areas.
3. **Mental health:** The pressure of academic and professional success has led to a rise in mental

health issues among the youth. Greater awareness and accessible mental health services are crucial.

4. **Political Representation:** While youth participation in politics is increasing, barriers such as a lack of resources and political dynasties need to be dismantled to ensure equal opportunities.

## STEPS TO EMPOWER YOUTH

To harness the potential of the youth, India must take proactive steps:

1. **Educational Reform:** Shift the focus from rote learning to critical thinking, creativity, and problem-solving.
2. **Skill Development Programs:** Expand initiatives like Skill India to include emerging technologies.
3. **Entrepreneurial Support:** Create more incubators, accelerators, and funding opportunities for startups.
4. **Health and Well-Being:** Provide accessible healthcare and prioritize mental health awareness campaigns.
5. **Youth Leadership Programs:** Encourage youth representation in governance, policy making, and civic leadership roles.

## CONCLUSION

The youth of India are not just the torchbearers of tomorrow; they are the changemakers of today. Their vision, energy, and innovation have the power to transform India into a global superpower by 2047. By addressing the challenges and providing the right opportunities, India can unlock the full potential of its youth. Together, they can build a nation that is economically robust, socially inclusive, and environmentally sustainable- a nation that stands as a beacon of hope and progress for the world. As we look toward the centenary of independence, it is clear that the youth are not merely participants in India's journey but its true architects. With their relentless determination and boundless aspirations, they will shape a future where India not only fulfils its potential but exceeds it.



# BRIDGING THE GROWTH-EQUITY DIVIDE: A PATH TOWARDS INCLUSIVE PROSPERITY

-Rekha Saini, B.Com Hons, 3<sup>rd</sup> Year

"Growth without equity is like building a skyscraper on a cracked foundation. It might look impressive for a while, but sooner or later, the cracks will show" by economist Samirul Ariff Othman, published on January 27, 2025, in the New Straits Times. This adage poignantly captures the inherent tension between economic growth and equitable distribution of its benefits. While economic growth is undeniably crucial for creating jobs, fostering innovation, and improving living standards, its value diminishes significantly if it primarily benefits a select few. A truly prosperous society necessitates a delicate balance – one where economic growth is not merely a rising tide that lifts all boats but rather a tide that lifts all boats equally.



## THE IMPERATIVE OF INCLUSIVE GROWTH

Pursuing inclusive growth is not merely a moral imperative but a strategic necessity for long-term economic and social stability. When the

benefits of economic progress are concentrated in the hands of a privileged few, while a significant portion of the population is left behind, social and economic disparities widen. This can lead to social unrest, political instability, and ultimately, hinder overall economic growth. Conversely, when the fruits of economic growth are shared more equitably, societies become more stable, harmonious, and resilient.

Furthermore, inclusive growth unlocks human potential. By providing equal opportunities for education, healthcare, and economic advancement to all members of society, we empower individuals to reach their full potential. A skilled and healthy workforce drives innovation, boosts productivity, and enhances a nation's competitive advantage in the global economy.

## KEY STRATEGIES FOR BRIDGING THE DIVIDE

Bridging the growth-equity divide requires a multifaceted approach that addresses the root causes of inequality. Some key strategies include:

**Investing in Human Capital:** Prioritizing investments in education, healthcare, and skills development is paramount. This includes ensuring access to quality education at all levels, expanding access to affordable healthcare, and providing vocational training and upskilling programs to equip individuals with the skills needed to thrive in the 21st-century economy.



**Promoting Inclusive Labor Markets:**

Policies that combat discrimination in the workplace, promote equal pay for equal work, and support the transition to a more inclusive and equitable labour market are crucial. This includes strengthening labour unions, promoting diversity and inclusion in hiring practices, and addressing the gender pay gap.

**Progressive Taxation:** Implementing progressive tax systems ensures that those who benefit most from economic growth contribute a greater share towards the overall well-being of society. This revenue can then be used to fund public services, invest in social programs, and reduce inequality.

**Strengthening Social Safety Nets:** Robust social safety nets, such as unemployment insurance, social security, and affordable housing programs, provide a crucial safety net for vulnerable populations, helping them weather economic downturns and recover from setbacks.

**Empowering Local Communities:**

Decentralizing decision-making processes and empowering local communities can ensure that development initiatives are responsive to the specific needs and priorities of different regions. This can help to address the unique challenges faced by marginalized communities and ensure that the benefits of growth are distributed more equitably.

**ADDRESSING THE CHALLENGES**

While the pursuit of inclusive growth is essential, it is not without its challenges.

**Trade-offs:** Striking the right balance between economic growth and equity requires navigating complex trade-offs. Excessive taxation or over-regulation can stifle economic activity and discourage investment.

**Implementation Challenges:** Implementing and effectively administering inclusive development policies can be complex and challenging. Bureaucracy, corruption, and lack of political will can hinder progress.

**Measuring Progress:** Accurately measuring progress towards inclusive growth can be difficult. While GDP growth is a widely used metric, it does not adequately capture the distribution of economic benefits or the well-being of all members of society.

**A COMPREHENSIVE APPROACH TO INCLUSIVE DEVELOPMENT**

Bridging the growth-equity divide necessitates a comprehensive approach that involves multiple stakeholders, including governments, businesses, civil society, and individuals. Governments play a crucial role in setting the policy framework and ensuring that resources are allocated equitably. Businesses, on the other hand, can contribute by adopting inclusive practices, such as fair wages, ethical sourcing, and community engagement.

Civil society organizations can serve as advocates for marginalized groups, ensuring that their voices are heard and their needs are addressed. Individuals, too, have a role to play by supporting inclusive businesses and holding policymakers accountable.



**Innovation as a Catalyst:** Innovation can be a powerful tool for bridging the growth-equity divide. Technological advancements have the potential to democratize access to information, education, and economic opportunities. For example, digital platforms can connect small businesses with global markets, while online



learning platforms can provide access to quality education for individuals in remote areas.

However, it is essential to ensure that the benefits of innovation are shared broadly. This requires addressing the digital divide and ensuring that marginalized communities have access to the necessary infrastructure and skills to participate in the digital economy.

**Sustainable Development Goals (SDGs):** The United Nations Sustainable Development Goals provide a useful framework for promoting inclusive growth. Goals such as "No Poverty," "Quality Education," "Decent Work and Economic Growth," and "Reduced Inequalities" underscore the importance of addressing the growth-equity divide.

By aligning national and organizational strategies with the SDGs, stakeholders can contribute to a more inclusive and sustainable future.

## THE ROLE OF EDUCATION AND AWARENESS:

Education and awareness are critical for fostering a culture of inclusivity. This involves not only formal education but also public awareness campaigns that challenge stereotypes and promote diversity and inclusion.

Educational institutions have a responsibility to instill values of equity and social justice in students. This can be achieved through inclusive curricula, community engagement programs, and initiatives that promote diversity and inclusion on campus.



## THE ROAD AHEAD

The journey towards bridging the growth-equity divide is a long and complex one. It requires a paradigm shift in how we view economic success, moving beyond narrow measures such as GDP growth to a more holistic understanding of well-being and prosperity. This shift necessitates strong political will, effective governance, and a commitment to social justice. Policymakers must be willing to make difficult decisions and navigate complex trade-offs to ensure that the benefits of economic growth are shared equitably.

Businesses must recognize that inclusive growth is not only a moral imperative but also a strategic necessity. By adopting inclusive practices, they can enhance their reputation, attract and retain talent, and drive long-term success.

Civil society organizations and individuals must continue to advocate for inclusivity and hold stakeholders accountable. By working together, we can create a society where everyone has the opportunity to thrive.

## CONCLUSION

Bridging the growth-equity divide is a complex and multifaceted challenge that requires a long-term commitment and a comprehensive approach. It necessitates a shift in perspective, moving beyond simply focusing on GDP growth to prioritize the well-being of all members of society.

We can create a more equitable and sustainable future for all by investing in human capital, promoting inclusive labour markets, strengthening social safety nets, and ensuring that the benefits of economic growth are shared broadly. The success of this endeavour will depend on strong political will, effective governance, and a commitment to social justice.



# SUSTAINABILITY AND GREEN COMMERCE

-Rishav Kumar B Com Prog, 1<sup>st</sup> Year

In recent years, sustainability has evolved from being a niche interest to a mainstream business imperative. With growing concerns over climate change, resource depletion, and environmental degradation, businesses worldwide are feeling the pressure to adopt more sustainable practices. In India, the concept of green commerce has gained significant traction, driven by both consumer demand for environmentally responsible products and the government's push for a greener economy. This shift is not only reshaping industries but also setting the stage for long-term, sustainable economic growth.



## THE RISE OF SUSTAINABILITY AND GREEN COMMERCE

Green commerce, also known as sustainable commerce or eco-friendly business, refers to the integration of sustainable practices in business operations, products, and services. It encompasses a broad spectrum of initiatives aimed at reducing environmental impact, such as energy conservation, waste reduction, sustainable sourcing, and ethical production.

Sustainability in commerce is increasingly driven by consumer awareness and demand. As people become more conscious of the environmental impact of their choices, they are actively seeking out brands and products that align with their values. The rise of social media and digital platforms has further amplified these

shifts, with consumers demanding transparency and accountability from businesses. The concept of “greenwashing,” where companies falsely claim to be environmentally friendly, has become a significant concern, prompting the need for genuine sustainability practices.

## KEY DRIVERS OF GREEN COMMERCE IN INDIA

**Consumer Awareness:** Indian consumers are becoming increasingly aware of the environmental consequences of their purchases. According to several surveys, a growing number of consumers in India are willing to pay a premium for eco-friendly and sustainable products. The rise in eco-consciousness has led businesses to adapt their strategies, focusing on sustainability as a key differentiator.

**Government Regulations:** The Indian government has introduced various policies to promote sustainability in business practices. The *National Action Plan on Climate Change* (NAPCC) and initiatives like *Swachh Bharat Abhiyan* (Clean India Mission) and *Atmanirbhar Bharat* (Self-Reliant India) encourage businesses to adopt eco-friendly practices. Additionally, the introduction of extended producer responsibility (EPR) for plastic waste management and regulations surrounding carbon emissions are compelling companies to rethink their business models.

**Corporate Social Responsibility (CSR):** In India, businesses are increasingly recognizing the role of corporate social responsibility (CSR) in driving sustainability. CSR activities that focus on environmental conservation, renewable energy, waste management, and community development have become integral parts of corporate strategies. These initiatives not only improve the company's public image but also contribute to long-term sustainability goals.



**Innovation and Technology:** Advancements in technology have made it easier for businesses to adopt sustainable practices. From the use of renewable energy sources like solar power to the implementation of AI for resource optimization, technology is enabling businesses to reduce their environmental footprint. Moreover, digital platforms allow businesses to track and monitor their environmental impact in real-time, offering opportunities for continuous improvement.

## GREEN COMMERCE PRACTICES IN INDIA

**Sustainable Supply Chain Management:** The shift toward sustainable supply chains is one of the most significant changes in the way businesses operate. In India, companies are increasingly focusing on sourcing raw materials responsibly, reducing waste, and improving the efficiency of their supply chains. This involves working with suppliers who adhere to sustainable practices, using eco-friendly packaging, and minimizing transportation-related emissions.

For instance, companies in the textile industry, one of the largest contributors to pollution, are exploring ways to reduce water usage, adopt sustainable dyes, and implement fair labor practices. The adoption of circular economy principles—where products are designed for reuse, recycling, or refurbishment—has gained momentum in various sectors like fashion, electronics, and construction.

**Eco-Friendly Packaging:** Packaging waste has become one of the largest contributors to environmental pollution, particularly in the fast-moving consumer goods (FMCG) sector. In response, several companies are transitioning to sustainable packaging solutions. The use of biodegradable, recyclable, or reusable materials is becoming standard practice for many businesses. Brands like *ITC*, *HUL*, and *Tata Consumer Products* have committed to reducing plastic packaging and promoting alternatives such as paper, glass, and plant-based plastics.

**Renewable Energy Adoption:** Many businesses in India are investing in renewable energy sources to reduce their carbon

footprints. Companies like *Infosys* and *Wipro* have already set ambitious goals to become carbon-neutral by integrating solar, wind, and other renewable energy sources into their operations. The use of solar panels, energy-efficient appliances, and smart grid technology helps companies reduce their dependence on fossil fuels and lower their environmental impact.



**Waste Management and Circular Economy:** In India, where waste management is a significant challenge, businesses are adopting innovative approaches to manage waste and promote recycling. Companies are investing in waste-to-energy technologies, recycling programs, and creating products from post-consumer waste. E-commerce giants like *Amazon* and *Flipkart* are working on reducing their packaging waste, while also encouraging customers to recycle packaging materials.

**Green Finance and Investment:** The growing interest in green commerce has led to an increase in sustainable investment. Green bonds and sustainable finance initiatives are enabling businesses to access capital for environmentally responsible projects. The rise of impact investing—where investors fund projects that create measurable social and environmental impact—has also contributed to the growth of green commerce in India.





## Challenges and Opportunities

While the growth of green commerce in India presents numerous opportunities, it also comes with challenges. One of the major hurdles is the higher cost of sustainable products and practices. Eco-friendly raw materials, energy-efficient technologies, and sustainable logistics often come with a higher price tag, making it difficult for small businesses to adopt such practices.

Additionally, the lack of standardization and clear guidelines for sustainability reporting makes it harder for businesses to communicate their efforts effectively. Consumers may struggle to differentiate between companies that are genuinely sustainable and those that are simply “greenwashing.”

However, these challenges also present opportunities for innovation. The growing demand for sustainable solutions opens the door for entrepreneurs and businesses to create new, innovative products and services that align with consumers’ environmental values. Moreover, as sustainability becomes a key competitive advantage, businesses that embrace green commerce early on stand to gain long-term benefits in terms of brand loyalty, cost savings, and regulatory compliance.

## THE FUTURE OF GREEN COMMERCE IN INDIA

As awareness about sustainability continues to rise, green commerce is set to become an even

more integral part of business operations in India. The ongoing push for innovation, technology adoption, and eco-friendly practices will further accelerate this transition. Moreover, with increasing consumer expectations, businesses will need to adopt transparent, measurable sustainability initiatives to build trust and remain competitive in the market.

In the coming years, sustainability will no longer be just a buzzword but a key driver of economic growth, shaping the future of commerce in India. As businesses, governments, and consumers align their efforts to create a more sustainable world, India has the potential to become a leader in green commerce, demonstrating how economic development and environmental responsibility can go hand in hand.

## CONCLUSION

Sustainability and green commerce are transforming the way businesses operate and how consumers make purchasing decisions. In India, the shift toward eco-friendly practices is not just a trend but a necessity, driven by environmental concerns, consumer demand, and government policies. While challenges remain, the opportunities for businesses to innovate and lead in sustainability are vast. As India continues to embrace green commerce, it is poised to become a key player in the global movement toward a more sustainable and responsible future.



# SUSTAINABLE BUSINESS PRACTICES: ECONOMIC GROWTH AND ENVIRONMENTAL RESPONSIBILITY

*-Lakshay Kumar Nahar B Com Hons, 3<sup>rd</sup> year*

As India aims to become a “Viksit Bharat” (Developed India) by 2047, the country’s path toward progress must be both economically sound and environmentally responsible. In this context, sustainable business practices emerge as a vital pillar for achieving inclusive and sustainable development. Businesses today are increasingly realizing that long-term growth isn’t just about maximizing profits, but also about integrating environmental sustainability and social responsibility into their operations.

## UNDERSTANDING SUSTAINABLE BUSINESS PRACTICES

Sustainable business practices refer to strategies that companies adopt to operate in ways that contribute to both economic success and the well-being of society and the planet. These practices encompass a wide range of activities, from reducing carbon footprints to ensuring ethical labour practices, and promoting energy-efficient technologies. In a rapidly changing global landscape, businesses are learning that economic growth can coexist with environmental stewardship and social responsibility.

## THE ROLE OF SUSTAINABLE BUSINESS PRACTICES IN ECONOMIC GROWTH

India’s economic growth trajectory is highly dependent on the innovation and competitiveness of its businesses. However, traditional business models often focus solely on maximizing profit, often at the expense of the environment and society. This approach, while successful in the short term, can lead to detrimental long-term consequences, such as resource depletion, environmental degradation, and social inequality.

On the other hand, businesses that embrace sustainability are better positioned for long-term success. Sustainable business practices create more resilient companies by reducing reliance on finite resources and adapting to regulatory changes that are increasingly focused on environmental protection. Moreover, these businesses tap into new markets by offering eco-friendly products and services, which resonate with today’s environmentally-conscious consumers.

Take the example of the renewable energy sector in India. The country’s push to transition from fossil fuels to renewable energy sources has opened up a multitude of opportunities for businesses to thrive. Companies that invest in solar energy, wind power, and other renewable technologies are not only contributing to environmental sustainability but also benefiting from the growing demand for clean energy solutions. This presents a perfect balance between economic growth and environmental responsibility.



## ENVIRONMENTAL RESPONSIBILITY: A NECESSITY FOR FUTURE GENERATIONS

The environmental challenges faced by India are immense—ranging from air and water



pollution to deforestation and climate change. However, these challenges also present an opportunity for businesses to lead the charge in environmental conservation. By adopting green technologies, reducing emissions, and promoting circular economy principles, businesses can significantly reduce their environmental footprint.

One key strategy for businesses to adopt is energy efficiency. Implementing energy-efficient processes and technologies not only helps reduce carbon emissions but also lowers operational costs. Companies that prioritize energy efficiency can cut down on energy consumption, saving money while doing their part for the planet.

Moreover, businesses must embrace waste management strategies that focus on reducing, reusing, and recycling. In a world where waste management is becoming increasingly challenging, businesses that innovate in waste reduction technologies and embrace sustainable production methods can set themselves apart while also contributing positively to the environment.



### **INCLUSIVE DEVELOPMENT AND SOCIAL RESPONSIBILITY**

Sustainability isn't limited to environmental concerns—it also includes social and economic aspects. Inclusive development, a cornerstone of India's Vision 2047, aims to ensure that growth benefits everyone, particularly the marginalized sections of society. Businesses must play a key role in this by ensuring that their operations contribute to social equity and promote diversity, inclusion, and fair labour practices.

For instance, companies can adopt fair wage policies, provide better working conditions, and ensure that their supply chains are free from exploitation. Businesses that commit to these practices help reduce poverty and inequality, thus contributing to the creation of a more equitable society. Additionally, by supporting local communities through corporate social responsibility (CSR) initiatives, businesses can foster economic inclusion, empowering communities to thrive alongside business growth.

### **THE GLOBAL CONTEXT: COLLABORATION AND RESPONSIBILITY**

India's role in the global context cannot be overlooked as it seeks to become a developed nation by 2047. The country is already emerging as a major player in international trade, and Indian businesses have an important responsibility to lead by example on the global stage. Sustainable business practices are now an international standard, and companies that align themselves with these global trends are better positioned to compete in a connected world economy.

International cooperation on environmental issues, such as the Paris Agreement on climate change, requires businesses to adopt sustainable practices that align with global goals. In this context, India's businesses have an opportunity to influence global sustainability initiatives, not only by adhering to international standards but also by contributing innovative solutions to address global challenges like climate change, resource scarcity, and social inequality.

Moreover, businesses that adopt sustainability practices will find themselves at the forefront of global supply chains. International consumers and partners are increasingly prioritizing businesses that demonstrate a commitment to sustainability, offering a unique competitive edge to those that embrace these practices.

### **CONCLUSION: THE ROAD AHEAD**

As India strides toward becoming a Viksit Bharat by 2047, sustainable business practices



must form the cornerstone of its growth strategy. By fostering economic growth through innovation and inclusivity, while prioritizing environmental responsibility, Indian businesses can contribute to a better future for all. A focus on sustainability is not only about protecting the environment but also

about ensuring that growth is equitable and beneficial for society at large. Businesses that recognize this truth will not only be more competitive in the global economy but will also play a crucial role in creating a more sustainable and inclusive world for generations to come.



# HEALTHCARE ACCESSIBILITY IN INDIA: BUILDING A HEALTHY AND INCLUSIVE NATION

-Sadiya Tanveer, B Com Hons, 1<sup>st</sup> year

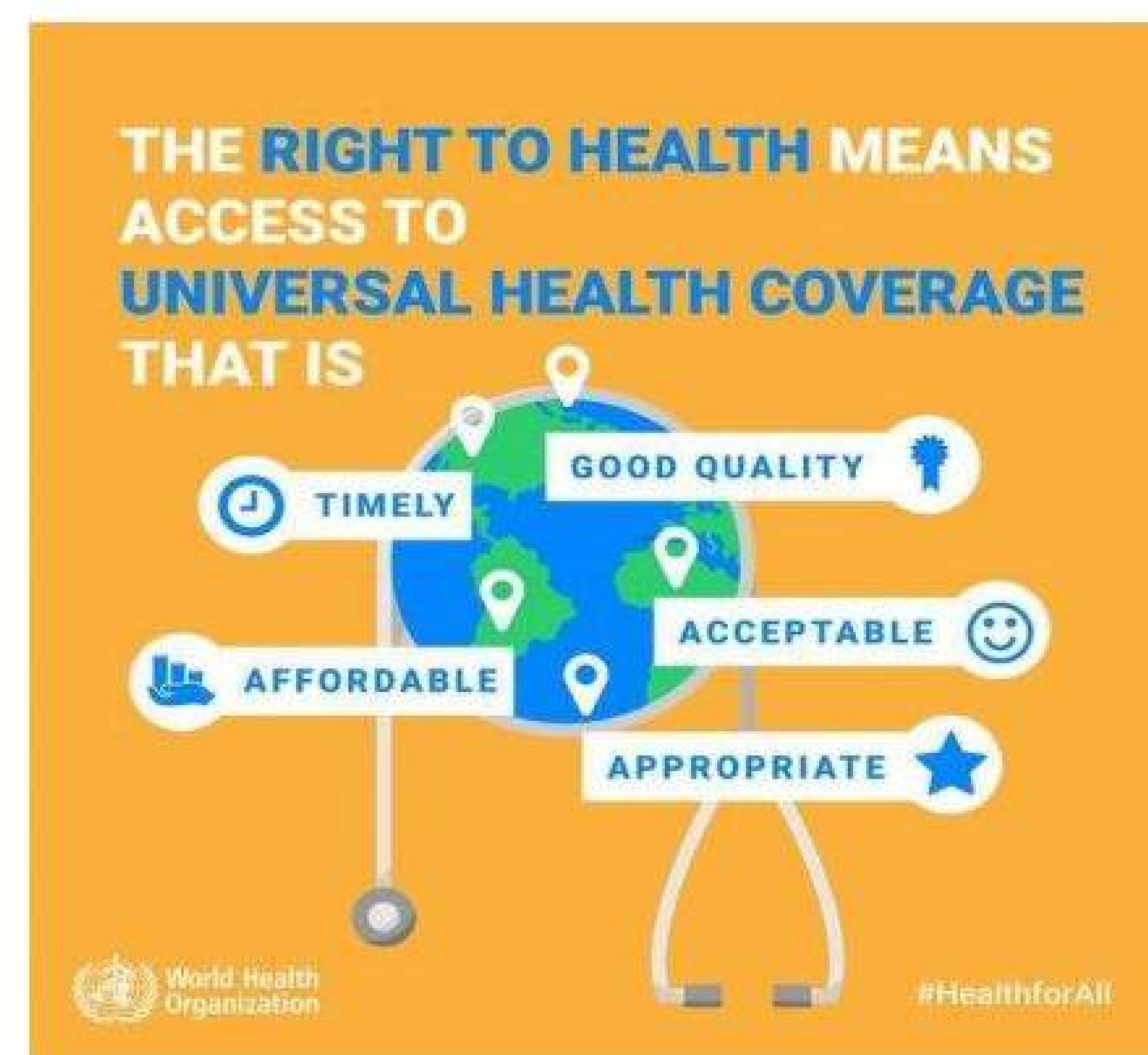
Healthcare accessibility is a fundamental human right, yet it remains an elusive goal for millions in Health care and wellbeing is One of the most important goals that is goal -3 to achieve sustainable development. While the country has made significant strides in healthcare infrastructure and medical advancements, disparities in access persist across geographical, socioeconomic, and demographic divides. This article delves into the multifaceted issue of healthcare accessibility in India, examining the challenges, opportunities, and potential solutions to build a healthier and more inclusive nation.

Earlier in villages or in towns healthcare accessibility or healthcare system was not so good that was really poor a single person was not able to get a basic healthcare advantage in villages as the country was not very developed. This condition of healthcare accessibility and well-being was a Little bit good if we see it in urban cities in comparison to rural areas but healthcare accessibility was not so good in urban areas it was good in comparison to villages but not good in comparison to India or the world.

To reduce this problem and to improve the health care accessibility government has introduced sustainable development goal 3 which is healthcare and well-being which play a very important role in today's world, earlier there were no facilities of water, sanitation in even hospital equipment.

If accessibility of healthcare system existed but it was only for wealthy people or to those who are able to get that and aware about those

accessibility, but was not in huge amount those people also had to face problem of scar cities of those accessibility of healthcare.



India is known for its cultural traditional and heritage healthcare system it has an ayurveda-based healthcare system which includes ayurvedic, Unani, homoeopathic and many more traditional health systems.

AFL-CIO: A large healthcare union makes sure the health care and well-being of the people and many other societies a performing their duties in the environment.

## CHALLENGES TO HEALTHCARE ACCESSIBILITY:

### Geographical Disparities:

India's vast geographical expanse presents a formidable challenge to healthcare accessibility. Rural and remote areas often lack adequate healthcare infrastructure, including



hospitals, clinics, and diagnostic centres. This scarcity of facilities forces individuals to travel long distances to seek medical care, often delaying treatment and exacerbating health conditions.

#### **Socioeconomic Barriers:**

Poverty and social exclusion are significant impediments to healthcare accessibility in India. Many individuals cannot afford essential medical services, including consultations, diagnostics, and medications. This financial burden often leads to delayed or forgone treatment, resulting in poorer health outcomes.

#### **Shortage of Healthcare Professionals:**

India faces a severe shortage of healthcare professionals, particularly doctors and specialists. This scarcity is more pronounced in rural areas, where healthcare facilities often operate with limited staff. The lack of qualified personnel hinders the delivery of timely and effective healthcare services.

#### **Inadequate Infrastructure:**

Many healthcare facilities in India, particularly in rural areas, lack essential infrastructure, such as basic medical equipment, diagnostic tools, and sanitation facilities. This inadequacy compromises the quality of care and limits the range of services that can be provided.



#### **Lack of Awareness and Health Literacy:**

A significant portion of the Indian population lacks awareness about basic health practices, preventive care, and available healthcare services. This lack of health literacy hinders early detection and treatment of illnesses, contributing to poorer health outcomes.

#### **Gender Disparities:**

Women in India often face significant barriers to healthcare access due to sociocultural factors, such as limited decision-making power, restricted mobility, and financial dependence. These disparities result in poorer health outcomes for women, particularly in maternal and child health.

#### **Quality of Care:**

Even when healthcare facilities are accessible, the quality of care can vary significantly. Factors such as inadequate training of healthcare professionals, lack of standardized protocols, and limited resources can compromise the quality of services provided. Opportunities to Enhance Healthcare Accessibility.

#### **Leveraging Technology:**

Telemedicine and digital health platforms offer immense potential to bridge geographical barriers and improve healthcare access in remote areas. These technologies enable remote consultations, diagnostics, and monitoring, bringing healthcare services to individuals who previously lacked access.

#### **Strengthening Primary Healthcare:**

Investing in primary healthcare infrastructure and services is crucial to addressing the healthcare needs of the majority of the population. By strengthening primary healthcare centres, we can provide comprehensive and preventive care at the community level, reducing the need for costly hospitalizations.

#### **Expanding Health Insurance Coverage:**

Expanding health insurance coverage can alleviate the financial burden of healthcare expenses, making essential medical services more affordable and accessible. Government-sponsored health insurance schemes, such as Ayushman Bharat, are steps in the right direction, but further expansion and effective implementation are needed.



### **Addressing the Shortage of Healthcare Professionals:**

Increasing the number of medical colleges and training institutions can help address the shortage of healthcare professionals. Additionally, incentivizing healthcare professionals to work in rural areas can improve healthcare access in underserved regions.

### **Promoting Health Literacy:**

Investing in health education and awareness campaigns can empower individuals to make informed decisions about their health. By promoting health literacy, we can encourage preventive care, early detection of illnesses, and adherence to treatment plans.

### **Empowering Women:**

Addressing gender disparities in healthcare requires a multifaceted approach that includes empowering women through education, economic independence, and increased decision-making power. By promoting gender equality, we can improve women's access to healthcare and overall health outcomes.

### **Ensuring Quality of Care:**

Implementing standardized protocols, providing continuous training for healthcare professionals, and strengthening regulatory mechanisms can help ensure the quality of care provided in healthcare facilities. By prioritizing quality, we can improve health outcomes and patient satisfaction.



### **PROS AND CONS OF HEALTHCARE ACCESSIBILITY INITIATIVES:**

**Telemedicine Bridges:** Geographical barriers, improves access in remote areas, cost-effective. Requires internet connectivity, digital literacy, and trust in technology.

**Primary Healthcare Strengthening:** Comprehensive care at community level, reduces hospitalizations, cost-effective. Requires significant investment in infrastructure and human resources.

**Health Insurance Expansion:** Alleviates financial burden, increases affordability, and promotes utilization. This may lead to increased healthcare costs and requires effective regulation.

**Healthcare Professional Training:** Addresses shortage, improves quality of care, enhances capacity. Requires long-term investment in education and training.

**Health Literacy Promotion:** Empowers individuals, encourages preventive care, improves health outcomes. Requires sustained efforts and community engagement.

**Women Empowerment:** Improves women's health, reduces disparities, and promotes gender equality. Requires addressing deep-rooted sociocultural barriers.

**Quality of Care Assurance:** Improves health outcomes, enhances patient satisfaction, and promotes trust. Requires strong regulatory mechanisms and continuous monitoring.

### **CONCLUSION**

The government must take some effective initiatives to increase Healthcare accessibility and well-being, especially in rural areas and to educate and aware people of sanitation and the health system. There must be some kind of fundamental right must be mentioned related to health. and healthcare accessibility and resources must be delivered to the people as fast as possible without compromising their needs. The government should bring new technologies into the healthcare system increase the investments to develop dispensaries, and small



hospitals and appoint effective professionals in the 3-tier sector where the need for a healthcare system is at a high peak. Healthcare accessibility is a complex and multifaceted issue that requires a comprehensive and collaborative approach. While India has made significant progress in healthcare infrastructure and medical advancements, disparities in access persist across geographical, socioeconomic, and demographic divides. By leveraging technology, strengthening primary healthcare, expanding health insurance coverage, addressing the shortage of healthcare professionals, promoting health literacy, empowering women, and ensuring the quality of care, we can build a healthier and more inclusive nation.

But in today's India we have achieved more of these now we are independent to maintain the healthcare system and to improve the healthcare and well-being and lifestyle of human beings as we are achieving greater efficiency in the healthcare system as we are providing sanitation and educating people and maintaining law and order to increase health care system. so we can state that we are in a good position but not in the best position, we have to do a lot of things in the healthcare sector in order to improve well being. The journey towards universal healthcare accessibility is challenging, but with sustained efforts and a commitment to equity, we can make this fundamental right a reality for all Indians.



# BUDGET 2025-26: A ROADMAP FOR VIKSIT BHARAT

The Union Budget 2025-26, presented by Finance Minister Nirmala Sitharaman, outlines a comprehensive economic strategy to accelerate India's growth, foster inclusivity, and strengthen key sectors. With a vision for **Viksit Bharat** (Developed India), the budget focuses on empowering the **Garib (poor)**, **Yuva (youth)**, **Annadata (farmers)**, and **Nari (women)**.

At a time when global economic headwinds suggest moderate growth, India remains the fastest-growing major economy. The government's structural reforms, investment policies, and digital transformation initiatives have enhanced global confidence in India's potential. This budget aims to stimulate growth, strengthen infrastructure, enhance private sector participation, and uplift household sentiments.



## KEY THEMES OF THE BUDGET

The budget revolves around four engines of growth:

1. Agriculture and Rural Economy
2. MSMEs and Manufacturing
3. Investment in the Economy and Innovation
4. Exports and Global Trade

With inclusivity as its guiding spirit, the budget also emphasizes transformative reforms in

taxation, power, urban development, mining, financial sector, and regulatory frameworks.

- In Revised Estimates (RE) 2024-25, the total Expenditure is estimated at ₹47,16,487 crore. Against this, total expenditure in the Actuals for FY 2023-24 was ₹44,43,447 crore. The total capital Expenditure is estimated at ₹10,18,429 crore in RE 2024-25 as against ₹ 9,49,195 crore in the actuals of FY 2023-24.
- The total expenditure in Budget Estimates (BE) 2025-26 is estimated at ₹50,65,345 crore of which total capital expenditure is ₹11,21,090 crore and effective capital expenditure is ₹15,48,282 Crore.
- Total resources being transferred to the States including the devolution of State's share, Grants/Loans and releases under Centrally Sponsored Schemes, etc. in BE 2025-26 is ₹25,01,284 crore, which shows an increase of ₹4,91,668 crore over Actuals of FY 2023-24.

## STRENGTHENING AGRICULTURE AND RURAL ECONOMY

### Prime Minister Dhan-Dhaanya Krishi Yojana

The budget introduces the 'Prime Minister Dhan-Dhaanya Krishi Yojana', covering 100 agri-districts to enhance agricultural productivity, irrigation, storage facilities, and access to credit. This initiative will benefit 1.7 crore farmers, focusing on sustainable agricultural practices and crop diversification.

### Aatmanirbharta in Pulses



To achieve self-sufficiency in pulses, a six-year 'Mission for Aatmanirbharta in Pulses' will focus on Tur, Urad, and Masoor production. Government agencies like NAFED and NCCF will ensure procurement at remunerative prices.

### **Comprehensive Programme for Fruits and Vegetables**

Rising incomes and growing awareness of nutritional needs have increased the demand for fruits, vegetables, and Shree-Anna (millets). A new scheme will boost production, improve supply chains, support farmer producer organizations (FPOs), and promote value addition.

### **Special Focus on Bihar: Makhana Board**

A Makhana Board will be set up in Bihar to enhance the production, processing, and marketing of makhana. This initiative will help makhana farmers receive government support, training, and better market access.

### **National Mission on High-Yielding Seeds**

A new mission will focus on developing and commercializing over 100 high-yield, climate-resilient seed varieties, strengthening India's agricultural research ecosystem.

### **Fisheries and Marine Economy**

India is the second-largest producer of fish globally, with seafood exports valued at ₹60,000 crore.

A new framework for sustainable marine fishing will be introduced, focusing on the Andaman & Nicobar and Lakshadweep Islands.

### **Mission for Cotton Productivity**

A five-year plan to increase cotton yields, promote extra-long staple varieties, and enhance sustainability in cotton farming.

Support for India's textile sector, ensuring steady supply and higher incomes for farmers.

### **Rural Development Initiatives**

A 'Rural Prosperity and Resilience Programme' to address under-employment, skill development, and rural entrepreneurship.

Kisan Credit Card (KCC) loan limits increased from ₹3 lakh to ₹5 lakh to enhance financial support for farmers.

A new urea plant in Assam to strengthen India's self-reliance in fertilizers.



### **BOOSTING MSMEs AND MANUFACTURING**

#### **Support for MSMEs**

MSMEs contribute 36% of India's manufacturing output and 45% of exports. The budget introduces:

Enhanced credit availability, increasing the credit guarantee limit from ₹5 crore to ₹10 crore.

Fund of Funds for Startups, with an additional ₹10,000 crore allocation.

Udyam Credit Cards, offering ₹5 lakh collateral-free loans to micro-enterprises.

#### **New Industrial Initiatives**

National Manufacturing Mission to strengthen domestic value chains, clean tech industries, and 'Make in India' goals.



Special focus on the toy sector to establish India as a global toy manufacturing hub.

Support for leather and footwear industries, generating 22 lakh new jobs.

Investment in Economy and Infrastructure

Major Infrastructure Investments

₹1.5 lakh crore allocated for state infrastructure development.

Expansion of the UDAN scheme to connect 120 new airports, boosting regional air connectivity.

A new greenfield airport in Bihar and a Western Koshi Canal project to support agriculture in Mithilanchal.

Public-Private Partnership (PPP) in Infrastructure

Each infrastructure ministry will create a three-year project pipeline for PPP investments.

States will receive financial support for urban planning, transport, and power sector reforms.

Energy and Power Reforms

A Nuclear Energy Mission targets 100 GW nuclear power by 2047, with a ₹20,000 crore investment in Small Modular Reactors (SMRs).

Power sector reforms to improve state electricity boards’ financial health and capacity.

SOCIAL DEVELOPMENT, EDUCATION, AND HEALTHCARE

Education and Skilling

50,000 Atal Tinkering Labs in government schools to promote STEM education.

Five National Centres of Excellence for Skilling, in collaboration with global institutions.

Expansion of IITs, adding 6,500 new seats and increasing hostel capacity.

AI Centre of Excellence for Education, with an investment of ₹500 crore.

Healthcare Reforms

Day Care Cancer Centres in all district hospitals (200 centres in 2025-26).

Expansion of medical education, with 10,000 new UG/PG seats.

Bharatiya Bhasha Pustak Scheme, making digital Indian language books accessible.

Welfare for Gig and Platform Workers

1 crore gig workers to be covered under PM Jan Arogya Yojana for healthcare benefits.

TAX REFORMS AND MIDDLE-CLASS RELIEF

Personal Income Tax Reforms

No income tax on earnings up to ₹12 lakh.

Revised tax slabs reducing tax burden across all income levels.

Total Income (Rs)	Rate of tax u/s 115BAC (1A)
0-4 lakh	0%
4-8 lakh	5%
8-12 lakh	10%
12-16 lakh	15%
16-20 lakh	20%
20-24 lakh	25%
More than 24 lakh	30%



TDS/TCS simplification, reducing compliance difficulties for small businesses.

#### **Investment Incentives**

Tax incentives for start-ups, pension funds, and sovereign wealth funds.

New tax exemptions for electronic manufacturing investments.



#### **ENHANCING GLOBAL TRADE AND EXPORTS**

##### **Export Promotion Mission**

A unified digital platform (Bharat Trade Net) for seamless international trade.

Integration with global supply chains, with sector-specific incentives.

Expansion of air cargo infrastructure to support high-value exports like perishable goods.

#### **CONCLUSION: A TRANSFORMATIONAL BUDGET**

The Budget 2025-26 lays the foundation for a prosperous, self-reliant, and innovation-driven India. By prioritizing agriculture, MSMEs, infrastructure, skilling, and technology, the government aims to create jobs, stimulate investments, and enhance India's global competitiveness.

With a bold vision and strategic reforms, India is poised to become a global economic powerhouse, fulfilling its ambition of becoming a Viksit Bharat by 2047.

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## PRIDE OF INDIA

# DR. MANMOHAN SINGH: A VISIONARY ECONOMIST AND STATESMAN

Dr. Manmohan Singh, born on September 26, 1932, in Gah, Punjab (now in Pakistan), was a distinguished Indian economist and politician who served as the 13<sup>th</sup> Prime Minister of India from 2004 to 2014. He is widely recognized for his pivotal role in liberalizing India's economy in the early 1990s and for his tenure as the country's first Sikh Prime Minister.

### EARLY LIFE AND EDUCATION

Born into a modest Punjabi Sikh family, Singh faced the challenges of the Partition in 1947, which led his family to migrate to India. Demonstrating exceptional academic prowess, he earned his bachelor's degree in economics from Panjab University in 1952. He furthered his studies at the University of Cambridge, obtaining a First Class Honours degree in Economics in 1957. Singh then pursued a DPhil in Economics at the University of Oxford, completing his thesis on India's export competitiveness.



### ACADEMIC AND PROFESSIONAL CAREER

Dr. Singh's academic journey included teaching positions at Panjab University and the Delhi School of Economics. His expertise led to significant roles such as Chief Economic Adviser in the Ministry of Finance, Governor of the Reserve Bank of India, and Deputy Chairman of the Planning Commission. These positions underscored his deep understanding of India's economic landscape.

### FINANCE MINISTER AND ECONOMIC REFORMS

In 1991, amidst a severe economic crisis, Prime Minister P.V. Narasimha Rao appointed Singh as the Finance Minister. Singh introduced groundbreaking reforms, including reducing trade tariffs, deregulating markets, and encouraging foreign investment. These measures transitioned India from a closed economy to a more market-oriented one, spurring rapid economic growth and integration into the global economy.

### PRIME MINISTERIAL TENURE

Ascending to the role of Prime Minister in 2004, Singh led a coalition government under the United Progressive Alliance (UPA). His tenure was marked by significant achievements:

- Economic Growth: India experienced robust GDP growth, solidifying its position as one of the world's fastest-growing economies.
- Social Welfare Programs: Initiatives like the National Rural Employment Guarantee Act aimed to improve the livelihoods of rural populations.



- India-U.S. Civil Nuclear Agreement: This landmark deal ended India's nuclear isolation, allowing access to nuclear technology and fuel for civilian purposes.

However, his administration also faced challenges, including allegations of corruption and internal political pressures, which impacted his leadership's perception.



### LATER LIFE AND LEGACY

After concluding his second term in 2014, Dr. Singh remained an influential figure, offering insights on economic and political matters. He passed away on December 28, 2024, at the age of 92. His legacy as a reformer and statesman endures, reflecting his contributions to India's economic transformation and his reputation for integrity and humility.

Dr. Manmohan Singh's life and career epitomize dedication, intellect, and integrity. As an economist, he reshaped India's financial landscape, steering the country toward

liberalization and unprecedented economic growth. As Prime Minister, he championed policies that strengthened India's global standing while focusing on social welfare and inclusive development. Despite political challenges and criticisms, his legacy remains that of a visionary leader who prioritized economic stability and national progress over personal ambition. His contributions continue to inspire policymakers, economists, and citizens, ensuring that his impact on India's growth story endures for generations to come.

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# PRIDE OF INDIA

## RATAN TATA: A VISIONARY LEADER AND PHILANTHROPIST

### EARLY LIFE AND EDUCATION

Ratan Naval Tata was born on December 28, 1937, in Mumbai, India, into the illustrious Tata family. He was raised by his grandmother, Lady Navajbai Tata, after his parents' separation. Despite personal challenges, he excelled in academics and pursued higher education in the United States. He earned a degree in architecture from Cornell University in 1962 and later completed a management course at Harvard Business School in 1975.



### CAREER AND LEADERSHIP AT TATA GROUP

Ratan Tata joined the Tata Group in 1962, starting his career at Tata Steel, where he worked on the shop floor alongside blue-collar workers. His hands-on experience helped him understand the grassroots operations of the conglomerate. In

1991, he succeeded J.R.D. Tata as the chairman of the Tata Group, marking the beginning of a transformational era for the company.

During his tenure, Tata Group expanded its global presence, acquiring internationally recognized brands such as:

- Tetley Tea (2000)
- Corus Steel (2007)
- Jaguar Land Rover (2008)

Under his leadership, Tata Group became a global powerhouse, growing its presence in over 100 countries. He also led the development of India's first truly indigenous car, the Tata Indica, and the world's most affordable car, the Tata Nano.

### PHILANTHROPY AND SOCIAL IMPACT

Beyond business, Ratan Tata was a dedicated philanthropist, directing over 66% of Tata Sons' profits to charitable trusts. His contributions to education, healthcare, and rural development left a lasting impact on millions. Some of his key philanthropic initiatives include:

Tata Trusts' contributions to cancer research, scholarships, and rural healthcare

Support for India's space research programs, including funding for ISRO's Mars Mission

Partnerships with universities like Harvard, Cornell, and MIT to support Indian students

### HONOURS AND RECOGNITION

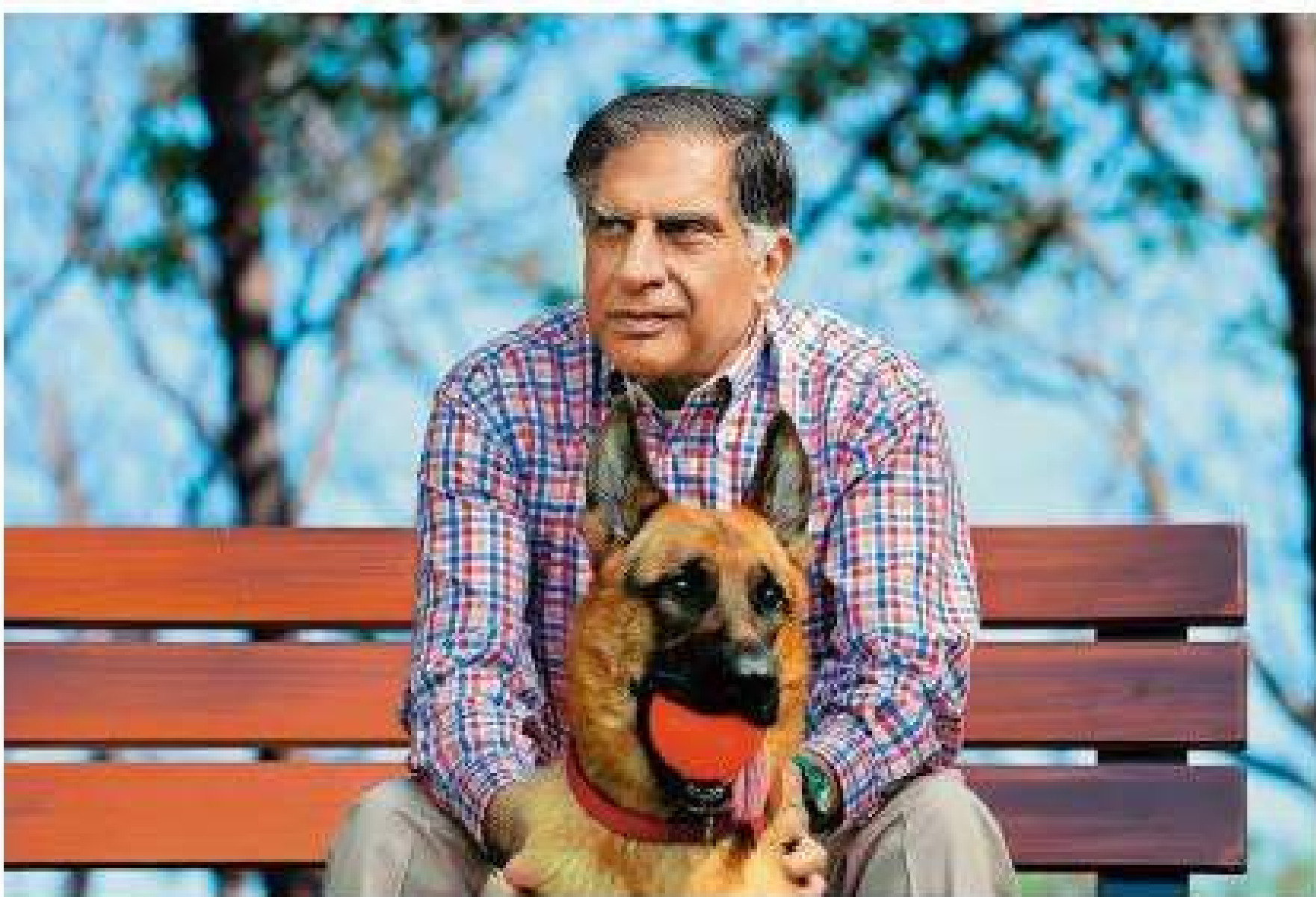
Ratan Tata received numerous national and international awards for his contributions to industry and society, including:



- Padma Bhushan (2000)
- Padma Vibhushan (2008) – India's second-highest civilian award
- Honorary Knight Grand Cross of the Order of the British Empire (GBE)

## LEGACY AND CONCLUSION

Ratan Tata's legacy is one of vision, integrity, and compassion. He transformed Tata Group into a global conglomerate while maintaining its ethical and philanthropic values. His leadership exemplified innovation, resilience, and commitment to social progress. Even after retiring as chairman, he continued to inspire young entrepreneurs through investments in startups and mentorship programs.



He passed away on October 9, 2024, at the age of 86, leaving behind a remarkable legacy of business excellence and humanitarian contributions. His life's work continues to inspire business leaders, entrepreneurs, and change-makers worldwide.

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<https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.tata.com/about-us/tata-group-our-heritage/tata-titans/ratan-naval-tata&ved=2ahUKEwjD-qLjja2LAXVwimMGHQKmGEIQFnoFCJ8BEAE&usg=AOvVaw2040KxgE5f-NZwj18N8TJt>

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## GOLD MEDALIST (B. COM 2024)

### MY TRANSFORMATIONAL JOURNEY AT SHIVAJI COLLEGE - WHERE PASSION IGNITES & DREAMS TAKE FLIGHT



As I reflect on my journey at Shivaji College, University of Delhi, I am filled with immense gratitude, nostalgia, and a deep sense of pride. This institution has been more than just a college; it has been a sanctuary of knowledge, inspiration, and self-discovery. From being an outstation student from Varanasi to receiving the *University of Delhi Gold Medal* at the *101st Annual Convocation of the University of Delhi* for securing the highest score in B. Com across the entire university, my journey has been nothing short of extraordinary. Moreover, being honoured with the Gold Medal for being *Student of the Year 2024* from Shivaji College has been a defining moment in my academic career. These achievements are a testament to the unwavering support of my respected Teachers, Mentors, Family, and Friends, whose guidance has been instrumental in shaping my success. I am eternally grateful to my parents, who stood by me through every challenge, and to my Shivaji College family, who shaped my journey with their encouragement and guidance. Shivaji College, with its rich legacy and commitment to excellence, provided me with the ideal platform to explore my potential and achieve my dreams.

Shivaji College is not just a name; it carries the legacy of the great warrior-king *Chhatrapati Shivaji Maharaj*. His courage, vision, perseverance, leadership and strategic mindset have left an indelible impact on my personality. These values have guided me in my academic and personal growth and development. As I walked through the college gate for the first time, I was struck by the strong sense of energy and enthusiasm that filled the campus. Little did I know that this would be the beginning of a life-changing journey.

Moving away from home to a new city leaving behind your family and hometown is never easy, but Shivaji

College welcomed me with open arms, providing an environment where I felt valued and empowered. The teachers, college administration and students created a warm and welcoming atmosphere that made me feel part of a larger family. Each classroom discussion, every event, and every challenge I faced became stepping stones toward my growth.



I extend my heartfelt gratitude to our *Respected Principal, Prof. Virender Bhardwaj Sir*, whose visionary leadership and commitment to academic excellence have made Shivaji College a powerhouse of knowledge and opportunities. His dedication towards holistic student development is truly inspiring, and I am privileged to have been part of this institution under his guidance.

*The Department of Commerce at Shivaji College* has been the bedrock of my academic journey, offering not just quality education but also an environment that fosters innovation, analytical thinking, and professional growth. The department plays an instrumental role in equipping students with industry-relevant knowledge and practical exposure, preparing them to face real-world challenges with confidence.

A special mention must be made of the Teachers of the Department of Commerce, whose relentless support, encouragement, and expertise have played a pivotal role in my academic and personal development. My journey at Shivaji College was made memorable by the exceptional teachers, whose unwavering support, guidance, and belief in my potential shaped my journey. My teachers have been the pillars of my success. They stood by me, offering not just academic mentorship but



also life lessons that extended far beyond the curriculum.



Their encouragement pushed me to participate in research, excel in competitions, and step beyond my comfort zone. The Teachers go above and beyond to ensure that students receive the best possible learning experience, combining theoretical insights with practical applications. Their dedication, patience, and commitment to student success have been truly inspiring, and I owe all my achievements to their unwavering support. Their constant encouragement pushed me to excel in academics, engage in research, and develop skills that will benefit me throughout my career. I am deeply grateful to my teachers, who provided me with invaluable insights and opportunities to grow.

One of the most enriching aspects of my college life was my active participation in *Kaizen - The Commerce Society of Shivaji College*. This society not only provided a platform for intellectual and professional growth but also shaped my leadership and technical skills. My journey in Kaizen began in the first year as a Technical Member, where I gained hands-on experience in managing digital and technical operations. In my second year, I was promoted to the position of Deputy Technical Head, a role that allowed me to take on greater responsibilities and refine my problem-solving abilities. Finally, in my third year, I had the privilege of serving as the Editorial Head, where I led content development, coordinated editorial content and ensured the dissemination of insightful commerce-related knowledge.

These experiences significantly enhanced my leadership, teamwork, and management skills, and I am immensely grateful to Kaizen for providing me with this remarkable journey of learning and growth.

While academic excellence has been my priority, I have always believed that true learning extends beyond textbooks. The diverse opportunities offered by Shivaji College allowed me to explore leadership, research, and social service, shaping my holistic development. I had the privilege of being actively involved in societies such as *National Service Scheme (NSS)*, *Kaizen - The Commerce Society*, and *the Viksit Bharat @2047 Club*. These platforms enabled me to develop teamwork, leadership, and resilience, which are invaluable skills for both my professional and personal life.

Whether it was organizing college events, participating in research conferences, or contributing to student development initiatives, every experience enriched my perspective and helped me evolve as a well-rounded individual. I encourage every student to actively participate in extracurricular activities, as they provide the necessary skills to navigate the challenges of life beyond academics.

Balancing academics and extracurricular activities is not just a challenge but an opportunity to develop time management, multitasking, and adaptability—skills that are crucial in both personal and professional life. As I look back on my journey, I would like to share a few words – **“Never be afraid to dream big, but also be willing to put in the hard work and dedication required to achieve your goals. Stay curious, stay humble, and always be open to learning and growth.”**

As I conclude this incredible chapter of my life, I am deeply grateful to Shivaji College, the Department of Commerce, my teachers, my mentors, and my peers for making this journey so special. This institution has given me a foundation of knowledge, a network of incredible people, and memories that will last a lifetime. I am honoured to have been a part of this esteemed institution and hope to make Shivaji College proud in all my future endeavours.

Thank you, Shivaji College, for being my guiding light, my source of inspiration, and the catalyst of my success!!



# STUDENT ACHIEVERS FOR THE ACADEMIC YEAR 2023-24

## B. Com Hons



**RIYA GUPTA**  
1<sup>st</sup> Year



**HARSH SINGHAL**  
2<sup>nd</sup> Year



**SALONI GUPTA**  
3<sup>rd</sup> Year

## B. Com Prog



**VANSHIKA AGARWAL**  
1<sup>st</sup> Year



**LOVISH**  
2<sup>nd</sup> Year



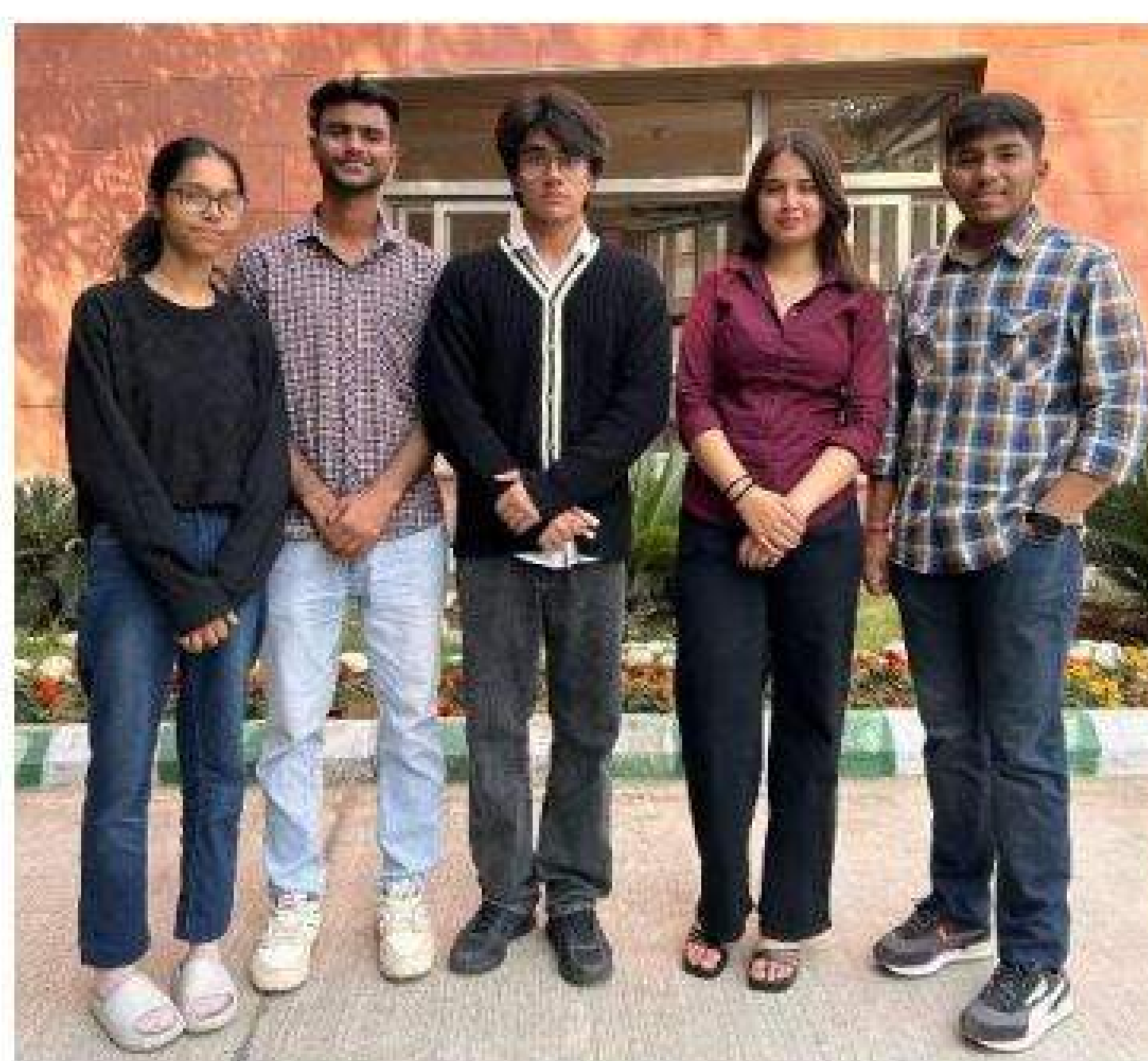
**ASHUTOSH**  
3<sup>rd</sup> Year



## COMMERCE STUDENTS: CULTURAL ACTIVITIES



**ANCHORAGE**



**BIZARRE**



**DICTUM**



**SHUTTERBUGS**



**REVERB**



# COMMERCE STUDENTS: NON-CULTURAL ACTIVITIES



**ENACTUS**



**TED X**



**SPADE**



**LITSOC**



**PLACEMENT AND  
INTERNSHIP CELL**



**ENTERPRENEURSHIP AND  
DEVELOPMENT CELL**



# KAIZEN STUDENT COUNCIL 2024 - 25



**JASMEET SINGH**  
PRESIDENT



**CHEHAK JAIN**  
VICE PRESIDENT



**SHANISTH**  
VICE PRESIDENT



**DIYA SHARMA**  
TREASURER



**MEHUL THAPPAR**  
SECRETARY



**ANSHIKA**  
JOINT SECRETAARY



**SHAUREY**  
JOINT SECRETARY



# KAIZEN STUDENT COUNCIL 2024 - 25



**ARAVIND AJIMON**  
TECHNICAL HEAD



**SIMRAN**  
SOCIAL MEDIA HEAD



**KESHAV**  
PUBLIC RELATIONS HEAD



**AYUSH**  
DEPUTY TECHNICAL HEAD



**YUVRAJ**  
CONTENT HEAD



**TANYA**  
DEPUTY PUBLIC RELATIONS HEAD



# COMMERCE DEPARTMENT EVENTS

## 2024-25

### ORIENTATION

The Commerce Department of Shivaji College conducted its annual Orientation Programme for first-year students on **September 3, 2024**, at Jijabai Auditorium. The session was hosted by Mehul Thapar (Secretary) and Chehak (Vice President) of Kaizen – The Commerce Society, who welcomed students and their parents, providing an overview of the department's academic structure and opportunities.

Dr. Ramesh Kumar Malik (Teacher-in-Charge, Commerce Honours) and Dr. Rajinder Singh (Teacher-in-Charge, Commerce Program) addressed the gathering, highlighting the department's commitment to both academic excellence and extracurricular engagement. Faculty members introduced themselves and briefed students on the semester timeline, internal assessment criteria, and section divisions. The SPACE Portal, an online academic platform, was also introduced to help students manage coursework.



The Kaizen Core Council, led by President Jasmeet Singh, introduced students to the society's activities, including business games, workshops, and the annual Optimum Commerce Festival. Other council members, including Vice Presidents Chehak & Shanisth, Secretary Mehul, and Treasurer Diya, explained their respective roles. The session concluded with an interactive Q&A segment, where faculty and society members addressed student queries, ensuring a smooth transition into college life.

### SEMINAR

#### ▪ "INDIA'S ROLE IN CONTEMPORARY GEOPOLITICAL DYNAMICS"

On **November 8, 2024**, Kaizen – The Commerce Society organized a special lecture on "The Role of India in Contemporary Geopolitical Dynamics" at Jijabai Hall. The session was conducted by **Professor Niti Bhasin**, a distinguished academic from the **Delhi School of Economics**, known for her research on India's economic policies and international trade.

Professor Bhasin provided insights into India's strategic role in Asia, discussing how it has strengthened diplomatic ties to balance relationships with major global powers. She elaborated on India's evolving trade agreements with Indo-Pacific nations, Europe, and the U.S., emphasizing its growing role in global supply chains. The lecture also explored India's leadership in international organizations such as the G20, BRICS, WTO, and the United Nations, highlighting its advocacy for sustainable development and equitable economic policies.





The session also touched upon India's technological and digital diplomacy, particularly its role in AI governance and Digital India initiatives. Professor Bhasin concluded by discussing India's efforts to attract foreign direct investment (FDI) while maintaining a commitment to green energy projects. The lecture ended with an engaging Q&A session, where students raised thought-provoking questions about India's diplomatic strategies and future challenges.

### ▪ "THE IT INDUSTRY AND CAREER OPPORTUNITIES":

On **February 4, 2025**, the Commerce Department and Kaizen organized a seminar on "The IT Industry and Career Opportunities" at the Old Auditorium. The event aimed to introduce students to career prospects in IT, data science, artificial intelligence (AI), and machine learning (ML). The seminar was hosted by Anshika and Saloni, with a keynote address by **Mr. Ankush Bhardwaj**, an industry expert in emerging technologies.

Mr. Bhardwaj began the session by engaging students with questions on everyday technology use, followed by an in-depth discussion on AI, machine learning, and deep learning. He explained the evolving landscape of AI and its increasing significance in the corporate world.

A special segment focused on the technical applications of AI, including its role in automation, cybersecurity, and financial analytics.



The seminar also featured an interactive Q&A session, where students actively participated, seeking guidance on IT career pathways and industry demands. The event concluded with a vote of thanks by Mrs. Manisha Rani, the Convener, who appreciated the Chief Guest, faculty members, and student organizers for their contributions in making the seminar a success.

### FACULTY DEVELOPMENT PROGRAMME

### TWO-DAY WORKSHOP ON BUSINESS ANALYTICS:

The Department of Commerce, in collaboration with the Faculty of Commerce and Business, Delhi School of Economics, organized a Two-Day Workshop on Business Analytics on **December 10-11, 2024**. The event aimed to equip faculty members with technical skills in business analytics, bridging the gap between theoretical concepts and industry applications.





The workshop commenced with a lamp-lighting ceremony, followed by addresses from Professor Virender Bhardwaj (Principal, Shivaji College) and Professor Hamensra Kumar Dangi, the keynote resource person. The first session, conducted by Professor Dangi, introduced the fundamental and real-world applications of business analytics. This was followed by an interactive session by Dr. Anil Kumar Goswami, who provided hands-on training in data visualizations tools such as Tableau and Power BI.

On the second day, Dr. Arun Julka conducted a session on R-Software, guiding participants through statistical, analysis techniques used in business analytics. The workshop concluded with a vote of thanks by Dr. Neetu Dhayal, expressing gratitude to the resource persons and faculty members. Certificates were distributed to all participants, marking the successful completion of the workshop.

## INTERNATIONAL CONFERENCE

**VIKSIT BHARAT @2047: STRATEGIES FOR AN INCLUSIVE AND SUSTAINABLE DEVELOPMENT IN GLOBAL CONTEXT**



The Department of Commerce, Shivaji College, University of Delhi, organized an International Conference on “Viksit Bharat @2047: Strategies for an Inclusive and Sustainable Development in the Global Context” on 4th March 2025 at Chanakya Sabhagar. Held in collaboration with the University of Delhi, Indian Commerce Association (Delhi NCR Chapter), and St. Joseph’s College of Commerce, Bangalore, the event featured esteemed guests including Shri Vikram Sahay (Guest of Honour), Prof. Raj Kumar Mittal (Chief Guest), and international scholars like Prof. Dogan Gursoy and Prof. Robin Nunkoo.





Over 40 research papers were presented in six parallel sessions by scholars from India and Australia. The conference focused on sustainable growth, youth empowerment, and inclusive policies for India's development by 2047.



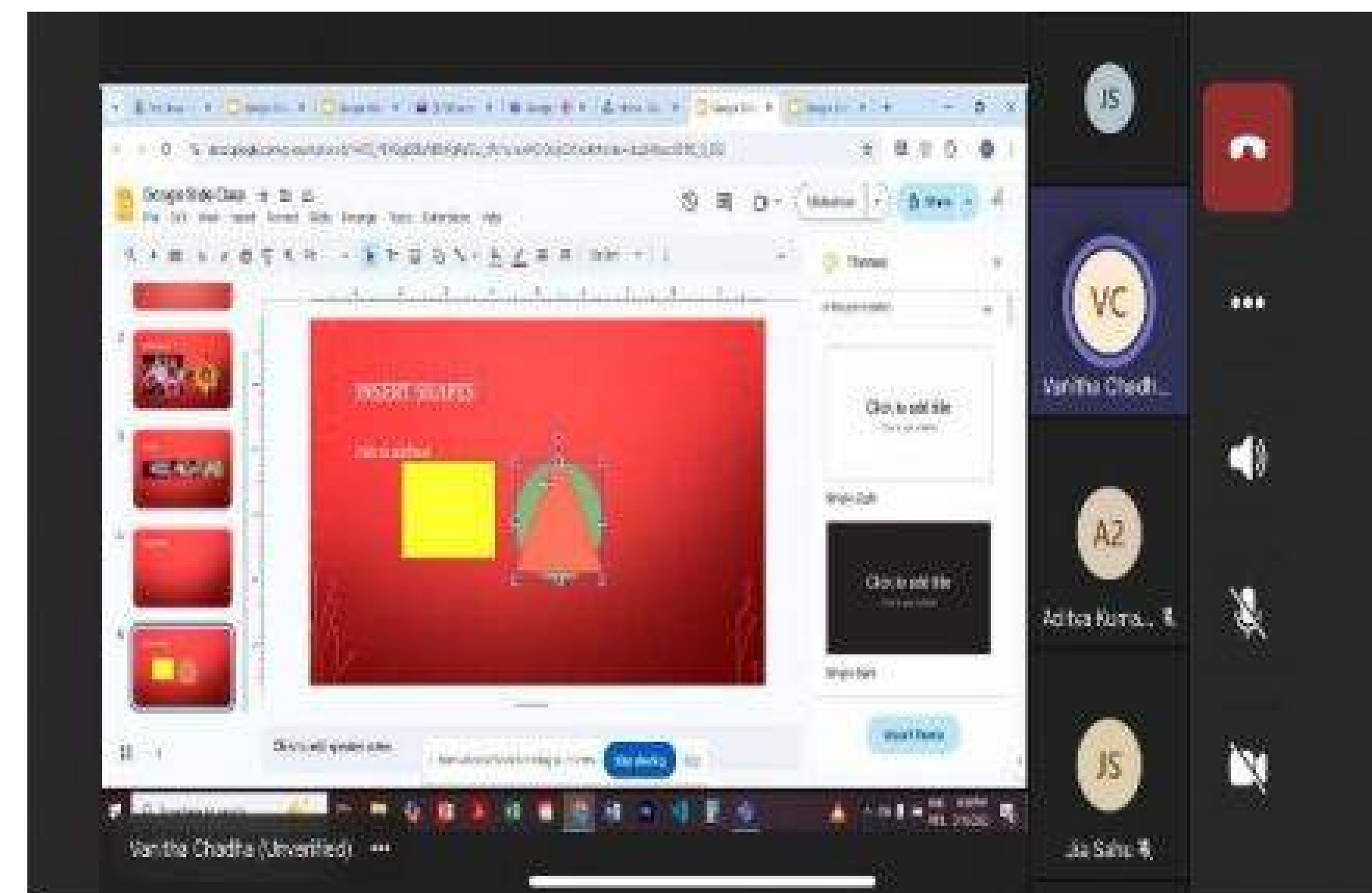
With publishing partners from UGC CARE-listed journals and a valedictory session led by Dr. Sunil Sharma, the conference saw active participation from over 130 students and 50 presenters. The successful event was made possible through the efforts of the faculty and Kaizen society students.

## ADD ON COURSE

### GOOGLE WORKSPACE BASICS

The Department of Commerce, Shivaji College, University of Delhi, conducted an Add-on Course titled “Google Workspace Basics” from 8th February to 29th March 2025, as part of the Even Semester 2024–25. The course comprised 15 sessions of 2 hours each and was aimed at enhancing students' digital proficiency through hands-on training in essential Google tools like Drive, Docs, Sheets, Slides, Forms, and various productivity add-ons. Delivered by expert faculty from Shivaji College and other reputed institutions, the sessions covered topics ranging from file management, email organization, and

data analysis to form automation and interactive presentations.



The course saw enthusiastic participation and provided valuable insights and practical knowledge to students, equipping them for academic and professional digital tasks. Its successful execution was made possible through the dedicated efforts of the department faculty and student volunteers.

## INDUSTRIAL VISIT

### MOTHER DAIRY PLANT

On 7th April 2025, the Department of Commerce organised an industrial visit to the Mother Dairy plant in Patparganj, New Delhi, for 3rd year students. The visit began with a warm welcome and an introductory session conducted by Mr. R.K. Pillai, the plant coordinator. He shared insights into the history of Mother Dairy, established in 1974 as a result of Operation Flood initiated by NDDDB in 1965. Students learned about the plant's large-scale operations, including its 10 lakh litre milk processing capacity, 40-acre infrastructure, and 12-hour cycle from collection to delivery. The session also highlighted the 29-step testing process and how farmer payments are based on Fat and SNF content. After the briefing, students were taken on a guided tour of the facility, where they observed the milk testing labs, processing units, and quality control sections.





Mr. R.K. Pillai explained each stage with clarity, patiently answering questions and

encouraging student interaction. The visit also covered the detailed logistics system of Mother Dairy, where milk is collected from village-level collection centres, quickly transported in chilled tankers to the plant, processed, and then distributed across Delhi-NCR through insulated vehicles to ensure freshness and safety. The entire supply chain operates within a tight 12-hour window, ensuring timely delivery to consumers. The visit concluded with an interactive Q&A session and group photo, making the experience both informative and memorable.



# DEPARTMENT OF COMMERCE



**TEACHERS:**

*From Left to Right*

**ROW 1:** Dr. Rajinder Singh, Mr. Rajesh Kumar, Prof. Suman Kharbanda, Prof. Ramesh kumar Malik, Prof. Virender Bhardwaj (Principal), Prof. Rabinarayan Samantara, Dr. Kiran Chaudhary, Dr. Chhavi Sharma, Dr. Vanitha Chadha

**ROW 2:** Dr. Suneel kumar , Ms. Harmanpreet Kaur, Ms. Manisha, Dr. Monika, Dr. Yogita Rani Negi, Ms. Sonika Sharma, Dr. Saumya Singh, Mrs. Manisha Rani, Dr. Neetu Dhayal



**KAIZEN MEMBERS**

*From Left to Right*

**ROW 1:** Lakshay, Anshika, Diya, Chehak, Jasmeet, Shanisth, Mehul, Shaurya, Rekha

**ROW 2:** Vaishnavi, Hashmeet, Charvi, Mahi, Anshika Garg, Keshav, Yuvraj, Simran, Tanya, Ayush, Sadiya, Sakshi, Shrishti, Damak, Aashika, Yash, Garvit, Nitish, Prince

**ROW 3:** Prateek, Isha, Esha Sahu, Saloni, Simondeep, Deepanshi, Megha, Shagun





**SHIVAJI COLLEGE**

**NAAC Accredited Grade "A"**

**UNIVERSITY OF DELHI**

**Raja Garden, New Delhi - 110027**