Vikasith Bharat 2047: Startup Ecosystem, International Cooperation, and Technological Leap for Sustainable Development of India

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ABSTRACT

As India envisions becoming a fully developed nation by 2047, marking a century of independence, it is critical to evaluate the synergistic roles of the startup ecosystem, international cooperation, and technological innovation in achieving sustainable development. This paper explores the current landscape, identifies key policy and infrastructural enablers, and provides a strategic roadmap for leveraging these three pillars to realize the vision of *Vikasith Bharat* (Developed India). The study uses qualitative and policy analysis, and global benchmarking to provide insights and recommendations.

INTRODUCTION

India's Vision 2047 envisions a "Vikasith Bharat" that is economically vibrant, socially inclusive, and environmentally sustainable. As the world's most populous democracy and fifth-largest economy, India stands at a critical juncture where growth must be driven not just by scale but by innovation, sustainability, and global integration. This paper is to study various issues related to the India's burgeoning startup ecosystem, strategic international cooperation, and accelerating technological advancement can collectively drive sustainable development. The present study is based on the secondary data collected from various magazines, journals and periodicals etc.

LITERATURE REVIEW

Numerous studies (NITI Aayog, 2022; World Bank, 2021) have identified the transformative potential of startups and technology in economic growth. Reports from OECD (2020) emphasize international cooperation as key to global sustainability targets. India's success in the digital public infrastructure space (e.g., Aadhaar, UPI) provides a unique template for technology-led inclusion. However, gaps remain in policy coherence, funding, R&D, and skill alignment. Over the decades, the process of governance in India has changed a lot and has achieved many things like, the launching of Aadhaar for Identity, successful execution of PMJDY for inclusion of the financially excluded population and the one nation one tax introducing the GST (Chakraborty, 2022). These initiatives reflect the capability of India for change through governance. However, there are still many more system challenges such as bureaucracy, corruption, and low community participation. For instance, though the government in India has launched the Digital India program which for instance has expanded the e-governance system, the problem of the digital divide is still an issue especially in rural regions of the country (Mehta 2021). The analysis of world-standards in sustainable development makes it possible to introduce corresponding changes in India. Some of Norway for instance Norway the Scandinavian countries have been able to show how sustainable governance can ensure economic development without polluting the environment and neglecting the poor. Government policies on renewable energy sources in Denmark and a circular economy model in Sweden offer lessons for India's sustainability agenda (OECD, 2022). Likewise, other Estonian e-governance model demonstrates how effective technology reduces the governance bureaucracy, brings transparency, and increases citizens' engagement (Kotka, 2021). Instead, the issue of ensuing inclusive growth continues to be contentious in India. Even though it is among the world's most rapidly developing nations, the country occupies a very low position in inequality and social mobility indices

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(Oxfam, 2023). Scheduling and planning of development often elude such groups and cultures as women, Dalit, and tribal people. Such disparities are MGNREGA and the Beti Bachao Beti Padhao campaign, though, they have not been implemented effectively and hence do not work wonders (Rao, 2022).

Significance of the Study

The vision of Viksit Bharat 2047 aspires to transform India into a developed nation by its 100th year of independence. To realize this vision, it is imperative to address the intersecting pillars of economic growth, technological advancement, global collaboration, and environmental sustainability. This study is needed to explore how the synergy between India's startup ecosystem, international cooperation, and technological innovation can collectively accelerate the country's journey toward inclusive and sustainable development.

Objectives of the Study

This paper is intended to focus on the following aspects

To explain the Startup Ecosystem in India.

To discuss the essence of the International cooperation for sustainable development.

To explore the Technological Leap and Innovation for sustainable development

To make recommendations to Roadmap to 2047(Vikasith bharath)

RESEARCH METHODOLOGY

The present study is in descriptive in nature and to explore the issues based on the secondary data sources availed through research magazines, periodicals, reports and policy documents.

FINDINGS AND DISCUSSIONS

The Startup Ecosystem in India

India is home to over 100,000 startups and 100+ unicorns as of 2025, making it the third-largest startup ecosystem globally. The sectors showing exponential growth include fintech, edtech, healthtech, agritech, and climate tech. Government initiatives like Startup India, Fund of Funds for Startups (FFS), and Digital India have catalyzed growth. However, regional disparities and funding challenges persist for early-stage and deep-tech startups. Startups are at the forefront of solving key challenges—waste management, clean energy, and rural digitization.

International cooperation

Bilateral and Multilateral Engagements: India’s engagement with G20, BRICS, Quad, and the Indo-Pacific Economic Framework reflects its proactive stance. Collaboration in areas such as climate change, green hydrogen, AI, and cyber security is growing.

Global Partnerships for Innovation: Strategic alliances with nations like Israel, Japan, the U.S., and the EU have resulted in innovation corridors, joint research centers, and technology transfer agreements.

Development Diplomacy: India's support to Global South through the International Solar Alliance, Vaccine Maitri, and South-South cooperation exemplifies inclusive development goals.

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Technological Leap and Innovation

Digital Public Infrastructure (DPI)

India's DPI model (Aadhaar, UPI, DigiLocker, ONDC) has revolutionized governance and financial inclusion. The Digital India Stack is now being adapted by countries in Africa and Southeast Asia.

Emerging Technologies

Artificial Intelligence, Block chain, Quantum Computing, and 5G are being prioritized under the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS).

R&D and Innovation Ecosystem

Despite low GERD (Gross Expenditure on R&D at 0.65% of GDP), the ecosystem is evolving with new R&D clusters, Centers of Excellence, and increasing participation from the private sector.

Challenges and Bottlenecks

- Regulatory complexity: Fragmented policies across states.
- Funding and risk capital: Lack of early-stage deep-tech funding.
- Skill gaps: Mismatch between industry needs and academic output.
- Infrastructural disparities: Urban-rural divide in tech access.
- Geopolitical risks: Technology dependencies and cyber vulnerabilities.

Roadmap to 2047(Vikasith bharath)

Strengthening the Startup Ecosystem

- Unified national startup registry and support framework.
- Tier-2 and Tier-3 innovation hubs.
- Startup–corporate–university clusters.

Deepening International Cooperation

- Global digital public infrastructure alliances.
- Innovation diplomacy initiatives.
- Cross-border green tech accelerators.

Accelerating Technological Advancement

- Increase R&D spending to 2% of GDP by 2030.
- National Talent Grid for STEM and AI skilling.
- Indigenous manufacturing for critical technologies.

CONCLUSION

The road to *Vikasith Bharat 2047* requires integrated action across sectors. Startups, global partnerships, and technological innovation must not operate in silos but synergize to address India's multifaceted development needs. Strategic policy alignment, citizen empowerment, and inclusive innovation will be the cornerstones of this transformation. India's ability to leapfrog into a sustainable and developed future hinges on bold decisions made today.

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