

KK-YC-Harnessing-Green- Growth.docx

by Turnitin Official

Submission date: 01-Jun-2026 06:02PM (UTC+0900)

Submission ID: 2883205123

File name: KK-YC-Harnessing-Green-Growth.docx (199.37K)

Word count: 1473

Character count: 9788

Harnessing Green Growth: Business Opportunities for MSMEs and Start-ups in India's Transition toward a Sustainable Economy

Authors-

Mr. Kshitij Khare

Assistant Professor, College of Commerce, IPS Academy, Indore, M.P., India.

kshitij.khare21@gmail.com

And

Dr. Yogita Chandel,

Associate Professor, Department of Commerce, IPS Academy, Indore

yogitachandel20@gmail.com

Abstract

India's commitment to achieving net-zero carbon emissions by 2070 has accelerated its transition toward a green economy. This paper explores the emerging business opportunities for Micro, Small, and Medium Enterprises (MSMEs) and start-ups in key green sectors such as renewable energy, electric mobility, waste management, and green finance. Using secondary data from government reports, economic surveys, and sustainability publications, the study evaluates how these enterprises are leveraging policy frameworks like the National Green Hydrogen Mission, FAME-II, and Production Linked Incentive (PLI) schemes. Special attention is given to Madhya Pradesh, which has launched targeted policies and funding to support green industrialization. The paper identifies regional hubs of innovation, analyzes challenges such as financing gaps and regulatory complexity, and concludes with policy recommendations to strengthen green entrepreneurship. By aligning profitability with sustainability, MSMEs and start-ups can drive inclusive development and position India as a global leader in climate-resilient innovation.

Harnessing Green Growth: Business Opportunities for MSMEs and Start-ups in India's Transition toward a Sustainable Economy

Introduction

India's development trajectory is increasingly shaped by its environmental commitments. With a population exceeding 1.4 billion and a rapidly growing economy, the country faces the dual challenge of sustaining growth while mitigating climate risks. The pledge to achieve net-zero emissions by 2070, announced at COP26, has catalyzed a nationwide shift toward a green economy—an economic system that promotes sustainability, equity, and innovation.

The green economy encompasses sectors that reduce environmental risks and promote sustainable development. These include renewable energy, electric vehicles (EVs), sustainable agriculture, green hydrogen, waste management, and green finance. According to the Economic Survey 2024–25, green sectors are expected to contribute over 15% to India's GDP by 2030.

MSMEs and start-ups are central to this transformation. MSMEs account for nearly 30% of India's GDP and employ over 110 million people (Ministry of MSME, 2024). Start-ups, known for their agility and innovation, are increasingly entering green sectors. Together, these enterprises form the backbone of India's entrepreneurial ecosystem and are well-positioned to drive the green economy transition.

This paper investigates the emerging business opportunities for MSMEs and start-ups in India's green economy. It examines key sectors, evaluates policy frameworks, highlights regional hubs—including Madhya Pradesh—and discusses challenges and strategies for sustainable entrepreneurship.

Method

This study employs a qualitative research design based on secondary data analysis. Sources include:

- Government publications: Ministry of MSME, MNRE, NITI Aayog, and Economic Survey 2024–25.
- Industry reports: NetZero India, CEEW, Startup India.
- Academic literature: Peer-reviewed journals and monographs from Madras School of Economics.
- Regional policy documents: Madhya Pradesh MSME Development Policy 2025 and Industrial Promotion Policy 2025.
- News articles and press releases from PIB, BusinessWorld, and Indian Masterminds.

Thematic analysis was used to identify trends, policy impacts, regional developments, and business implications.

Results

Key Green Sectors Driving Transformation

Renewable Energy

India added 18 GW of renewable energy capacity in 2024, with solar and wind leading the charge (MNRE, 2025). MSMEs are adopting rooftop solar to reduce energy costs, while start-ups like ReNew Power and ZunRoof are innovating in solar panel efficiency and smart grid integration (NetZero India, 2025).

Electric Mobility

EV sales crossed 2 million units in 2024, driven by FAME-II incentives (PIB, 2025). Start-ups such as Ather Energy and Euler Motors are expanding electric two- and three-wheeler solutions. MSMEs are entering EV component manufacturing and charging station deployment.

8 Waste Management

India generates 62 million tonnes of waste annually. Start-ups like Recykal and Carbon Masters are building circular economy models through digital platforms. MSMEs in Tier-2 cities are adopting composting, plastic recycling, and e-waste management practices (Startup India, 2025).

Green Finance

Green bonds worth ₹25,000 crore were issued in 2024 (CEEW, 2024). MSMEs face challenges accessing these instruments due to creditworthiness issues. Fintech start-ups are bridging this gap through ESG scoring and alternative lending platforms.

Discussion

Policy Frameworks Supporting Green Entrepreneurship

India's policy landscape has evolved to support green entrepreneurship:

- **National Green Hydrogen Mission:** Allocates ₹19,744 crore to develop 5 MMT of green hydrogen capacity by 2030. Ports like Deendayal (Gujarat), Paradip (Odisha), and V.O. Chidambaranar (Tamil Nadu) have been designated as hydrogen hubs (BusinessWorld, 2025).
- **FAME-II:** Offers subsidies for EVs and charging infrastructure with a budget of ₹11,500 crore (PIB, 2025).
- **PLI Schemes:** Incentivize domestic manufacturing in solar PV modules, advanced chemistry cells, and EV components (India.gov.in, 2025).

Madhya Pradesh: A Case Study in Green Industrialization

Madhya Pradesh has emerged as a proactive state in promoting green entrepreneurship. The **Madhya Pradesh MSME Development Policy 2025** focuses on financial assistance for green industrialization, simplified regulatory processes, and infrastructure support (KIP Financial Consultancy, 2025). Key highlights include:

- ₹200 crore grant disbursed to MSMEs across 48 districts under the MSME Development Policy (Indian Masterminds, 2025).
- Special incentives for green manufacturing units, including subsidies for solar installations and waste recycling.
- Promotion of Swadeshi and self-reliance through local sourcing and sustainable practices.

The **Industrial Promotion Policy 2025** positions Madhya Pradesh as a hub for emerging sectors by leveraging its central location and sector-specific industrial parks (Invest MP, 2025). The policy encourages investment in clean tech, EVs, and agro-processing.

Start-ups in Bhopal and Indore are innovating in solar energy, organic farming, and sustainable packaging. The state's support ecosystem includes incubation centers, funding programs, and land allotments for green projects.

Regional Hubs of Innovation

India's green economy is geographically diverse:

- **Gujarat:** A leader in solar energy and hydrogen production, Gujarat hosts the Deendayal Port, a designated green hydrogen hub. The state offers incentives for solar manufacturing and has robust infrastructure for clean energy projects.
- **Tamil Nadu:** Known for its EV manufacturing ecosystem, Tamil Nadu is home to V.O. Chidambaranar Port, another hydrogen hub. The state supports clean tech start-ups through incubation centers and policy incentives.
- **Odisha:** The Gopalpur Industrial Park in Odisha is emerging as a model for clean energy clusters. Paradip Port has been designated as a hydrogen hub, and the state is investing in green infrastructure and skill development (World Economic Forum, 2025).
- **Madhya Pradesh:** Green MSME clusters in Indore, Bhopal, and Jabalpur.

These hubs benefit from policy incentives, infrastructure, and skilled labor, creating conducive ecosystems for green entrepreneurship.

Challenges

Despite progress, several challenges persist:

- **Financing Gaps:** MSMEs often lack access to affordable green finance due to limited collateral and awareness. Traditional banks are hesitant to lend to green projects perceived as high-risk.
- **Regulatory Complexity:** Multiple clearances, overlapping jurisdictions, and inconsistent standards create barriers to entry and delay project implementation.
- **Skill Shortages:** There is a shortage of trained professionals in green technologies such as solar installation, EV maintenance, and waste management.
- **Market Access:** MSMEs struggle to integrate into global green supply chains due to lack of certification, branding, and digital presence.

Conclusion

India's green economy transition is both a necessity and an opportunity. MSMEs and start-ups are at the forefront of this transformation, driving innovation, employment, and sustainability. Madhya Pradesh's targeted policies and funding demonstrate how regional governments can catalyze green industrialization.

To unlock the full potential of green entrepreneurship, the following recommendations are proposed:

1. **Green Finance Access:** Establish dedicated MSME green funds and promote ESG-based lending.
2. **Capacity Building:** Launch national training programs and integrate sustainability into curricula.
3. **Regulatory Simplification:** Create single-window clearance systems and harmonize standards.
4. **Market Linkages:** Support MSMEs in accessing global green supply chains and promote green certification.
5. **Innovation Ecosystems:** Expand climate tech incubators and encourage PPPs.
6. **Regional Development:** Incentivize green clusters in Aspirational Districts and Tier-2 cities.

With the right support, India can achieve its climate goals while fostering inclusive, sustainable economic growth.

References

1. Singh, R., & Sharma, A. (2025). *Building a sustainable future: The role of green innovation and green premium in Indian SMEs*. Environment, Development and Sustainability. <https://link.springer.com/content/pdf/10.1007/s10668-025-06515-7.pdf>
2. Verma, S., & Joshi, M. (2024). *Role of MSMEs in sustainable development of the Indian economy*. International Research Journal of Economics and Management Studies, 4(5), 113–122. <https://irjems.org/Volume-4-Issue-5/IRJEMS-V4I5P113.pdf>
3. NetZero India. (2025, July). *Top 11 Indian startups leading the green revolution in 2025*. <https://netzeroindia.org/indian-startups-leading-the-green-revolution/>
4. Ministry of MSME. (2024). *Annual report 2023–24*. Government of India. <https://msme.gov.in>
5. Centre for Energy, Environment and Water. (2024). *Green finance in India: Unlocking MSME potential*. <https://www.ceew.in>
6. Press Information Bureau. (2025, June). *FAME-II scheme update*. <https://pib.gov.in/PressReleasePage.aspx?PRID=2112237>
7. BusinessWorld. (2025, October 10). *India names three major ports as green hydrogen hubs*. <https://www.businessworld.in/article/india-names-three-major-ports-as-green-hydrogen-hubs-575111>
8. Indian Masterminds. (2025, October 13). *CM Mohan Yadav launches ₹200 crore MSME support at Madhya Pradesh Startup Summit*. <https://indianmasterminds.com/news/mohan-yadav-msme-summit-2025-madhya-pradesh-startup-funding-151868/>
9. Invest MP. (2025, February). *Madhya Pradesh Industrial Promotion Policy 2025*. https://invest.mp.gov.in/wp-content/uploads/2025/02/IPP_2025_Policy.pdf
10. Startup India. (2025). *Climate tech start-up directory*. <https://www.startupindia.gov.in>

ORIGINALITY REPORT

10%	8%	2%	3%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Indian School of Business Student Paper	2%
2	www.livemint.com Internet Source	1%
3	www.middleeastbulletin.com Internet Source	1%
4	indianmasterminds.com Internet Source	1%
5	Submitted to University of Nottingham Student Paper	1%
6	ijrpr.com Internet Source	1%
7	www.industrialautomationindia.in Internet Source	1%
8	government.economictimes.indiatimes.com Internet Source	1%
9	www.constructionworld.in Internet Source	1%
10	Yogita Chandel, Deepak Johnson. "Contribution of Indian Knowledge System in Multidisciplinary & Current Educational Research", International Journal of Education, Modern Management, Applied Science & Social Science, 2025 Publication	1%

Exclude quotes Off

Exclude matches Off

Exclude bibliography On