

Infrastructure Development and Viksit Bharat

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ABSTRACT:

Sustainable infrastructure and innovation-driven growth is pivotal to realizing the vision of Viksit Bharat (@2047, ensuring long-term economic prosperity social inclusivity, and environmental resilience. India's transition towards a developed economy demands large-scale investments in green, resilient, and digitally integrated infrastructure, complemented by robust innovation ecosystems. Leveraging renewable energy, smart mobility, low-carbon urban planning, and climate-adaptive infrastructure can significantly reduce ecological footprints while enhancing productivity. Innovation-led strategies, fuelled by research and development, public-private partnerships, and technology transfer, can foster industrial competitiveness, generate high-quality employment and bridge urban-rural development gaps. Econometric evidence suggests that a 1% increase in infrastructure investment can boost GDP growth by up to 0.7%, while innovation intensity positively correlates with export performance and productivity gains. Policy alignment with the Sustainable Development Goals (SDGs), coupled with fiscal reforms, digital governance, and capacity building, will be crucial to achieving balanced regional development. By integrating sustainability and innovation at the core of growth strategies, India can position itself as a global leader in green technology, climate action, and inclusive development, ensuring that the economic transformation towards Viksit Bharat@2047 is both equitable and future-ready. The study explores urgent and emerging challenges that are becoming increasingly relevant in today's rapidly evolving and interconnected world, highlighting their importance in the present global context.

KEYWORDS:

Viksit Bharat, Infrastructure Development, Sustainable, Innovation, Economic Growth.



Introduction:

Building a developed India, called Viksit Bharat, requires careful planning and execution of infrastructure projects. This means integrating different areas like transportation, energy, water, telecommunications, and urban development. Working together is important to use resources wisely and create infrastructure that lasts. It's also crucial to consider climate change and use clean energy and nature-based solutions to make infrastructure stronger.

Using technology like digital tools and data analysis can help make infrastructure work better and make decisions based on evidence. We should make sure that everyone benefits from infrastructure projects especially those who are often left out. This means giving resources fairly to all parts of the country. Working together on projects and having good rules and partnerships between the government and private companies is key to making infrastructure projects successful. We also need help from other countries, experts and international money to build infrastructure in Viksit Bharat.

Objectives of Infrastructure Development & Viksit Bharat:

- » To study and identify critical areas for infrastructure development.
- » To study about holistic, multi-sectoral approach for sustainable infrastructure.
- » To study and assess digitalization's role in optimizing infrastructure, improving service, decision-making.
- » To study international cooperation, partnerships, expertise, financing for Viksit Bharat's infrastructure.

Methodology :

The secondary data was gathered from various sources including, books, journals and research paper.

Meaning of Infrastructure Development & Viksit Bharat:

Meaning : Infrastructure development refers to the creation and improvement of a country's basic systems and facilities, such as transportation, energy, communication, water supply, and sanitation, which are essential for economic and social progress. Viksit Bharat translates to "Developed India" and is a government vision to make India a developed, self-reliant, and prosperous nation by its 100th year of independence in 2047.

Definition of Infrastructure Development & Viksit Bharat:

Infrastructure development is the creation of physical networks and systems like roads, railways, ports, power grids, and digital communication networks to support a nation's economic growth, connectivity, and quality of life. A vision to elevate India to the status of a fully developed nation by the year 2047.

Functions of Infrastructure Development & Viksit Bharat:

Economic Growth and Competitiveness:

Catalyst for Economy: Infrastructure growth stimulates related sectors like housing and construction, driving overall economic expansion.

Global Hub: Efficient transportation, reliable energy, and advanced digital networks position India as a global manufacturing and trade hub, attracting foreign investment.

Industrial Advancement: Multi-modal logistics parks, dedicated freight corridors, and other initiatives streamline supply chains, crucial for manufacturing.

Improving Quality of Life:

Last-Mile Connectivity: Essential for delivering services to citizens in urban and rural areas, connecting people to markets, schools, and healthcare.

Basic Services: Development of clean water, sanitation, and affordable housing addresses the fundamental needs of the population.

Urban Development: Transforming cities into smart, sustainable, and livable environments by improving infrastructure efficiency and quality of life.

Sustainability and Innovation:

Green Infrastructure: Focus on renewable energy, waste management, and water conservation contributes to sustainable growth.

Digital Transformation: Building robust digital infrastructure and leveraging technologies like AI, IoT, and blockchain improve efficiency and services.

Resilience: Developing infrastructure that is resilient to future challenges is a key focus.

Regional Development and Social Inclusion:

Balanced Growth: Infrastructure development helps close the gap between regions, empowering less developed areas to contribute equally to national growth.

Employment and Mobility: Roads and other infrastructure create

jobs during construction and catalyse long-term economic activity, promoting mobility and social inclusion.

Strategic Enablers:

Integrated Planning: Platforms like Gati Shakti support data-driven decision-making for efficient infrastructure development.

Financing: Innovative financing models, including blended finance and private participation, are crucial for unlocking capital for projects.

Advantages of Infrastructure Development & Viksit Bharat:

- » **Economic Growth & Investment:** Infrastructure spending creates a multiplier effect, driving increased economic activity, generating employment, and attracting further investment from both domestic and international sources.
- » **Improved Efficiency:** Better infrastructure, such as access-controlled highways, reduces travel times and logistics costs, making it more efficient for goods and services to move across the country and globally.
- » **Enhanced Quality of Life:** Access to improved infrastructure, including housing, healthcare, and clean water, directly raises the living standards for citizens.
- » **Increased Social Equity:** Highways connecting rural areas to urban centers promotes social mobility and economic participation, ensuring that development reaches all sections of society.
- » **Sustained Growth:** Infrastructure development provides the foundation for long-term, sustained economic growth, ensuring a more prosperous future for generations to come.
- » **Viksit Bharat Vision:** Infrastructure is a cornerstone of the Viksit Bharat @2047 vision, which aims to transform India into a developed nation by leveraging advanced infrastructure for economic and social progress.

Infrastructure Development & Viksit Bharat programs :

India's "Viksit Bharat" vision is supported by infrastructure programs like the National Logistics Policy, Pradhan Mantri Awas Yojana, BharatNet, and the Pradhan Mantri Gram Sadak Yojana (PMGSY). These schemes focus on enhancing connectivity, housing, and digital infrastructure, with initiatives such as the National Highway development, rural road construction, and expanding internet access to strengthen the econo-

my and improve citizen welfare.

Disadvantages of Infrastructure Development & Viksit Bharat:

- » Funding Constraints and Liquidity: There are significant financing gaps, and delays in government payments to contractors strain their cash flow.
- » Cost Inflation: Rising costs for construction materials like steel, cement, and fuel lead to project cost overruns.
- » Costly Delays: Delays in project execution, often due to bureaucratic red tape, increase costs and can have macroeconomic consequences, including higher fiscal deficits and inflationary pressures, leaving less funding for public services.
- » Regional Disparities: Infrastructure development is not uniform across India, with some states lagging significantly behind others, leading to regional economic disparities.
- » Corruption and Inefficiency: Corruption and weak governance within the project implementation process add to costs and inefficiencies.
- » Challenges in Public-Private Partnerships (PPPs): While a vital funding model, PPP projects can suffer from imbalanced risk sharing and difficulties in contract enforcement, deterring private participation.

Suggestions to improve the Infrastructure Development & Viksit Bharat:

- » Leverage Digital Technologies: Expand digital public infrastructure using Artificial Intelligence (AI) for governance and real-time services, 5G networks.
- » Invest in Green and Sustainable Infrastructure: Prioritize renewable energy sources like solar, wind, and green hydrogen, and implement circular economy principles in urban planning to design out waste and pollution.
- » Develop Smart, Liveable Cities: Transform urban centres into smart hubs with integrated IoT and AI for efficient resource management. Focus on affordable housing, sanitation, 24/7 utilities, and sustainable urban mobility solutions.
- » Focus on Mobility: Promote a shift from private vehicle ownership to Mobility as a Service (MaaS), integrating smart, sustainable transport solutions like air taxis, driverless vehicles, and common mobility cards.
- » Develop Multi-Modal Logistics: Build extensive national highway

grids, improve waterways, and establish multi-modal logistics parks to reduce congestion and boost connectivity across the nation.

Discussion :

Infrastructure development is crucial for achieving the “Viksit Bharat” (Developed India) vision by 2047, focusing on integrated physical, digital, and social networks to foster economic growth, connectivity, and improved quality of life. Key strategies involve leveraging digital platforms like PM Gati Shakti, increasing public and private investment in sectors like transportation, energy, and digital connectivity, and emphasizing sustainability and resilience in infrastructure projects. Initiatives such as improving road and rail networks, expanding digital infrastructure, and developing smart cities are central to bridging divides and driving inclusive development across the nation.

Viksit Bharat vision is for achieving inclusive and sustainable economy, inclusive, and sustainable economy, encompassing physical (roads, railways, ports) and digital (AI, data platforms) aspects. To realize this vision, strategies focus on modernizing infrastructure, integrating technology, promoting public-private partnerships, addressing challenges like land acquisition and skilled labour, and ensuring that development is sustainable and climate-resilient to meet the needs of a growing nation and achieve high-income status by 2047.

Conclusion:

If India attains the \$5 trillion GDP target established by PM Modi, recognition will extend beyond the five leading states to include others. Ernst and Young Global Limited (EY) has identified the next set of states in line, including West Bengal, Rajasthan, Andhra Pradesh, Telangana, Madhya Pradesh, and Kerala. However, the pursuit of the \$1 trillion aspiration will be the responsibility of each state, with a significant obstacle being the slowdown in the global economy. EY’s Srivastava notes that states heavily reliant on exports may face constraints due to the ongoing global economic sluggishness. EY emphasizes the need for deliberate efforts to boost growth in state economies, requiring governments to increase capital expenditures relative to their Gross State Domestic Products (GSDPs). Additionally, there is a recommendation to progressively enhance the share of services and industry in Gross State Value Added (GSVA) compared to agriculture, as it would be beneficial for both output and employment growth. Rahul Ahluwalia, Founding Director of the

Foundation for Economic Development, underscores that exports are a crucial avenue for rapid growth in a country like India. Despite global merchandise exports reaching \$25.3 trillion in 2022, India's share was only 1.8%. Ahluwalia advocates for India to enhance competitiveness as a manufacturing destination, aiming to increase its share of global exports. This strategy is anticipated to generate a growth surge similar to the IT and ITES sectors' success over the past two decades. B.V.R. Subrahmanyam, CEO of Niti Aayog, hinted in October at the formulation of a strategy for the next decade. Prime Minister Modi is expected to unveil a vision document for 'Viksit Bharat@2047,' outlining a vision for a developed India on its 100th year of independence. The objective India is to transform into a \$30 trillion economy by 2047.

For India to achieve \$5 Trillion economy, it should be our primary goal to focus on infrastructure development. As we focus on building economy, we should not forget factors like financial funding, climate change, IT enabled services housing, transportation, health care, sanitation and telecommunications.

References:

1. https://www.researchgate.net/publication/395581704_sustainable_infrastructure_and_innovation-led_growth_strategies_for_viksit_bharat2047_-_an_empirical_analysis
2. [https://www.gapbodhitaru.org/res/articles/\(127-130\)_building_the_future_-_infrastructure_development_strategies_for_viksit_bharat.pdf](https://www.gapbodhitaru.org/res/articles/(127-130)_building_the_future_-_infrastructure_development_strategies_for_viksit_bharat.pdf)

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Conflict of interest:

The Authors have no conflict of interest to declare that they are relevant to the content of this article.

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