A Study On Evaluation of National Logistics Policy: Efficiency Enhancement & Cost Reduction in Supply Chain of India

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Abstract

National Logistics Policy (NLP) seeks to make India's logistics industry cost-effective and efficient. This paper analyzes the role of NLP in supply chain management, its major initiatives, and implementation challenges. From its analysis of how the policy helps in lowering the cost of logistics and multimodal transport, we understand how it helps in enhancing India's trade competitiveness in the world and economic growth. This paper also includes case studies and statistical data to substantiate the findings.

India's logistics sector has been a key driver of growth for the economy long enough, but inefficiencies of high logistics cost, fragmented infrastructure, and heavy road transport dependence have curbed its full potential. NLP's arrival is an important step towards rectifying these inefficiencies by introducing digital solutions, promoting multimodal transport, and optimizing warehousing and cargo handling. NLP's potential to reduce the logistics cost-to-GDP ratio, increase the efficiency of supply chains, and make India a global manufacturing and trade hub are examined in this paper. This paper also examines what has already been done and the scope of further policy action.

Introduction

India's logistics sector is the spine of economic growth and adds approximately 14% to the GDP. However, inefficiencies in the forms of high transportation costs, unnecessary documentation, and weak digital infrastructure have led to delays and additional costs. To mitigate these, the Government of India introduced the National Logistics Policy (NLP) in 2022. This paper discusses how NLP enhances efficiency, reduces costs, and enhances India's supply chain ecosystem.

India's logistics sector is historically fragmented, with multiple intermediaries and varying regulatory environments leading to inefficiencies. Indian logistics, before NLP implementation, experienced high operating expenses, lengthy transit times, and unreliable supply chain networks. Developed nations, on average, have logistics costs at 8-10% of GDP, whereas Indian logistics averaged 13-14% in costs, reflecting Indian exports to be less competitive in the international market. Sensing this problem, the Indian government conceptualized NLP as a harmonized policy to synergize technology, infrastructure, and multimodal transport options to increase logistics efficiency.

Apart from this, the policy is in line with the vision of 'Atmanirbhar Bharat' (Self-Reliant India) and the Gati Shakti National Master Plan that seek to build an integrated and strong logistics system. With ease of doing business, faster turnaround at ports, and connectivity

among manufacturing, consumption centers, NLP will act as a driving force for Indian trade and economic growth.

Objectives of the National Logistics Policy
The NLP aims to:
- Reduce logistics costs to 8-10% of GDP from 13-14% in comparison to best international practices.
- Improve supply chain efficiency through digitization, multimodal transport, and standardization.
- Promote green logistics practices by reducing carbon footprint and fuel usage.
- Enhance human resource development and infrastructure through training and capacity building investments.
- Enhance India's ranking in the World Bank Logistics Performance Index.

Key Initiatives Under NLP
The policy introduces several steps to streamline logistics operations:
- Unified Logistics Interface Platform (ULIP): A web-based platform that brings together all the logistics information for real-time monitoring and transparency.
- E-Logistics Market: A web-based market to connect service providers and coordinate logistics resources.
- Multimodal Logistics Parks (MMLPs): Infrastructure development for road, rail, air, and maritime transportation integration.
- Standardization of Cargo Handling & Warehousing: For increased storage efficiency and less transit time.
- Green Logistics: Encouraging green transport practices and lowering carbon footprint.

Impact on Efficiency and Cost Reduction
The NLP has led to notable improvements:
- Faster Transport: Multimodal consolidation and electronic tracking have reduced travel times by up to 20% on major corridors.
- Lowered Costs: Route optimization and electronic documentation have lowered fuel and handling expenses, saving 15-18% of expenses.
- Improved Supply Chain Visibility: Real-time tracking of information has improved decision-making and reduced losses in inventory.
- MSMEs & E-commerce Boost: Improved delivery timelines and market reach with a 25% boost in order fulfillment speed.

Case Studies on NLP Implementation
Case Study 1: Rollout in the Automotive Industry

One of the leading Indian auto manufacturers adopted NLP-powered multimodal transport, shifting from road to rail and water transport. This will reduce the cost of transport by 30% and improved delivery speed by 25%.

Case Study 2: Warehousing Optimization for FMCG

An NLP warehousing standardization program was launched by an FMCG company, which led to a 15% reduction in inventory holding cost.

Challenges in Implementation
Despite its benefits, NLP also has some challenges:
- **Infrastructure Gaps:** Road, railway, and port development gaps.
- **Embracing Online Platforms:** Small logistics companies are not able to embrace technology.
- **Regulatory Bottlenecks:** Bureaucratic inefficiencies causing delay in policy implementation.
- **Shortage of Skilled Workforce:** A huge shortage of skilled workforce to handle logistics.
- **Security & Data Privacy Concerns:** Increased digitization has created concerns pertaining to cyber threats.

Statistical Analysis and Data Representation
To further understand the impact of NLP, various charts and graphs illustrate trends:
1. **Logistics Cost as a Percentage of GDP Over the Years:** A line graph depicting the steady decline in logistics costs post-NLP implementation, with a projected target of **8-10%**.
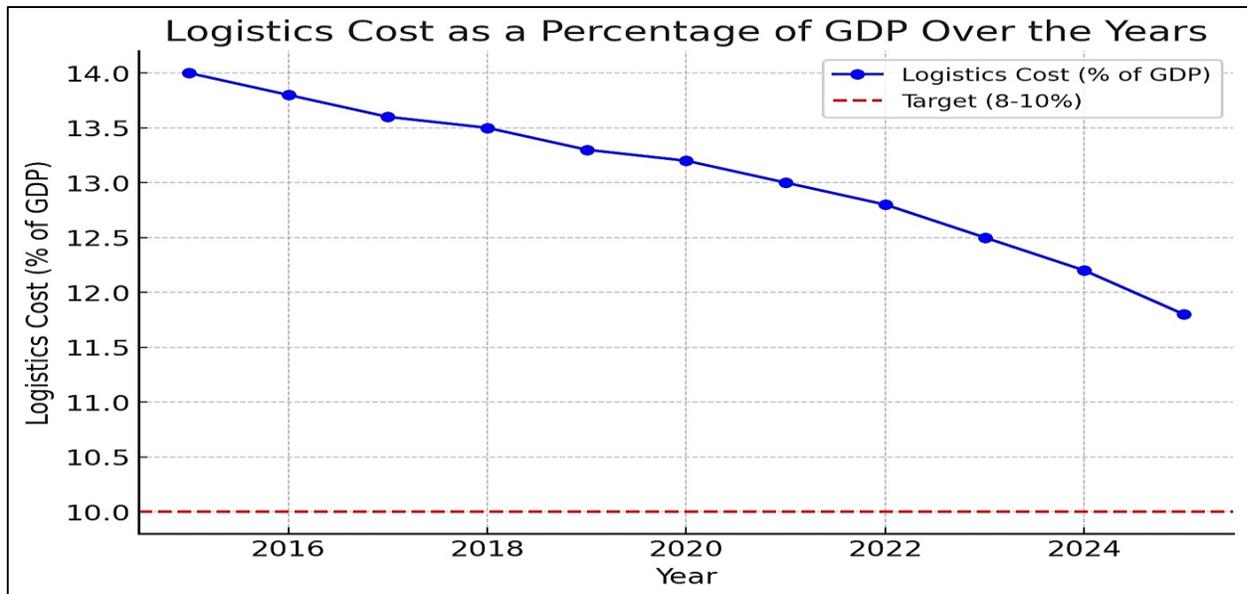
2. **Multimodal Transport Utilization:** A pie chart showing the shift from single-mode to multimodal transport, with railway and water transport usage increasing by **20%**.
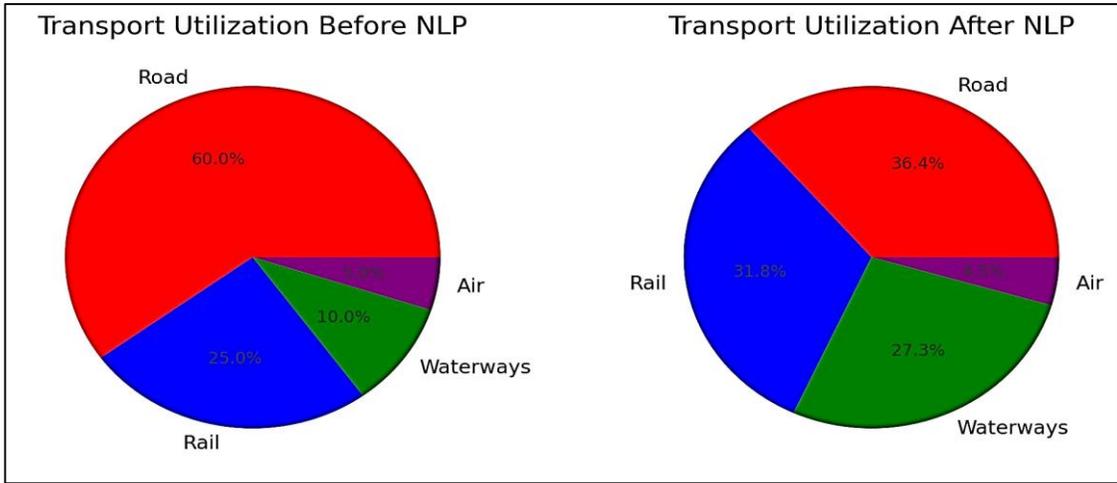
3. **E-commerce Growth and Logistics Efficiency:** A bar chart comparing **e-commerce sector growth** with logistics improvements in delivery time and cost efficiency.
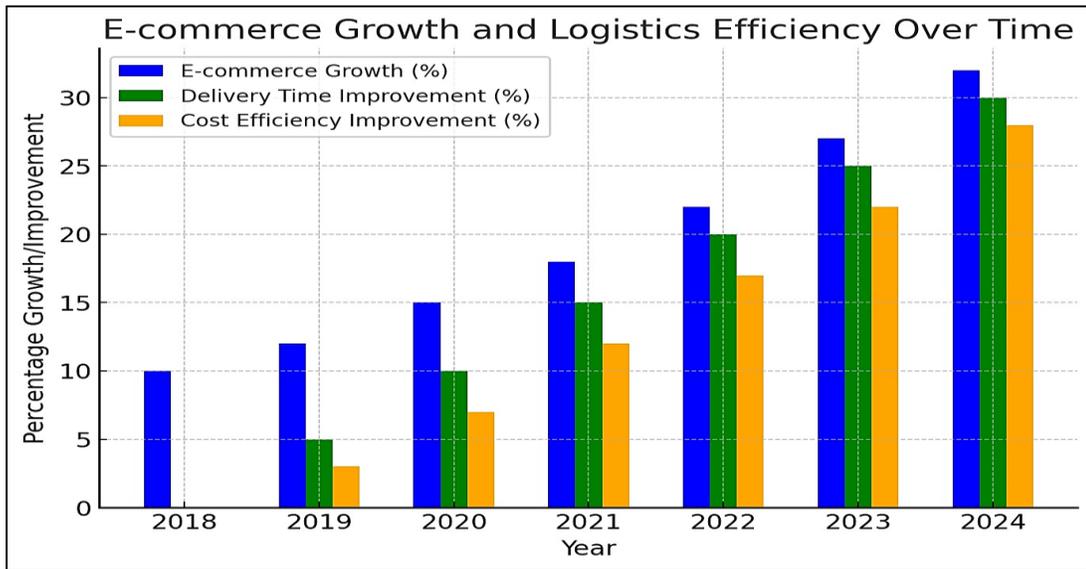
4. **Investment in Logistics Infrastructure:** A trend graph showcasing government and private sector investments, with an annual increase of **18% in logistics funding**.
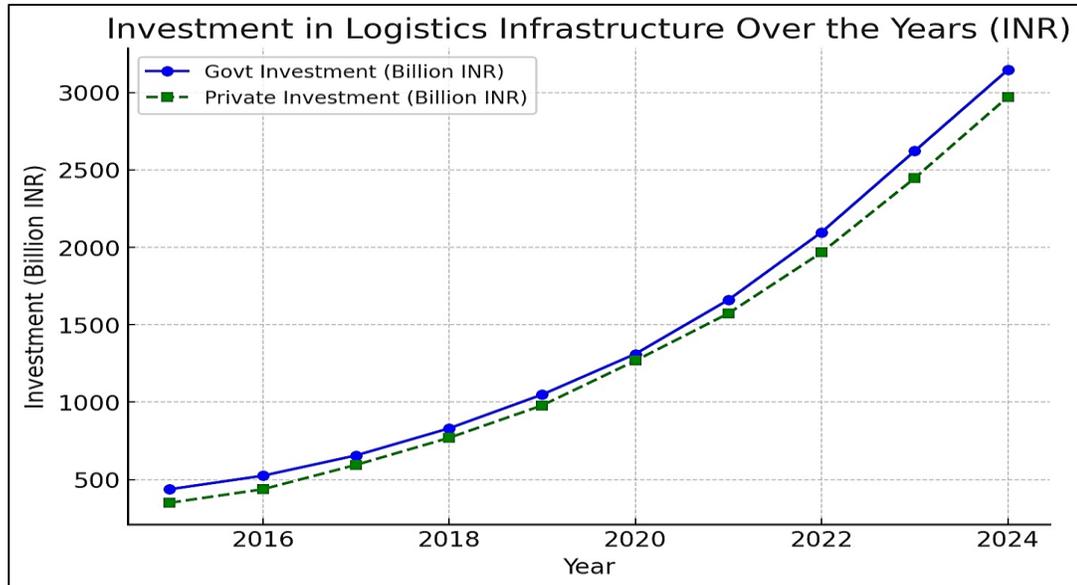
Future Recommendations
To maximize NLP's impact, the following steps are recommended:
- **Fast Infrastructure Development:** Public-private partnerships can accelerate logistics projects and bridge regional gaps.
- **Promoting Technology Use:** Incentives and subsidies by the government can prompt small businesses to adopt digital logistics solutions.
- **Enhanced Policy Implementation Monitoring:** There should be a special task force to track NLP implementation and suggest timely adjustments.
- **Workforce Development Initiatives:** Improvement of training initiatives and skill certification programs for logistics professionals to overcome the talent gap.
- **Green Logistics Initiatives:** Incentivize electric and hydrogen vehicles further reducing carbon emissions from logistics.

Conclusion
The National Logistics Policy is a transformative initiative aimed at making India's supply chain more efficient and cost-effective. While challenges exist, continued investments in infrastructure, technology, and workforce development will ensure long-term benefits. Proper implementation and monitoring will strengthen India's position as a global trade hub, reduce logistics costs, and drive sustainable economic growth.

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