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Achintya Securities Limited

The Indian Logistics Revolution

Digitalisation, Drones, and the Multi-Billion Dollar Shift



Introduction

India's logistics sector is undergoing a massive structural transformation. No longer just a traditional ecosystem of fragmented truck fleets and unorganised warehouses, the industry is rapidly evolving through digitalisation, new-age delivery models, and proactive, aggressive policy support. From autonomous drone deliveries and sophisticated cold chain networks to AI-driven hyperlocal logistics, India is rewiring its supply chain nervous system.

This transformation is not merely operational; it is a profound economic pivot. Let us deep-dive into the nuances of India's new-age logistics revolution and assess why this macro-theme is emerging as a generational investment opportunity.



Market Dynamics: A Trillion-Dollar Trajectory

The scale of India's logistics market is staggering. In 2024, the sector reached an estimated value of 228 billion US dollars, and it is projected to nearly double to 428.7 billion US dollars by 2033. This expansion represents a robust Compound Annual Growth Rate (CAGR) of approximately 7.2% over the next decade.

To understand the trajectory of this market expansion, we can look at the standard growth projection model:

Projected Market Size (2033) = \$228 B * (1 + 0.072) ^9 = approx. \$428.7 B

Traditionally, the Indian supply chain suffered from a lack of integrated ecosystems, which historically kept logistics costs hovering at a bloated 13% to 14% of the Gross Domestic Product (GDP)—significantly higher than the global average of (8%). However, recent studies, including a pivotal report by the National Council of Applied Economic Research (NCAER), indicate that massive infrastructure pushes have already begun bringing these costs down to an estimated 7.8% to 8.9%. The e-commerce boom, rising consumer demand for hyper-fast deliveries, and a massive infusion of capital into infrastructure are accelerating this efficiency.

Policy Catalysts: PM Gati Shakti and the Digital Backbone

A significant driver of this revolution—which goes beyond readily available commercial data—is the government's digital and infrastructural intervention. The National Logistics Policy (NLP) 2022 is the central pillar aiming to permanently anchor logistics costs below 10% of GDP and push India into the top 25 of the World Bank's Global Logistics Performance Index (LPI). Notably, India has already leaped six places to the 38th rank in the 2023 LPI.

Furthermore, the integration of the Unified Logistics Interface Platform (ULIP), which connects 34 digital systems across 7 distinct ministries, has eliminated crippling bureaucratic bottlenecks. Coupled with the PM Gati Shakti initiative—a \$1.2 trillion national master plan for multi-modal connectivity—the sector is experiencing an unprecedented convergence of roadways, railways, and digital data tracking, creating a unified, real-time supply chain dashboard for the country.



The Drone Revolution: Redefining Last-Mile Aerial Logistics

Drone delivery is rapidly transitioning from a theoretical concept to a scalable game changer in last-mile logistics. Valued at roughly 23 million US dollars in 2024, the commercial drone ecosystem is witnessing exponential growth. Drones bypass urban traffic grids and poor rural road conditions, enabling deliveries in 30 minutes or less.

The environmental and economic unit economics are highly compelling. A single delivery drone can save up to 45 tonnes of carbon emissions annually—the ecological equivalent of planting around 1,800 trees. Companies like Skye Air have pushed the boundaries, launching a service in Bengaluru that executes package deliveries in just 7 minutes, effectively slashing business delivery costs by nearly (50%). Startups are rapidly iterating on payload capacities and battery ranges; Skye Air’s flagship model, for instance, can now comfortably transport payloads of up to 10 kg.

Regulatory tailwinds are equally strong. The Drone Rules 2021 dismantled prohibitive permissions, expanded cargo weight limits to 500 kg, and reduced GST on drones to just (5%). Production-Linked Incentive (PLI) schemes and the Drone Shakti programme have heavily subsidised domestic manufacturing. Furthermore, giants like Zipline, Swiggy, Dunzo, and Zomato are actively participating in Beyond Visual Line of Sight (BVLOS) trials. The Indian Council of Medical Research (ICMR) has also successfully utilised these networks to deliver vaccines and essential medicines to remote terrains, proving the life saving potential of aerial logistics.

Cold Chain Infrastructure: Plugging the Multi-Billion Dollar Leakage

Cold chain infrastructure is the critical missing link in India's agricultural and pharmaceutical supply chains. Currently, post-harvest losses in fruits and vegetables range between 5% and 16%, translating to billions of dollars in wasted capital annually.

The cold chain logistics market stood at 11.6 billion US dollars in 2024 and is aggressively tracking to exceed 18 billion US dollars by 2029. This growth is being fuelled by the integration of IoT (Internet of Things) temperature sensors, real-time data analytics, and automated Grade-A warehousing.

Simultaneously, India's position as the "pharmacy of the world" is driving the pharma cold chain segment, which is projected to grow from 0.57 billion US dollars in 2024 to 0.8 billion US dollars by 2033. Government interventions, particularly the Pradhan Mantri Kisan Sampada Yojana (PMKSY), are providing crucial capital subsidies to establish integrated cold storage facilities, thereby stabilising food security and expanding export quality.



Hyperlocal and Quick Commerce: The Need for Speed

Hyperlocal delivery has completely re-engineered consumer expectations, giving birth to the booming quick commerce segment. The Gross Merchandise Value (GMV) of quick commerce in India was a mere 0.5 billion US dollars in 2022. By 2024, it had surged to an astonishing 6–7 billion US dollars, and it is expected to cross the 10 billion US dollars mark in 2025, reflecting a phenomenal annual growth rate of 73%.

Market intelligence suggests the total addressable market for quick commerce could hit 24 billion US dollars by 2028. This space is fiercely competitive and heavily consolidated among three major players:

- **Blink it:** Commanding a 45% market share, powered by an aggressive network of over 1,500 dark stores.
- **Swiggy Instamart:** Holding a 25% share, operating 1,000+ dark stores, and consistently executing 18-minute deliveries.
- **Zepto:** Capturing 22% of the market, processing over 1.7 million daily orders, and setting industry benchmarks for inventory turnover.

This speed and scale are only possible through the deployment of highly localised "dark stores" (micro-fulfilment centres), AI-based dynamic routing algorithms, and electric vehicle (EV) fleets that drastically lower last-mile delivery costs. Furthermore, the advent of the Open Network for Digital Commerce (ONDC) is threatening to democratise this space, allowing local retailers to plug into hyperlocal delivery fleets without relying exclusively on tech giants.

Green Logistics: The Push for Sustainable Supply Chains

Sustainability has shifted from a corporate buzzword to a core operational mandate. With transportation contributing heavily to global emissions, Indian logistics players are aggressively electrifying their fleets.

- **Flipkart** has pledged to achieve a 100% electric last-mile delivery fleet by 2030 and has already deployed over 20,000 EVs.
- **Amazon India** has committed to integrating 10,000 EVs into its delivery fleet by 2025.

Beyond vehicles, the development of massive, multi-modal logistics parks (MMLPs) is incorporating renewable energy. Solar-powered warehouses, rainwater harvesting systems, and green packaging are becoming standard requirements for Grade-A logistics facilities, which directly impacts their Environmental, Social, and Governance (ESG) compliance and attracts premium institutional investors.



The Investment Thesis: Where is the Smart Money Going?

The convergence of supportive government policies, rapid digitalisation, and massive consumer demand makes the logistics sector a highly attractive asset class for venture capital, private equity, and retail investors alike.

- 1. Tech-Enabled Startups & Quick Commerce:** Capital continues to pour into quick commerce. A prime example is Zepto, which recently raised 450 million US dollars in a funding round, catapulting its valuation to an impressive 7 billion US dollars.
- 2. Infrastructure & Real Estate:** Real Estate Investment Trusts (REITs) focused on warehousing are gaining immense traction. With India absorbing roughly 38 to 40 million square feet of Grade-A warehousing annually, industrial real estate offers stable, long-term yields.
- 3. Hardware & Manufacturing:** The PLI schemes and the Digital Sky platform are making drone manufacturing and logistics hardware highly lucrative, drawing deep-tech investors.

Moreover, massive skill development programmes are upgrading the workforce, which currently employs over 8 million people, transitioning them from unorganised manual labour to tech-enabled warehouse operators and fleet managers.

What's Next: The Future Frontier

As India marches toward becoming a 5 trillion US dollar economy, logistics will be its defining backbone. The PM Gati Shakti plan will continue to un-silo multi-modal infrastructure, making the shift from road-heavy transport to cheaper, greener rail freight a reality.

Emerging innovations—such as open logistics networks (via ONDC), rural supply chain penetrations, and advanced Unmanned Aircraft System Traffic Management (UTM) for drones—are shaping the immediate future. With the right synergy of private investment, technological research, and government support, India is well on its way to building a logistics network that is not just faster and more cost-efficient, but resilient and environmentally sustainable for decades to come.





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