

Logistics Market in India

Industry Report

[FINAL VERSION]

[21st April 2022]

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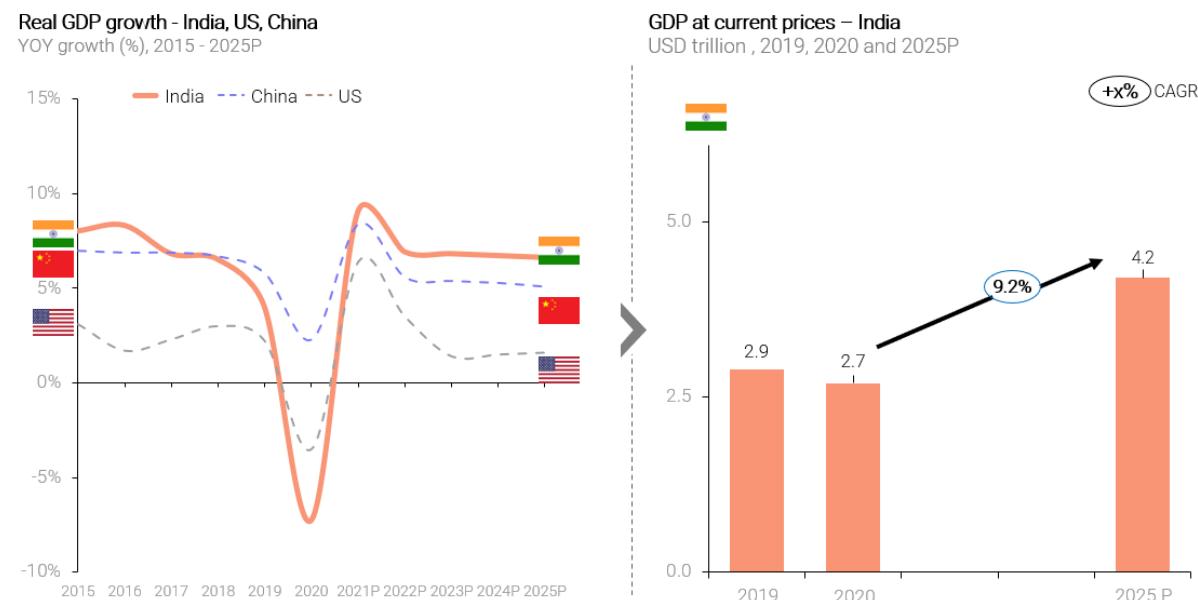
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1. India Macro-economic Overview and Review

Overview of Indian economy

With a Gross Domestic Product of approximately US\$2.7 trillion in 2020, India is the sixth largest economy according to the World Economic Outlook database. India witnessed an annualized GDP growth of more than 7% between 2015 and 2019 and has consistently been one of the fastest growing large economies.

The period of sustained economic growth was interrupted by COVID-19 pandemic, whose first wave severely impacted economic activities in 2020. India witnessed one of the most stringent nation-wide lockdowns globally, resulting in its GDP contraction by 8% in 2020. The Indian economy has since been on a sustained recovery path. The country's real GDP growth rate is projected at ~9% per annum during 2020-2025, which is the highest growth rate among the larger economies – resulting into India becoming a US\$ 4.2 trillion economy by 2025. As per Centre for Economics and Business Research ("CEBR"), India is projected to become the third largest economy in the world by 2030.



Note(s): In the analysis global benchmarks, the timeline has been kept as CY and not FY

Source(s): Secondary Research (IMF and RBI)

Despite the impact of the second wave of COVID-19 pandemic, IMF has projected India to achieve 9.5% GDP growth in FY22, which is significantly higher than the 6% projected growth for the global economy.

Reforms by the Indian Government to boost growth

The Indian Government's focus is towards improving spending power of the rural economy, infrastructure development and modernization and enabling foreign investments will continue to boost growth. Some of the major reforms and policies introduced by Government during the last few years include:

- Launched the 'Make in India' campaign in 2014 to showcase India as a global design and manufacturing hub. The campaign focuses on 25 selected sectors, including technology, construction, and biotechnology with following three major objectives:
 - To increase the manufacturing sector's growth rate to 12-14% per annum to increase the sector's share in the economy
 - To create 100 million additional manufacturing jobs in the economy by 2022
 - To ensure that the manufacturing sector's contribution to GDP is increased to 25% by 2022 (revised to 2025)

- Introduced Goods and Services Tax (GST), a major initiative to simplify the indirect tax system in the country by bringing all state and central indirect taxes into a single regime, thereby driving in simplicity and transparency
- Increased FDI ceiling across several sectors, including insurance, defense, single brand retail, construction etc. and eased the approval norms to improve investor sentiment and encourage further foreign investment. These measure by Government have attracted highest ever total FDI inflow of US\$ 81.72 billion in FY2021, 10% higher when compared to FY2020.
- Launched initiatives such as Digital India, Start-up India, e-Governance and Skill India to position India's digital economy for the next phase of growth
- Launched Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme focusing on financial inclusion of economically weaker section (EWS) and Lower Income group (LIG), to provide easy and low-cost access to basic financial services such as savings and deposit accounts, remittance, credit, insurance, and pension. As of June,2021 there are 425 Mn beneficiaries of the scheme with US\$20 Bn in retail deposits
- Reduced corporate tax rates from 30% to 22% to attract private investments from across the globe, improve competitiveness of India's private sector and create more jobs

Other initiatives focused on the development of the logistics sector include:

- Grant of Infrastructure status to Logistics sector which allows providing credit to the exporters at competitive rates and on a long-term basis, reducing logistics costs.
- Creation of Logistics Division by the Department of Commerce to initiate the task of developing an action plan for the Integrated development of Logistics sector in India
- A National Logistics Law that would provide an agile regulatory environment through a unified legal framework for "One Nation-One Contract" paradigm

Key outcomes of the government reforms have directly / indirectly impacted the growing focus on Indian logistics infrastructure. Key outcomes include:

Rise of FDI investments:

- In 2020, India overtook China and emerged as the top destination for FDI in Asia-Pacific by project numbers with a total of 372 projects in 2020, gaining a regional market share of 16%
- Total FDI by way of capital investment in India in 2020 was \$ 23.5 Bn ranking it as one of the top 2 destinations for foreign capital investments
- Recently, ESR India has signed an agreement with the government of Maharashtra to invest \$ 615 Mn in the logistics sector. The Warburg Pincus-backed firm agreed to set up 11 logistics and industrial parks around Pune and Mumbai.

Improved ease of doing business:

- World Bank's "Doing Business" report acknowledged India as one of the top 10 economies for 3 consecutive years as India reached a ranking of 63 in 2020 from 130 in 2015.
- The report further highlighted that India improved on ease of doing business after implementing regulatory reforms with efforts focused primarily on the areas of starting a business, dealing with construction permits and cross-border trading
- Key initiatives like the "Make in India" campaign focused on attracting foreign investment, boosting the private sector—manufacturing in particular—and enhancing the country's overall competitiveness.
- According to the LEADS 2019 survey, there is a marked improvement in logistics ease across most of the Indian states driven by the improved ease of arranging logistics at

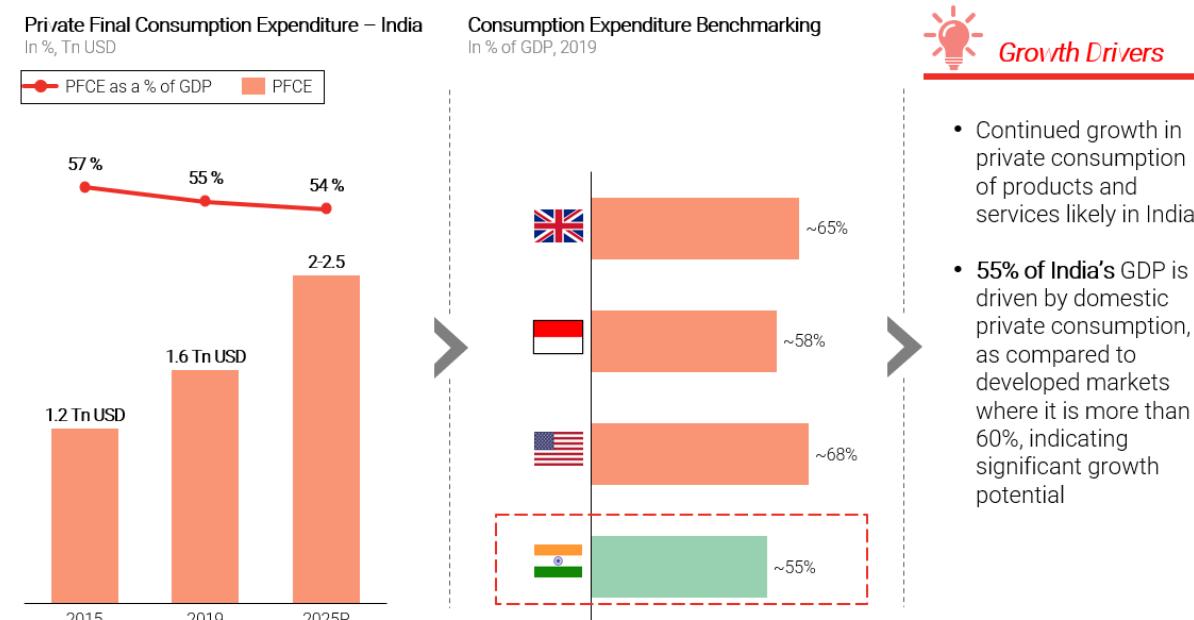
competitive rates, availability and quality of infrastructure, ease of track and trace, state facilitation and coordination and many other factors. This has also acted as a catalyst for improving trade and economic development in the country.

Improved economic development:

As per MoSPI, a few notable achievements of the Government that have paved the way for improved economic development are:

- Increase in the construction of express highways from progress rate of 12 km per day to 27 km per day in FY 2020
- Rural roads connectivity increased from 56 percent in 2014 to 82 percent in FY 2019
- Impetus to regional air connectivity for reviving unserved and underserved airports and improve air connectivity in Tier 2 and Tier 3 cities
- 9,528 km of broad-gauge railway line commissioned since 2014
- Urban transformation through development of smart cities

GDP growth in India is expected to be driven by rising private final consumption expenditure (“PFCE”) in the next five years



Note(s): Growth for interim years (FY22-25) is basis CAGR for FY21-26

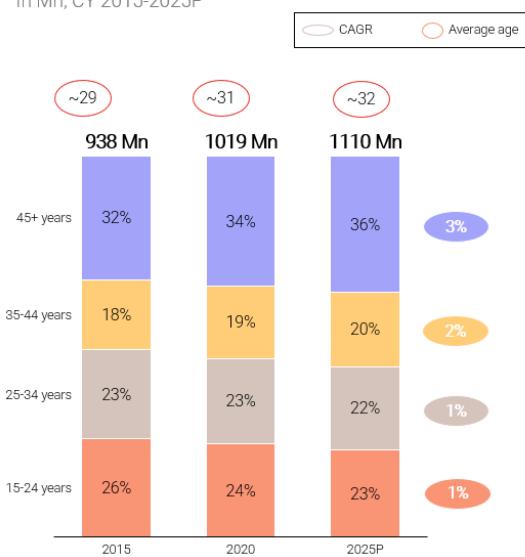
Source(s): World bank, IMF, RedSeer Analysis

India had a GDP per capita of US\$1,960 in 2020 and is projected to cross the milestone of US\$2,000 in 2021. The US\$2,000 threshold has been traditionally considered as inflection point for an economy post which consumer expenditure spikes like in case of China which saw exponential growth since it crossed GDP per capita mark of USD2,000 in 2006. According to World Bank, Households and NPISHs¹ Final consumption expenditure for China nearly doubled from 2007 to 2014. India is well positioned to benefit from this milestone. As per World Economic Forum estimates, the Private Final Consumption is projected to increase from \$1.6 trillion in 2019 to \$2-2.5 trillion in 2025.

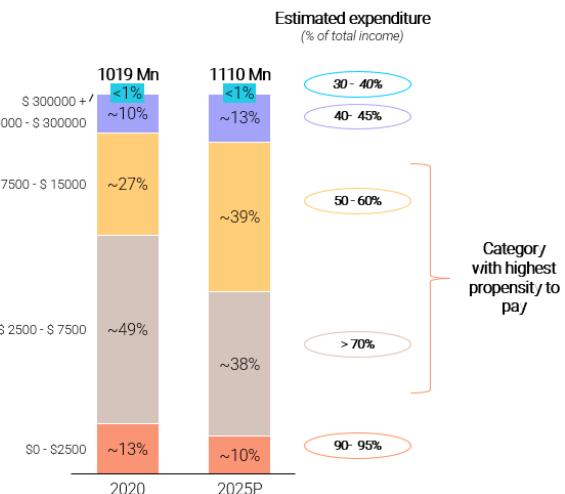
¹ NPISH stands for Non-profit institutions serving households

Consumption expenditure will be driven increasing working age population and growing household income

Population – Age split (15 years +)¹
In Mn, CY 2015-2025P



India Population –Income split
In Mn USD, CY 2020, 2025P

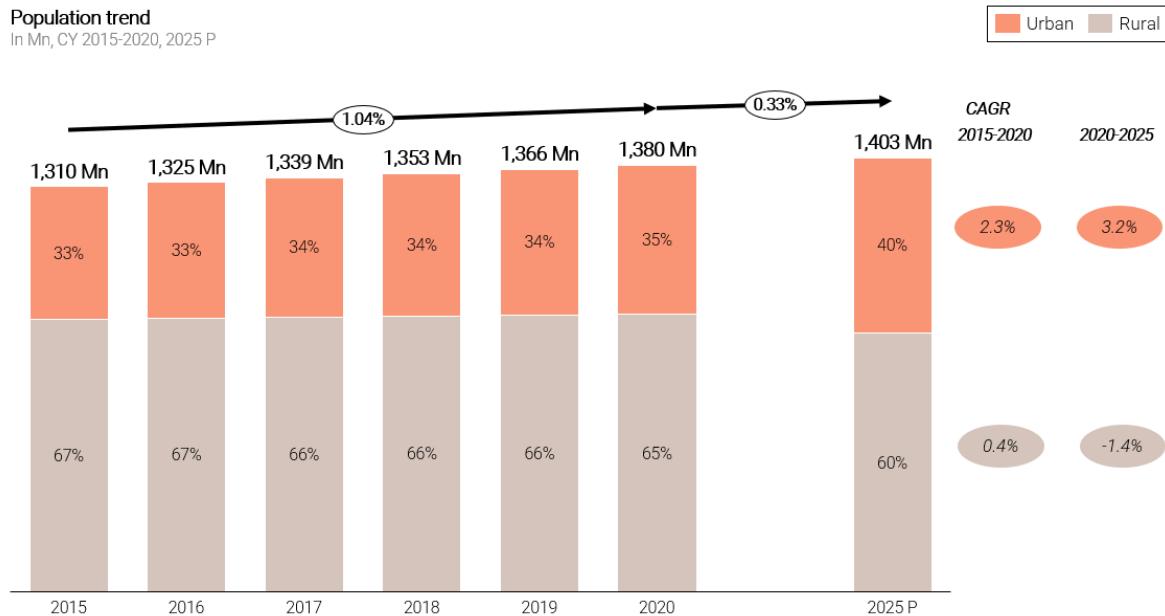


Note(s): 1. Reference date- 1st July of respective years
Source(s): UN, RedSeer Analysis

India is one of the youngest nations in the world, with an average age of 31 years for population above 15 years age. Approximately 66% of the population above the age of 15, is between 15 and 44 years of age as of FY 2020, resulting in a young and savvy population with higher propensity to adopt new trends such as digital services. Millennials (i.e., typically those born in 1980s and 1990s according to various definitions) and generation Z (those born after mid 1990s) are driving the digital adoption and consumption growth in India. The middle-income² segment of the population, which currently forms ~27% of the working age population, is projected to expand to ~40% in next 5 years, will drive consumption of products and services.

² Middle-income is USD 7,500 to 15,000 of annual household income

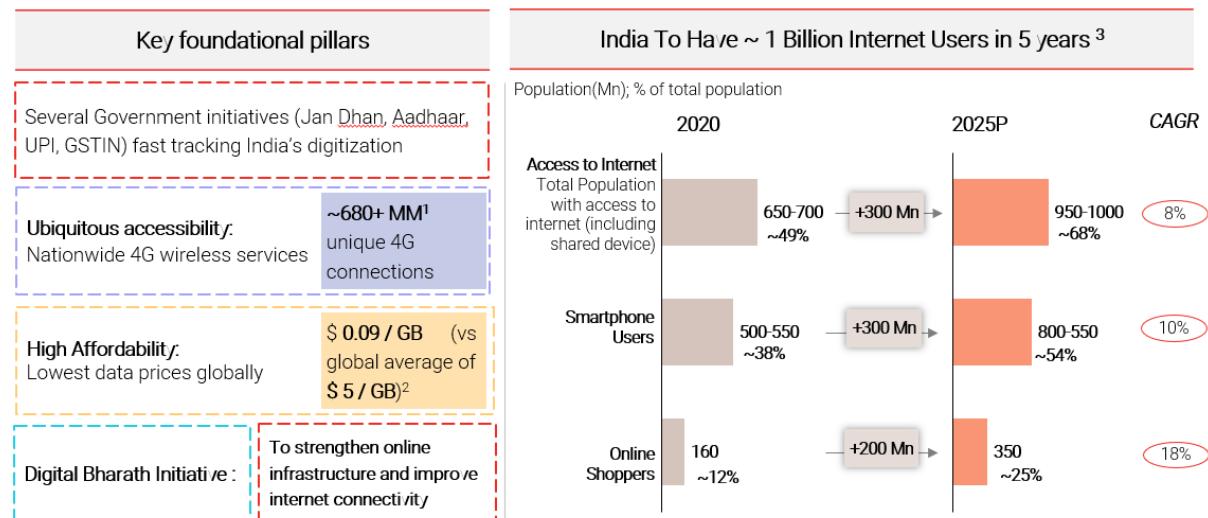
With most of India being rural (~65%), urbanization is taking place at faster rate, further driving the consumption



Source(s): World bank, Niti Ayog

With 450-500 million population living in urban areas, India has one of the highest urban population in the world, which is 1.4 times the total population of the USA. India's urban population is projected to further grow to 550 million by the FY2026. Urbanization is expected to drive substantial investments in infrastructure development, which, in turn, lead to job creation, development of modern consumer services, increased ability to mobilize savings and consumption will drive overall GDP growth.

Internet and smart-phone penetration have nearly doubled from 2015 to 2020 and continues to grow



Sources:

1.Airtel, Vodafone Idea, Reliance Jio Infocomm quarterly results as of 31st December 2020. BSNL does not publish separate 4G connection numbers

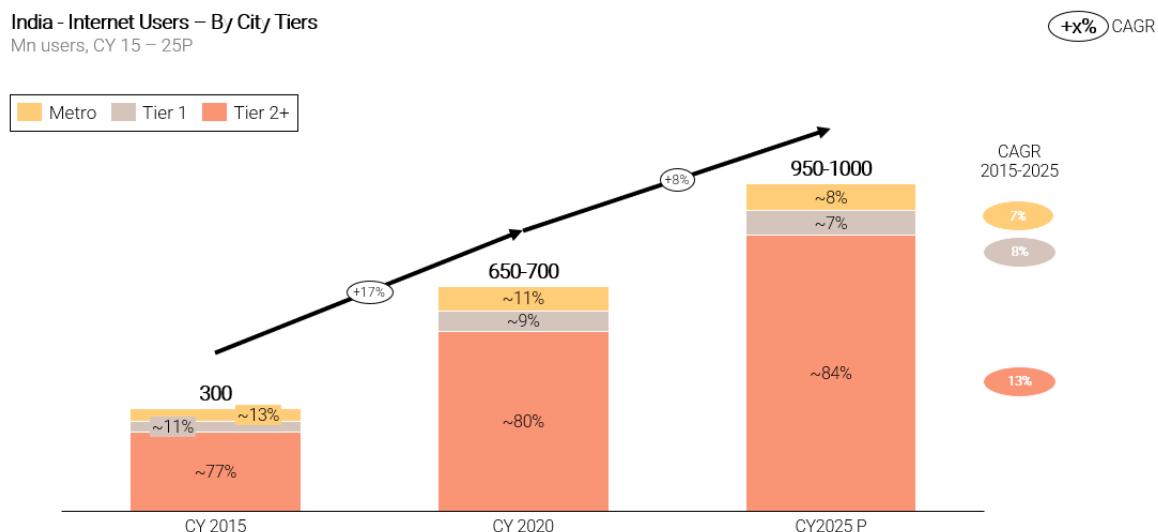
2.Cable.co.uk- Worldwide Mobile Data Pricing report for 2020

3. Redseer estimates. Service transactors includes users accessing on either desktops, Laptops or smartphones. Anyone who is transacting for banking (NEFT, IMPS, etc.), IRCTC, mobile recharges, P2P, P2M, recharge, Bill pay is included

Since 2000, a large part of Indians who have obtained access to telephony have skipped the traditional fixed line phones and adopted cellular phones instead. 90% of all phone connections were fixed line in 2000, while currently 90% of all phone connections are mobile. Internet adoption has picked up gradually, as data cost in India has significantly declined, especially since Reliance Jio's public launch in September 2016. India's internet adoption has more than doubled in the last 5 years from 317 million unique internet users in 2015 to 650 - 700 million unique users in 2020. This is further projected to cross ~900 million users by 2025.

The factors driving India's digital growth story are expected to remain robust and continue to drive the growth in smartphone and internet user base going forward. Factors such as low-cost smart-phones availability from local as well as global brands, and low-cost reliable broadband internet (4G and 5G connections) will all remain in play for the coming years and drive continued adoption of smart-phones and internet user base going forward.

~80% of the internet users are from Tier 2+ cities, a true impact of “Digital India” campaign across the country



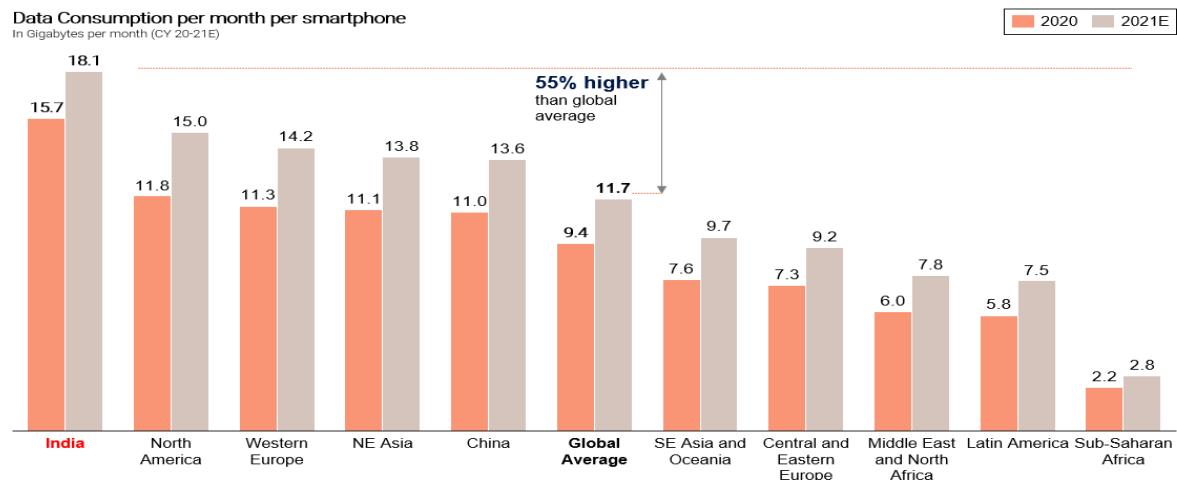
Note(s):

1. City tier definitions: Metro cities are Top eight cities by population: Ahmedabad, Bangalore, Chennai, Delhi-NCR, Hyderabad, Kolkata, Mumbai, and Pune; Tier 1 cities are non-metro cities with population of more than 1 million and, Tier 2+ cities are cities, towns, villages with population of less than 1 million

Source(s): RedSeer Estimates

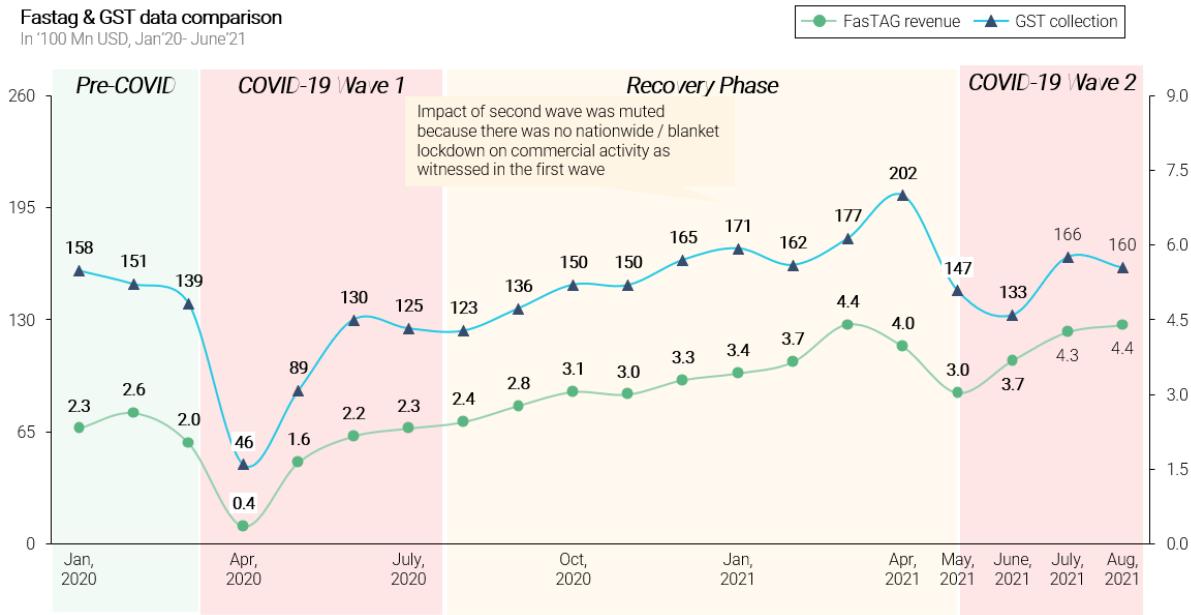
With 650-700 million internet users in 2020, India is one of the largest and the fastest growing markets of digital consumers. This substantial growth of the digital economy was largely led by consumers in the urban areas. As per the TRAI report, rural internet subscribers account for 39% of the total internet subscribers in the country as of December 2020, increasing from about 32% in March 2017. ~38% of the population of India owns a smartphone. This is largely a result of the overall cost of smartphone ownership coming down because of cheaper alternatives and lower data cost. Increasing number of non-English language/ local language applications targeted at the non-English audience of smaller cities are also driving adoption in these cities.

India has one of the highest data consumption globally, which is growing rapidly



Source(s): Ericsson mobility report – Nov 2020, RedSeer Analysis

Overall, Indian economy saw COVID Impact in first lockdown in 2020 – across vehicle movement and goods and service transaction but market saw V-Shaped recovery once lockdown was lifted



Note: Fastag and GST collection in INR Cr is converted to USD using exchange rate of USD/INR=70

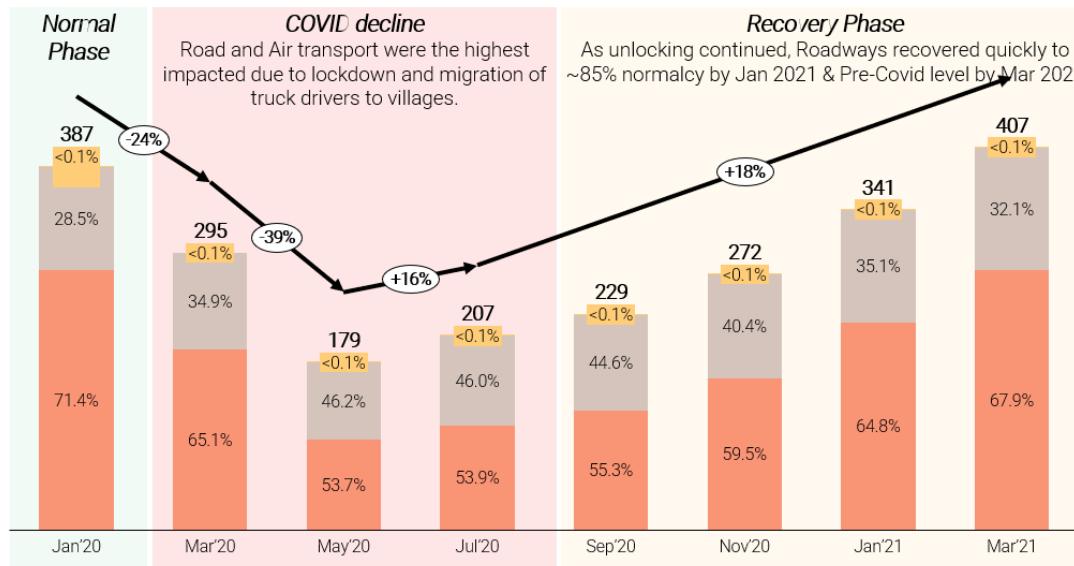
Source(s): GST collection from Ministry of finance press release, FASTag revenue from NPCI

GST revenue collection hit a record low and fell by 74% in May 2020 due to covid lockdown but since then it has constantly grown and reached pre covid levels by September 2020. From September 2020 Collections constantly grew on a YoY basis and reached an all-time high of INR1.41 lakh crore in April 2021 and INR 1.163 lakh crore in July 2021 creating a local high across last 3 months. The steady increase in GST collections since September is a result of heightened economic activity and rising commodity prices. This indicates that covid-related anxieties have abated, and consumption demand is steadily rebounding.

Freight movements saw a similar recovery overall – Lockdown in March-May 2020 saw freight market dip and rapid recovery once lockdown was lifted

India Logistics market – Freight movements in COVID
In Mn Tonnes, Jan'20- Mar'21

+x% CAGR Road Rail Air (Domestic)



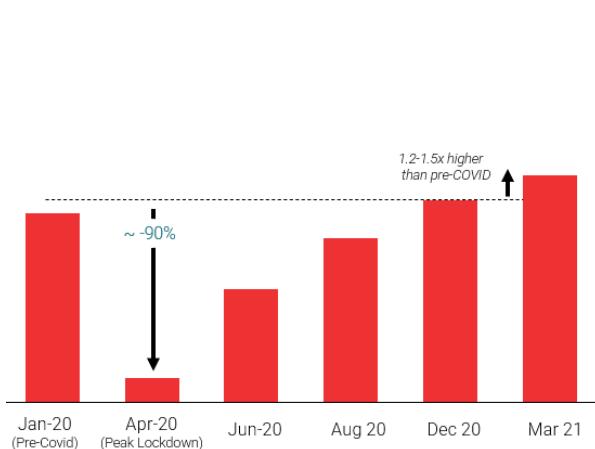
Note(s): Excludes freight transport through ship, IWT and pipeline

Source(s): NTPC, Ministry of Civil Aviation, press release April 2021, Indian railways yearbook (2017-2018, 2019-2020, e-way bill data by GOI, RedSeer Analysis

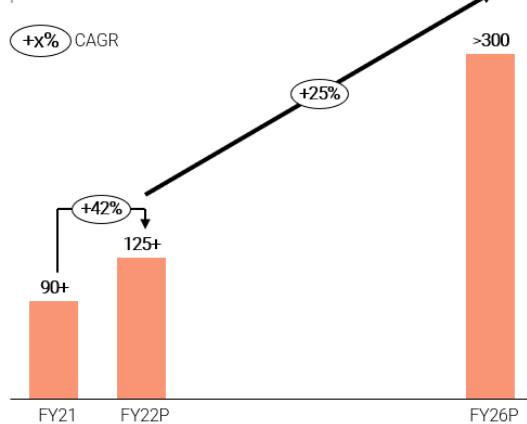
Freight movement has witnessed similar recovery as the nationwide lockdown was lifted in phases. Road and air transport were the highest impacted due to nationwide lockdown as road movements reduced, restaurants and eateries were closed. A large volume of truck drivers also migrated to their villages creating a dearth of vehicles & sudden inflation of prices. This trend reversed in the unlocking phase after July 2020 as roadways recovered to ~85% normalcy from both a pricing and availability perspective.

Consumer Internet market also saw a dip due to restriction on movement of goods, but quickly bounced back.

India Consumer Internet- Overall Market Gross Transaction Value
USD Bn (Monthly GTV, Annualized), Includes consumer internet products/services



India Consumer Internet GTV- Overall Market
USD Bn, CAGR, Includes consumer internet products/services



Note: 1. Consumer Internet includes online retail of mobile, electronics, fashion, grocery (e-tailing) and other sectors like Food Tech, Fintech (ex payments), eHealth, Bill Payments and Recharges, Stay, mobility, EdTech, Classifieds etc.

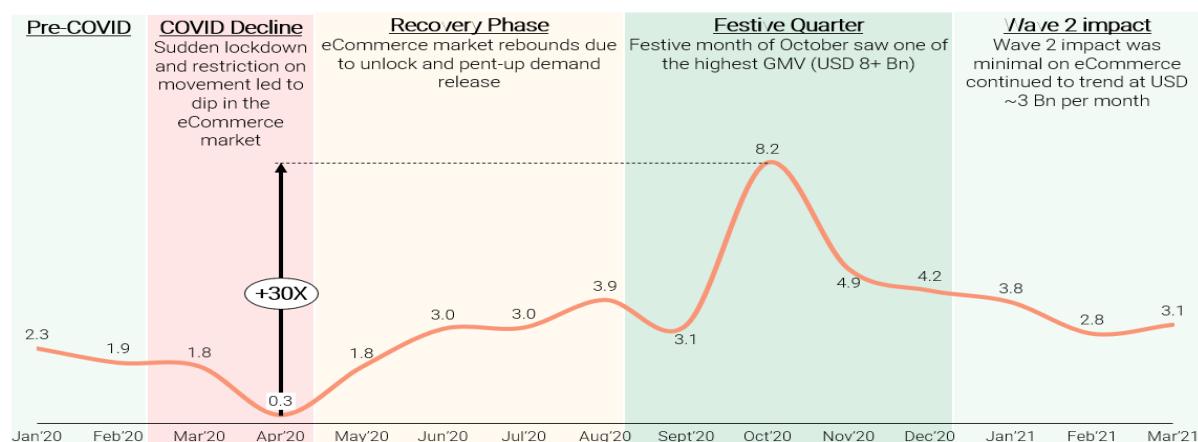
Source(s): RedSeer Estimates

India's consumer internet market experienced a 'V-shaped' recovery in gross transaction value ("GTV") terms through the course of FY 2021. The consumer internet market dropped 90% from pre-COVID GTV in April 2020. The drop was due to both supply-side (truck unavailability) and demand-side (govt. enforced decline in demand) constraints. However, it recovered steadily month on month and was operating at 1.2-1.5 times higher than pre-COVID levels by March 2021.

The Indian consumer internet market is projected to continue steady growth in FY2022 and cross triple digits GTV for the first time and eventually reach ~US\$ 300 billion by FY 2026 growing at a CAGR of 25-30%

Product based commerce (eCommerce) bounced back quickly as lockdown eased in 2020

Monthly eCommerce market in India
In USD Bn, Jan'20- Mar'21



Source(s): RedSeer Estimates

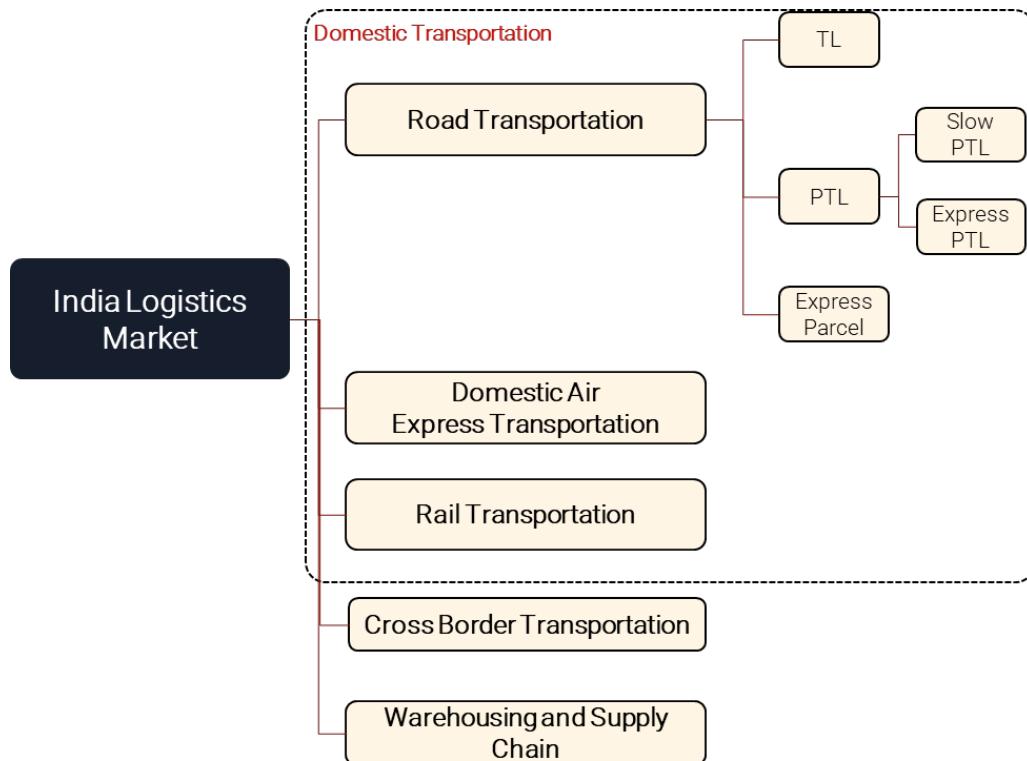
2. India Logistics Sector

2.1 Indian Logistics Industry - Introduction

Indian logistics sector is one of the largest in the world and presents large addressable opportunity. The sector is critical for the economic growth of the country as it connects various elements of the economy and consists of transportation, warehousing and other supply-chain activities ranging from the suppliers to the end-customers.

2.1.1 Market structure and size

Indian logistics market is broadly structured in transportation, warehousing, and Supply chain management



Note(s):

1. Market structure excludes freight transport through ship, IWT (Inland water transport) and pipeline

Source: RedSeer Research

India's Logistics market can primarily be divided into 3 major segments:

1. Domestic Transportation:
 - a. Road Transportation
 - b. Rail Transportation
 - c. Air Express Transportation
2. Cross Border Transportation
3. Supply Chain Services

Domestic Road Transportation: Domestic Road Transportation represents the movement of freight over the road network within India. It is vital for the economic development and social integration of the country. Easy accessibility, flexibility of operations, door-to-door service and reliability have earned road transportation higher share of freight traffic in comparison with other mode of transportation.

Domestic Road transportation is segmented into three segments based on the subject shipment and shipment turnaround time:

1. **Express Parcel Delivery:** A timely domestic road transportation service of which the subject shipments are eCommerce shipments, speed posts, or document couriers, with a typical shipment turnaround time of less than 3 days and weight less than 40 Kilograms.
2. **PTL or Part Truck Load:** A domestic road transportation service of which the subject shipment is less or lighter than a full truckload, which allows multiple shippers to move shipments from one location to the other. PTL services can be further segmented into Slow/Traditional PTL and Express PTL services each having a typical shipment turnaround time of more than 4 days and 2-4 days respectively.
3. **TL or Truckload:** A domestic road transportation service of which the subject is a dedicated shipment of a truck/trailer, typically moving directly from the point of departure/origin to the point of destination through line-haul.

Domestic Rail Transportation: Domestic Rail Transportation represents the movement of shipments over the railways network.

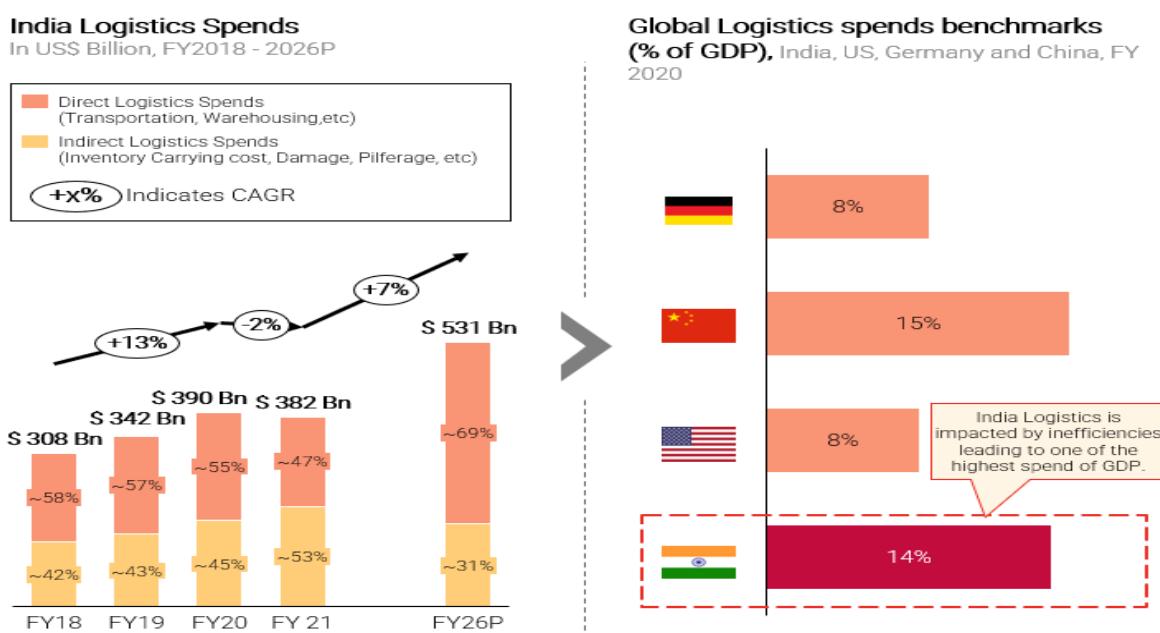
Rail Transportation is one of the most cost-effective modes of bulk freight transportation of which the subject shipments are mostly commodities like coal, iron ore, cement, fertilizers, food grains, mineral oil, and raw materials for steel plant.

Domestic Air Express Transportation: Domestic air express transportation represents the movement of shipments within domestic pathways using the cargo and passenger planes belly.

Cross Border Transportation: Cross Border Transportation represents the movement of shipments within international pathways via cargo and passenger planes belly and ships.

Supply-chain services: Supply-chain services represents two or more services like transportation, warehousing and fulfilment and other value-added services. Integrated supply chain services are an evolved form of logistics services where third party service providers provide holistic solutions. Unlike single service providers, they have capabilities of providing full range of logistics services – Express delivery, TL, PTL, warehousing, and other value-added services.

Logistics spends in India is estimated at US\$~380 Bn in FY21 and is projected to grow at CAGR of ~7% to become US\$~530 Bn by FY26.



Source (s): Chamber of Commerce – India, Report on Logistics, India Economics Survey 2017-18, 2019-20, RedSeer estimates

The Indian logistics sector is one of the largest in the world and is critical for the country's economic growth. As of FY21, Indian logistics market size stood at US\$382 billion and is projected to grow to US\$531 billion by FY26, driven by the following factors:

- Strong demand from manufacturing (led by "Make in India" campaign), retail, automotive and pharmaceutical sectors and need for efficiency improvement in the newly created demand.
- Increasing shift of industry preferences towards integrated supply-chain services and other sophisticated solutions like inventory optimization and data analytics from isolated offerings like transportation or warehousing.
- Growth of eCommerce in India and demands for specialized needs of online delivery (faster delivery, return management, cash-on delivery etc.)

India's logistics spend, as a percentage of GDP, is significantly higher compared to developed countries³, largely due to high incidence of indirect spends. This is similar to China (~15%) as against ~8% in US and Germany.

Direct logistics accounted for ~55% of overall spends (~8% of GDP) in FY20. This includes spends on transportation, packaging, processing, warehousing, and supply chain management. Total direct spend on logistics was US\$~216 billion in FY20 and is projected to reach US\$~365 billion by FY26. The growth in logistics spend to be driven by strong underlying economic growth, a favorable regulatory environment, growth of domestic manufacturing, rapid growth of the digital economy and improvements in India's transportation infrastructure

³ Developed countries here refers to USA and Europe

Logistics market has fragmented and unorganized supply and as a result, organized players⁴ accounted for only ~3.5% in FY20, ~5.5% in FY21 and is projected to reach 12.5-15% in FY26. The organized market is projected to grow at a CAGR of ~35% in FY20-26. Growth in organized market to be driven by following:

1. Changing customer expectations: Fundamental review of supply chain footprints due to GST, demands of servicing needs of online commerce and quicker delivery while reducing wastages, pilferage and losses.
2. Increasing demand for end-to-end services, need for real-time, data-driven decision-support systems, control towers
4. Capability to offer integrated and value-added services to customers
5. Superior ability to offer flexible and customized solutions with ability to leverage technology and data
6. Ability to bring higher efficiencies thus driving lower costs through large established networks
7. Increased potential of organized players for IT integration with customers
8. Higher demand for scaled up operations, with track record of safety and regulatory compliance

Indirect logistics expenditure includes optimizable costs such as inventory carrying costs and avoidable costs such as pilferage, damage, wastage which arise due to market inefficiencies. Currently, indirect logistics spends account for near to 45% of the overall logistics spend (~6% of India's GDP), compared to 10% for developed countries. Indirect spends were estimated at US\$174 billion in Fiscal 2020 and are expected to marginally decline to US\$166 billion by Fiscal 2026. This reduction will be led by organized players through below mentioned drivers. Following are the drivers for decreasing indirect costs:

1. **Improving Turnaround Time:** Infrastructure development, removal of border check posts post GST, rebalancing of modal share in freight movement and regulatory reforms such as LEEP (Logistics Efficiency Enhancement Program) and NLP (National Logistics Policy) simplifying compliance and reduce costs
2. **Reducing Inventory Carrying Costs:** Better demand-supply matching, centralized warehouses and tech integration & enablement (live tracking, dynamic route mapping) reducing inventory carrying cost.
3. **Pilferage, Damages and Wastages:** Skilled labour employed by organised players, better material handling systems including for specialty and perishable goods, Increasing automation in warehouses and better shipment tracking through QR Code, RFID etc

2.1.2 Market inefficiencies and disruptions by tech enabled logistics

Logistics market inefficiencies exist due to market characteristics, which are now disrupted by tech-enabled new-age logistics service providers

Key characteristics creating structural inefficiencies in Indian Logistics market are:

- **Fragmented supply:**

⁴ Organized market penetration has been taken for penetration in road transportation, warehousing & supply-chain services

- India logistics is highly fragmented compared to other markets such as the US and China. The top 10 organized players account for ~2% of the direct logistics market in India versus ~15% and 10-15% in the US and China respectively. Despite GDPs that are only 8x and 5x of India, the largest players in the US and China are ~35x and ~32x of the largest logistics player in India. Both China and the US and other developed economies have a number of integrated logistics players compared to India which is characterized primarily by monoline service providers. The two most unorganized sectors dominate the logistics market—Road transportation and warehousing.
- Truck ownership is highly fragmented & unorganized in India. More than 85% of fleet owners are small (fleet size less than 20 trucks) and owns older 2-axle rigid trucks (driving less than 325 kms/day on an average). These trucks incur higher fuel costs and operates beyond the government prescribed load carrying limits. The owners lack the flexibility to offer services on multiple routes and are unable to take the most optimized routes due to lack of real-time traffic data. High fragmentation has resulted in high degree of intermediation across the logistics value chain resulting in additional layers and higher costs within the value chain.
- Similarly, warehousing is also fragmented and unorganized, characterized by a large number of small warehouses (less than 10,000 square feet) that account for nearly 90% of the warehousing space in India
- While the US and China markets have large players that integrate across the logistics value chain, the Indian market is unique in that most incumbents are regional or vertical focused and are unable to offer a wide range of services. Similarly, most incumbents are either focused on B2C segments or the B2B segments but do not cater to both segments
- **Slow turnaround:** India witnesses slower turnaround compared to developed economies. An average truck in India travels about 325 kms per day compared to global average of ~500 kms per day due to poor road conditions, under-developed inter-modal connectivity, inadequate route optimization, manual loading and unloading processes at warehouses.
- **Under-investment in technology, infrastructure, design and engineering capabilities:** Indian logistics has witnessed chronic under-investment in technology, network design and infrastructure and engineering capabilities, due to sub-scale nature of majority of the players. Due to their low scale, these players have been unable to undertake sizeable investments in critical technologies and infrastructure and to execute large scale automation and build technology and engineering teams
- **Lack of skilled labor and automation:** A large part of the logistics market is operated by unskilled labor. They are traditionally equipped to handle manual operations – like picking, packing, loading, and unloading and are not well trained to operate new technology resulting in multiple inefficiencies in operations. A major portion of these activities can be automated using state-of-the-art automated sorters and modern technology that can improve efficiencies significantly. Majority of logistics businesses in India have been family-owned and managed which has resulted in severe inability to attract, retain, and incentivize qualified and trained talent across functions which has further resulted in these organizations being unable to innovate as required by the changing industry landscape.

- **Lack of data capabilities:** Traditional logistics players lack sophisticated data capabilities including data stacks which results in lack of data intelligence and business analytics for real-time decision making and also reliance on heuristics for decision-making
- **Non-integrated institutional players:** Majority of the institutional logistics players have specialized offerings and do not cover the overall ecosystem of logistics leading to a lack of integrated service providers. This non-integration leads to multiple inefficiencies across demand-supply matchmaking, variance in freight costs and timelines. This has a direct implication on the contribution margins leading to poor operating leverage and an inefficient price discovery for the end customer.

Factors for High Logistics Spends, Inefficiencies and Underinvestment in Indian Logistics:

1. **Historically complex indirect taxation structure:** Prior to rollout of GST, India's complex indirect tax regime impeded smooth inter-state movement of goods. As a result, traditional players remained regional and sub-scale, resulting in significant inefficiencies. Pre-GST, ~60% of travel time was lost due to onerous paperwork and tax compliance procedures at inter-state checkpoints. Similarly, companies focused on tax savings, instead of cost efficiencies resulting in building of multiple localized sub-scale warehouses.
2. **Poor road infrastructure:** India's road connectivity has historically been underdeveloped in terms of quality and connectivity. As a result, Indian trucks travel significantly lower distances (~325 kilometers per day) compared to the global average of 500 to 800 kilometers. This has resulted in longer turnaround times, higher fuel and maintenance costs and opportunity costs of lost business. Similarly, poor quality of roads has resulted in accelerated depreciation of trucks, further exacerbated by inadequate maintenance undertaken by fleet owners.
3. **Inability to attract high quality talent:** Majority of logistics businesses in India have been family-owned and managed which has resulted in severe inability to attract, retain and incentivize qualified and trained, high quality and professional talent across functions which has further resulted in these organizations being unable to introduce new practices and innovate as required by the changing industry landscape.
4. **Spot market dominance:** The Road Transportation market today operates as a giant spot marketplace comprising of all agriculture & MSME transportation needs, and non-contractual bookings by the transportation partners of manufacturing and retail firms. According to the National Freight Index, at least 80% of the truck bookings in India happen through the spot market.

Key issues faced in the spot market by companies include:

- a. Lack of transparency in price and last-minute deal discovery creates an artificial sense of urgency in shippers leading to inefficient cost management
- b. As truckers hold information till the last moment, the prices of trucks moving on popular lanes gets inflated forcing shippers to select inefficient routes to get lowest cost quotations

Growing market consolidation and organized growth in India logistics

B2B demand and consumption patterns are undergoing changes due to a combination of factors including changes in respective industries and evolution of regulatory landscape

B2B demand for logistics is driven by the competitive intensity of underlying industries as well as rise of digital commerce, which is leading to new segments, new channels & go-to-market strategies, such as direct-to-retail and direct-to-consumer. These trends are causing companies to demand visibility, precision and value-added services for their supply chains. Similarly, B2B demand for logistics is shifting towards full-stack integrated offerings services from a single service provider instead of monoline services from multiple service providers. Customers realize that they can rely on technology capabilities of 3PL players to improve compliance through integration between enterprise-wide systems and supply chain systems.

Increasing consumer demand from Tier 2+ towns require TAT and reliability comparable to urban centers, thereby requiring logistics service providers to navigate relatively inferior infrastructure while delivering comparable service quality. Similarly, customers demand consistent timeliness and high service quality from logistics service providers while lowering unit costs along with omni-channel fulfilment and transportation capabilities.

With the rollout of GST, enterprise customers are increasingly looking to optimize their supply chains for speed and efficiency. This shift towards a “total-cost” approach is driving the demand for reliable, national, integrated supply chain service providers instead of traditional, mono-line partners.

The emergence of new digital-native segments, new distribution channels and go-to-market strategies such as direct-to-retail (D2R) and direct-to-consumer (D2C) are driving the need for innovation in the traditional B2B supply chain, with greater demand for supply-chain visibility, precision and value-added services.

Changes in production trends to drive demand for PTL and TL services

Manufacturing has emerged as one of the high growth sectors in India on the back of strong push by the Indian government through the Make in India Campaign. Manufacturing accounts for 17% of India's GDP and has emerged as a high-growth sector on the back of strong push by the Indian government through initiatives like Make in India, production-linked incentives (PLI), government tenders for domestically manufactured goods etc. As a result, Indian manufacturing has been transitioning from bulk commodities to non-commodity consumption-focused products which need faster go-to-market and more reliable and efficient logistics operations. Various measures such as production-linked incentives (PLI), government tenders for domestically manufactured goods and other incentives for industries such as electronics, pharmaceuticals, infrastructure, telecom equipment etc have led to a surge in manufacturing activity, which has consequently led to surge in demand for raw materials and inputs. This heightened flow of raw materials and finished goods across the country has led to increase in demand for road transportation services across both PTL and TL.

Further, secular adoption of technology and digital transformation has been spurring innovation and adoption of newer production techniques such as distributed local manufacturing, loosely coupled manufacturing ecosystems and an increased focus on agile manufacturing methods at larger operations. Some of the major trends and changes witnessed in the production methods which will spur demand for differentiated PTL and TL services are captured below:

Smart production spaces: Production facilities that combine technologies such as AI, IoT and analytics to dynamically coordinate across production and distribution processes in a flexible and automated manner

Additive Manufacturing: 3D printing is a transformative approach to industrial production which is driving quicker prototyping and testing of product-market fit, which in turn brings digital flexibility and efficiency to manufacturing operations

Operational excellence and scalable platforms: Companies are increasingly ramping up digital and data capabilities to create lean, scalable manufacturing operations. These measures include automation of assembly lines, digital architecture for back-offices, digitizing supply chains, and moving customer sales and service interfaces online.

For these measures to be successful, companies require their logistics partners to be agile, flexible, scalable and technologically advanced. Organized logistics players are best positioned to take advantage in the growing offline commerce across industrial activities, offline consumption and growing cross-border trade.

Government has taken several initiatives to promote a healthy environment for the growth of manufacturing sector in the country. Some of the notable initiatives and developments are:

- The government approved a PLI scheme for 16 plants for key starting materials (KSMs)/drug intermediates and active pharmaceutical ingredients (APIs). The establishment of these 16 plants would result in a total investment of Rs. 348.70 crore (US\$ 47.01 million) and generation of ~3,042 jobs. The commercial development of these plants is expected to begin by April 2023.
- As part of efforts to expand its smartphone assembly industry and improve its electronics supply chain, the government, in March 2021, announced funds worth US\$ 1 billion in cash to each semiconductor company that establishes manufacturing units in the country.
- The Union Budget 2021-22 is expected to enhance India's domestic growth in manufacturing, trade and other sectors. Development of a robust infrastructure, logistics and utility environment for the manufacturing sector is a primary focus area.
- In July 2021, the government launched six technology innovation platforms to develop technologies and thereby, boost the manufacturing sector in India to compete globally.
- To propagate Make in India, in July 2021, the Defence Ministry issued a tender of Rs. 50,000 crore (US\$ 6.7 billion) for building six conventional submarines under Project-75 India.
- In July 2021, the Ministry of Commerce and Industry announced that 104 start-ups from sectors, including food-tech, green energy, defence, education-tech, and health-tech, have joined 'Start-up India Showcase', an online discovery platform for the country's most promising start-ups that provides various social and digital connectivity opportunities.
- In May 2021, the government approved a PLI scheme worth Rs. 18,000 crore (US\$ 2.47 billion) for production of advanced chemical cell (ACC) batteries; this is expected to attract investments worth Rs. 45,000 crore (US\$ 6.18 billion) in the country, and further boost capacity in core component technology and make India a clean energy global hub.

- In India, the market for grain-oriented electrical steel sheet manufacturing is witnessing high demand from power transformer producers, due to the rising demand for electric power and increasing adoption of renewable energy in the country
- In line with this, in May 2021, JFE Steel Corporation in collaboration with JSW Steel Limited (JSW) signed a MoU to evaluate a study to establish a grain-oriented electrical steel sheet manufacturing & sales joint-venture company in India.
- To facilitate manufacturing and investment in sectors such as ICT and telecom, in May 2021, TEMA (Telecom Equipment Manufacturers Association of India) signed a collaboration deal with ICCC (Indo-Canada Chamber of Commerce) to promote 'Make in India' and 'Self-reliant India' initiatives.
- India's display panel market is estimated to grow from ~US\$ 7 billion in 2021 to US\$ 15 billion in 2025.
- The Mega Investment Textiles Parks (MITRA) scheme to build world-class infrastructure will enable global industry champions to be created, benefiting from economies of scale and agglomeration. Seven Textile Parks will be established over three years.
- The government proposed to make significant investments in the construction of modern fishing harbours and fish landing centres, covering five major fishing harbours in Kochi, Chennai, Visakhapatnam, Paradip, and Petuaghata, along with a multipurpose Seaweed Park in Tamil Nadu. These initiatives are expected to improve exports from the textiles and marine sectors.
- The 'Operation Green' scheme of the Ministry of the Food Processing Industry, which was limited to onions, potatoes and tomatoes, has been expanded to 22 perishable products to encourage exports from the agricultural sector. This will facilitate infrastructure projects for horticulture products.

The Union Budget 2021-22 allocated funds of Rs. 1,000 crore (US\$ 137.16 million) for the welfare of tea workers, especially women and their children. About 10.75 lakh tea workers will benefit from this, including 6.23 lakh women workers involved in the large tea estates of Assam and West Bengal.

2.1.3 Infrastructure Development and Govt. Policies impacting logistics sector

The Indian government has undertaken several regulatory and policy reforms to drive economic growth, enhance general capital formation, support infra-development and facilitate ease of doing business. Some of these measures have directly benefited the Indian logistics sector, such as implementation of Goods and Services Tax ("GST"), National Logistics Policy and Logistics Efficiency Enhancement Program. These measures are rationalizing the indirect tax structure, improving transportation infrastructure and expanding connectivity, thereby improving overall logistics efficiency.

GST in particular has been a key factor catalyzing the growth of organized logistics in India. By eliminating state border checkpoints and compliance scrutiny, GST has facilitated smoother and faster flow of goods across the country and significantly reduced overall transportation costs. In addition, GST has eliminated the previous need for companies to establish localized warehouses to minimize inter-state movement and associated taxes. The

single tax regime allows for consolidation of warehouses into larger units that benefit from economies of scale and that are better suited to benefit from technology adoption.

This has created increased demand for pan-India, integrated warehousing and transportation models which allow customers to scale operations with low fixed costs while creating opportunities for optimizing footprints and capacity utilization, lower inventory and faster and cheaper fulfilment. These changes will therefore enhance the role of large, organized logistics players, while reducing customer dependence on smaller transportation companies that thrive principally on last-mile delivery consignments and also favour asset-light networks that are equipped to realign their infrastructure and network in response to changes in their customers' operations.

Organized logistic players have infrastructure advantage due to their large real estate footprint, leveraging India's regulatory reforms & infra-development and general capital formation.

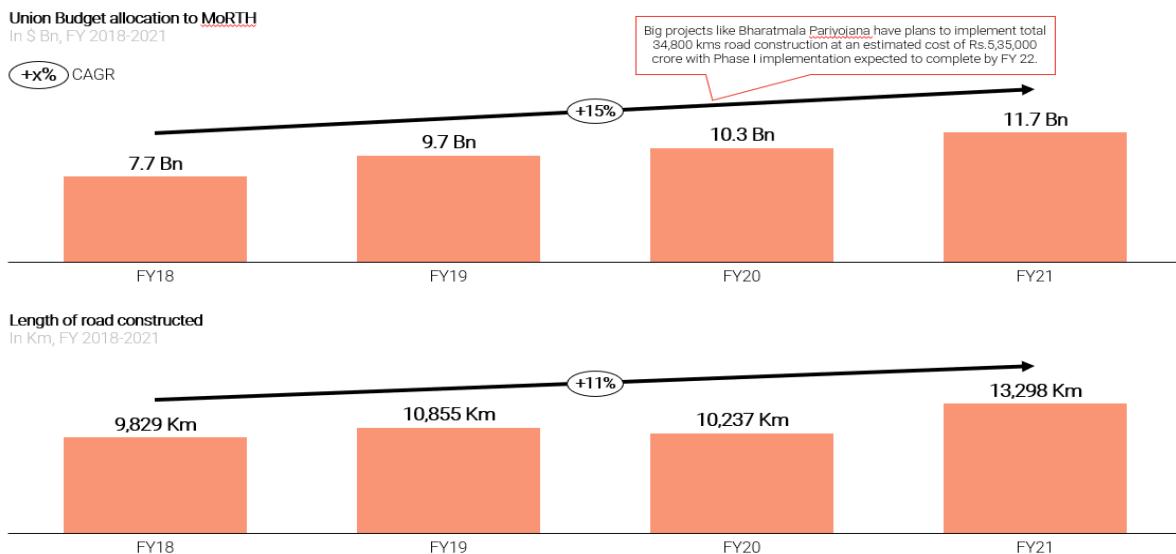
As per the Union Budget announced on Feb 1, 2022, the government has provided additional boost to the logistics and infrastructure development by enforcing key plans and schemes like:

1. **PM Gati Shakti Yojana** i.e., a national master plan for Multi-modal connectivity with a provisional deployment of Rs 100 lakh crores in the scheme
2. **Multiple PLI Schemes** in the Semiconductor, Auto, Solar power development and manufacturing industries. Total outlays are mentioned below:
 - a. Outlay of INR 76,000 Crores in the Semiconductor PLI
 - b. Outlay of INR 26,400 Crores in the Auto Industry PLI
 - c. Additional outlay of INR 19,500 Crores to manufacture high efficiency modules in the Solar power PLI
 - d. PLI Schemes for design led manufacturing for 5G

Apart from this, the government has introduced several new policies to boost growth in the manufacturing, infrastructure and automobile industries.

1. Automobiles Industry:
 - a. Battery swapping policy with interoperability standards
 - b. Energy and battery as a service by private sector
 - c. Clean tech and governance solutions, special mobility zones with zero fossil fuel policy proposed
2. Infrastructure:
 - a. National highway to be expanded by 25000 Km
 - b. Manufacture of 400 Vande Mataram trains
 - c. Additional funding of village infrastructure, housing, road connectivity
3. Manufacturing:
 - a. Duty concessions for domestic manufacturers of electronic items
 - b. Concessional tax regime of 15% for newly incorporated domestic manufacturing companies
 - c. Tariff and import duty exemptions on inputs of capital goods further encouraging domestic manufacturing
 - d. Removal of exemptions on items which can be / are manufactured in India

Government is focused on road network towards reducing inefficiencies in road transportation.



Note(s): MoRTH stands for Ministry of Road Transport and Highways
Source(s): Union Budget Document

The government has allocated Ministry of Road Transport and Highways (MoRTH) US\$11.7 Bn for FY2020-2021 and increased the allocation to US\$~15.5 Bn for the FY2021-22, the higher ever allocation for the ministry. With the increase in the investment, MoRTH has built ~13,000 km of roads at a record 36 km per day in FY 2021.

Favorable Govt. policies and reforms aimed at cost reduction and efficiency enhancement and promoting adoption of advanced technological applications

Key Policies / Reforms	Impact / Implication
GST roll out	<ul style="list-style-type: none"> Logistics market was one of the most benefitted sector post implementations of GST as it reduced a wide scale of inefficiencies in transportation and warehousing. GST roll-out dissolved the indirect tax system and phased out border check posts. This improved operational efficiencies through quicker and increased frequency of transportation. As per World Bank estimates, Indian corporates have a potential saving of 30-40% of logistics costs incurred due to stoppages at various tolls & posts. GST is also driving warehouse and trucking consolidation leading to emergence of organized and tech enabled logistics players in the market who are more cost-effective and prevent high value loss in the system.
National Logistics Policy	<ul style="list-style-type: none"> In the Union Budget 20-21, Government of India announced a new National Logistics Policy (NLP) which will create a single-window e-logistics market and focus on employment generation, skill development and efforts to make medium and small enterprises competitive.

BS VI	<ul style="list-style-type: none"> <i>Bharat Stage Emission Norms are emissions standards set by the GOI which have been effective since April 2020. The norms aim to reduce pollutant emissions from motor vehicles & improve vehicle efficiency.</i>
Amendment of Central Motor Vehicle Rules 1989	<ul style="list-style-type: none"> <i>The MoRTH amended Rule 93 of CMVR 1989 to increase allowances in the height, axle length and de-coupling of N category vehicles. The initiative has enabled increase in overall truck carrying capacity and accentuated profit margins in Road transportation.</i>
Drone Policy	<ul style="list-style-type: none"> <i>Drone policy was drafted to improve the ease of doing business by simplifying & relaxing the certification, authorization & permit process of using drones. This makes it easier for companies to own & use a drone.</i>
FAME II	<ul style="list-style-type: none"> <i>FAME II is a subsidy scheme by the GOI promoting the deployment of Electric Vehicles (EVs) and associated charging infrastructure for freight EVs. The aim is to accelerate the manufacturing and uptake of electric vehicles and reduce total carbon emission contribution by road transportation. Use of EVs in road transportation would reduce the cost of fuel, thereby increasing profitability.</i>
Scrapage Policy	<ul style="list-style-type: none"> <i>The scrappage policy along with deepening of hub & spoke logistics and increasing demand for better vehicle productivity / freight movement efficiency is expected to reduce the share of multi-axle rigid-trucks on the road and lay the path for efficient & high powered, tech-enabled, longer tractor-trailers with a higher freight carrying capacity.</i> <i>This is expected to substantially reduce the overall freight transportation costs in the country leading to a 'point-of-inflexion' between the volume of tractor-trailers and rigid trucks being deployed in India</i>
Bharatmala Pariyojana	<ul style="list-style-type: none"> <i>The Bharatmala Pariyojana is an integrated highways development program to bridge critical infrastructure gap through 9,000 kms of economic corridors, 6,000 kms of feeder routes, 2,000 kms of coastal roads</i> <i>This network will cater to ~70% of freight volume and connect ~550 districts</i>
Logistics Efficiency Enhancement Program (LEEP)	<ul style="list-style-type: none"> <i>LEEP is designed to improve freight transportation efficiency including the associated costs, transportation time and logistical practices like goods transferring and tracking through infrastructure technology and process interventions.</i>
National Infrastructure Pipeline	<ul style="list-style-type: none"> <i>Government has launched the National Infrastructure Pipeline (NIP) for the period FY 2020-2025, committing an investment of INR 102 trillion on infrastructure bouquet of projects in road, railways, civil aviation, telecom, housing, and others.</i> <i>Five major industrial corridors, the Delhi-Mumbai Industrial Corridor (DMIC), Amritsar-Kolkata Industrial Corridor (AKIC), Chennai-Bengaluru Industrial Corridor (CBIC), Visakhapatnam-Chennai Industrial Corridor (VCIC), and Bengaluru-Mumbai Economic Corridor (BMEC), have been approved by the government for faster freight movement.</i> <i>The government has announced the development of 35 Multi Modal Logistics Parks (MMLP) at strategic locations to enable efficient intermodal freight movement.</i>
Make in India	<ul style="list-style-type: none"> <i>A government initiative to promote domestic manufacturing of products and infrastructure by providing dedicated investments. It aims to increase domestic manufacturing resulting in higher demand for freight movements and need for supply chain solutions.</i>
Digital India	<ul style="list-style-type: none"> <i>A key enablement of road logistics has been the government's initiative to enhance the load-carrying limits across all "N category" commercial vehicles (including trucks) and allowing swapping of trailers.</i>

Source(s): RedSeer Research

National Logistics Policy is expected to create the next big impact in driving logistics market efficiencies post GST – It aims to optimize administrative and assets-related costs and enable digitization

NLP - Policy Architecture

NLP – Key Parameters		Impact on Logistics Efficiency		
		Administrative	Storage & Assets	Digitization
One Nation One Contract	<ul style="list-style-type: none"> India's logistics sector remains complex with 20 government agencies, 37 export promotion councils, 500 certifications, 50 IT ecosystems, banks and Insurance agencies. Unified policy, regulatory environment and an overarching institutional framework would be established to increase Competitiveness. 	Less time for government approvals. Greater regulatory consistency and ease of business.		
Standardization	<ul style="list-style-type: none"> Support to be provided for Central/State ministries to standardize physical assets, equipment, processes, documentation, accounting, and digital payments. The aim is to reduce costs and improve the efficiency and performance index of the country. 		Standardization will ensure interoperability of logistics assets and increase efficiency	
Modern Warehousing	<ul style="list-style-type: none"> A framework for accelerated development of warehousing, benchmarking and rating, adoption of technology enabled solutions etc. A national register of geo-tagged warehouses would be developed to facilitate optimal utilization. 			Geo-Tagged warehouses will increase efficiency in tracking. 5.6 on average spent between two stops.
Digital Transformation	<ul style="list-style-type: none"> iLog (India Logistics) Platform to provide a single-point interface for B2B and B2G processes. Logistics Monitor to provide real-time assessment of utilization and operational performance of logistics infrastructure, and support planning for future infrastructure requirements 	Established players like Delhivery that deal with FMCG and have large logistics teams are at an advantage		Allowing secured exchange of data, and removing information asymmetries in logistics market.

Source(s): Indian railways 2.0 (Jan 2021) report by FICCI, RedSeer Research

The National logistics Policy has specifically been a major catalyst to integrate multiple modes of transportation, documentation and administrative procedure and bring about high efficiencies in the overall process. This would optimize overall cost of transportation, improve timelines, and increase flexibility in the overall logistics ecosystem.

Emergence of Tech enabled new age logistics service providers

Tech-enabled new-age logistics service providers are defined as providers that uses modern technologies as key driver in providing supply chain services across transportation, warehousing, and fulfilment etc. They are creating new structural capabilities in the supply chain ecosystem and enables significant cost and time optimization. Availability of data such road network information, weather data and telemetry data from IOT devices enables organized players to make better decisions on route and fleet management. With technology at the core of their capabilities, these players have built sophisticated proprietary technology systems and are investing in data sciences (AI & ML,) cutting edge engineering & automation and new age technologies – Vision ML, drones, and robotics.

Tech-enabled new-age logistics service providers are disrupting every aspect of the supply-chain

Broad tech disruptions by technology in supply-chain are below:

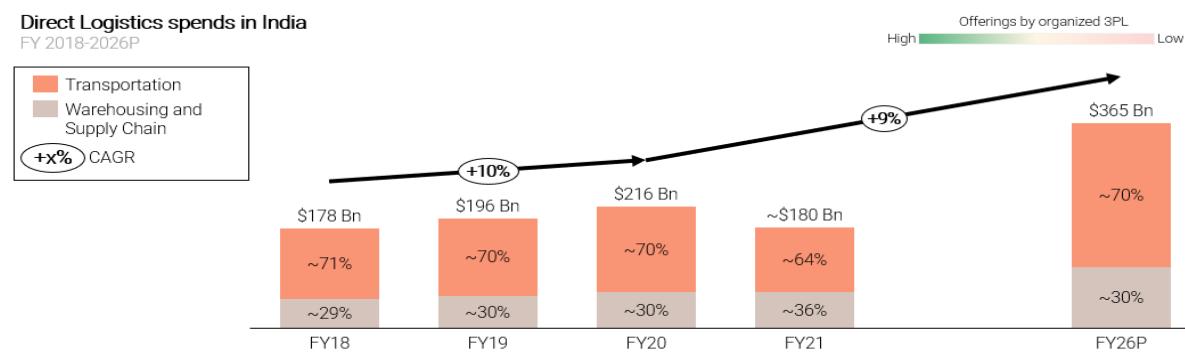
- **Better capacity utilization:** Freight movement in India today is highly fragmented, so much so that an average truck is moving at ~70% fill-rate. The issues are predominant on single-lane highway routes where order densities are poor. Many trucks are facing an issue of seasonal demand and stay garaged for months while others are overflowing with orders and unable to service. Trucks also face issues in finding return loads from a destination and charge the customers for the cost of moving an empty truck back to the origin.
 - New-age tech enabled logistics service providers are solving this by leveraging on big data and using AI/ML to provide strategic guidance for on-ground service optimization for industry clients.
- **Network consolidation:** Indian logistics market is impacted with a fragmented supply and spot market driven high price variance.
 - The use of technology brings in the power of scalability creating a wide opportunity for transparent pricing, real-time freight tracking and effective utilization of supply resources.
- **Effective demand-supply matching:** According to Niti Ayog, unplanned freight dispatches inflate total freight transportation costs by 5-10%.
 - Platformising demand has created multiple avenues for customers to get real-time transparency on freight rates and effective demand-supply matching.
- **Data Driven decision support :** With the rising infrastructure and policy developments in India, Industry preference is increasing towards faster and more frequent shipment dispatches at optimized costs.
 - Advanced data analytics capabilities when applied to integrated supply chain data has enabled new-age players to create more opportunities to optimize decisions such as facility placement, inventory management, fulfilment route selection, truck selection and fraud detection.
- **Hardware and software automation:** Warehouse and Transportation Management Systems (WMS/TMS) are automating business workflows, reducing paperwork and improving operational visibility and precision. Further, investment in automation and robotics are improving operational throughput and precision, thereby lowering human errors and operating costs.

All the above-mentioned trends, fast-paced growth, regulatory changes and infrastructure development provide a fertile ground for scaled and integrated technology-led logistics players to provide a suite of low-cost, scalable, reliable and efficient logistics services. Smaller players who are focused on specific niches and use cases are likely to partner with the large and scaled players for technology support.

2.2 Indian Logistics Market – Deep-dive into Key Segments

Transportation is the largest component of India's logistics market, accounting for ~70% of total direct logistics spend in FY2020

The Indian logistics market presents a large addressable opportunity, with direct spends on logistics of US\$216 billion in Fiscal 2020 and is expected to grow to approximately US\$365 billion by Fiscal 2026 [at a CAGR of 9%.]



Source (s): RedSeer Research, RedSeer Estimates

The direct logistics market is primarily comprised of transportation and warehousing, of which transportation accounted for 70%, or US\$151 billion in FY 2020.

Organized players accounted for only ~3.5% of the logistics market segments⁵ in Fiscal 2020. Organized players are expected to grow at a CAGR of ~35% between Fiscal 2020 and Fiscal 2026, taking their share to 12.5-15% by Fiscal 2026. This shift is expected to be driven by the ability of organized players to offer integrated services, network and scale-driven efficiencies and larger investments in technology and engineering, resulting in higher share of wallet with customers.

Organized players offer services along two types:

1. Offerings for logistics segments:
 - a. Transportation
 - b. Warehousing
 - c. SaaS solution offerings
2. Ancillary services:
 - a. Partner financing
 - b. Freight insurance
 - c. Fuel cost

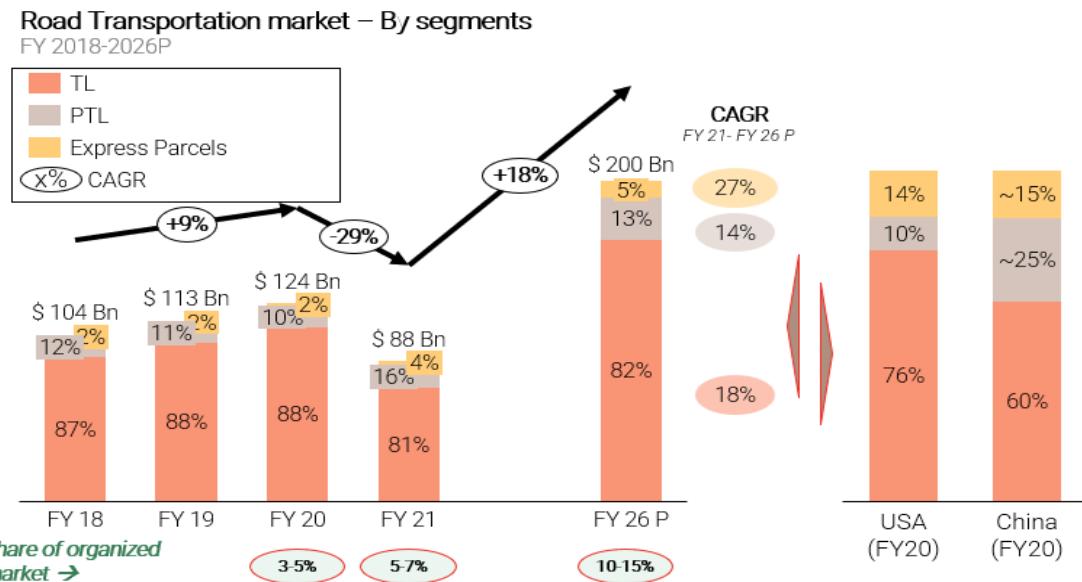
Currently, organized logistics players cater to the core logistics segment (transportation, warehousing) with large headroom for growth in ancillary services. Transportation accounts for 85-90% of the total revenue of organized players followed by 10-15% of revenue from warehousing. Value-added services account for less than 1% of revenue in FY2020.

⁵ Logistics market segments include Road Transportation and Warehousing & Supply chain services only

2.2.1 Road Transportation

Road transportation is the largest market for freight movements in India offering the lowest costs for short/ medium goods movements, fewer touchpoints, and higher flexibility

Source(s): RedSeer Research, RedSeer Estimates



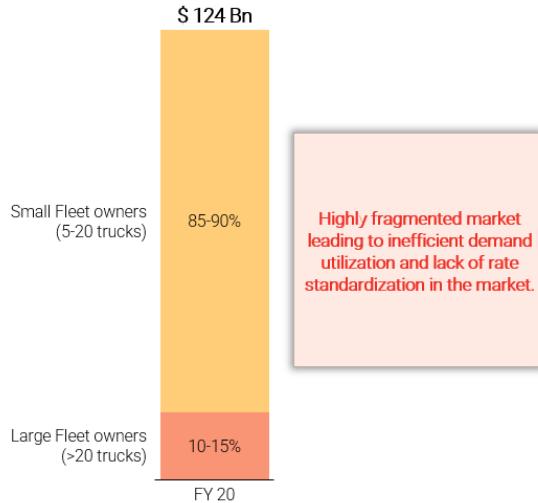
With total length of national highways reaching 150,000 kilometers, India has second largest road network in the world. The Road Transportation market was estimated at US\$~124 Bn in FY20 and is projected to grow at CAGR of ~8% to become US\$~200 Bn market in FY2026.

Truckload (TL) is the largest segment of road transportation due to its strong adoption by manufacturing and automobile companies. PTL, less than truckload, is the fast-growing segment due to the flexibility of usage, cost, and growing demand for small shipment transportation. PTL market grew faster during COVID and gained share from TL due to shortage of drivers in COVID-19 lockdown.

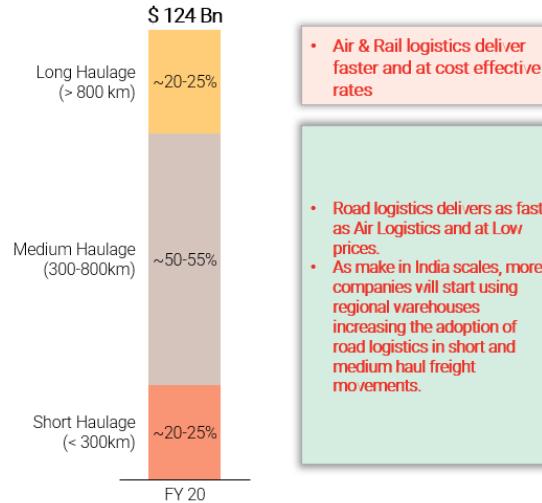
Express Parcel Delivery market is the fastest growing transportation segment driven by sharp growth in ecommerce, D2C and social commerce market.

Supply in road transportation is highly fragmented and it is primarily used for medium and short haulage movements of freight

Road transportation market -By truck ownership
In %



Road transportation market – By distance travelled
In %, reason for market fitment of road logistics in description

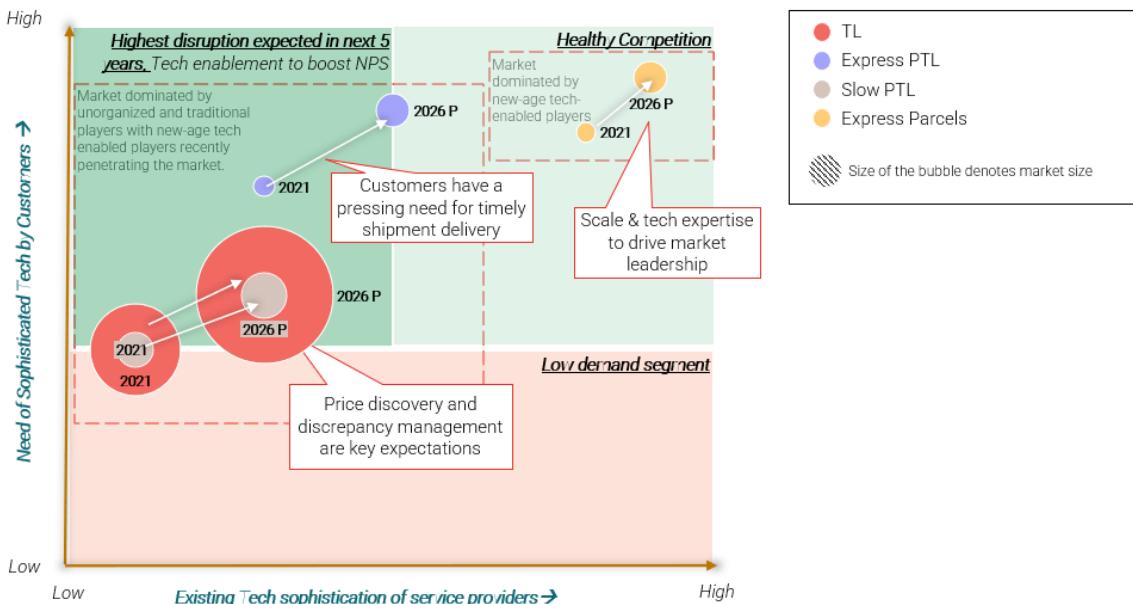


Source (s): RedSeer Research

Road transportation has a strong positioning in short and medium haulage (70-80% market movements happen across short and medium haulage) by providing quick and cost-effective services. The freight is transported point to point with ability to do more pitstops unlike rail and air, that uses hub-and spoke for transportation. The fragmented nature of the industry (85-90% truckers are small fleet owners owning < 20 trucks) creates several inefficiencies across the value chain.

Gaps in tech sophistication in customer demand and supply across different road transportation segments; Demand for tech sophistication across customer type is increasing

Need-gap assessment of tech infrastructure
2021 and 2026P



Source(s): RedSeer Research, RedSeer Analysis

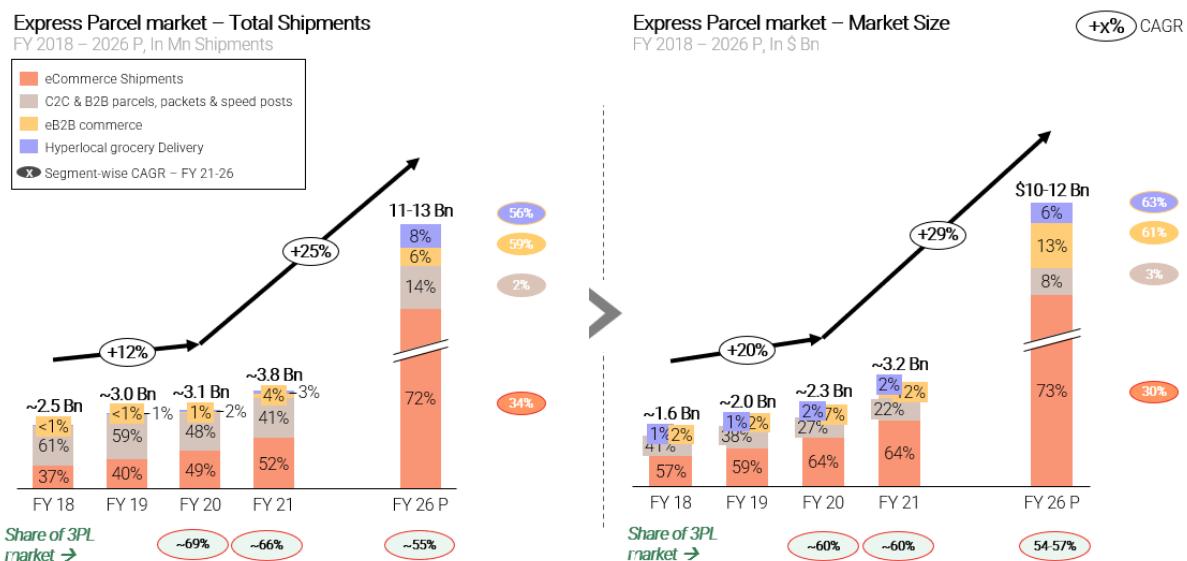
Following trends are observed road transportation market:

- Increasing need for tech disruption in PTL and TL:** With rising customer expectation for tech and its sophistication in PTL and TL market, tech-enabled logistics providers would drive the rapid transformation of the sector
- Stronger need for price discovery and supply-chain solution:** There is a strong need for better price discovery and cost-effective supply chain solutions in the market & customers are therefore moving towards tech enabled service providers
- Disruptions driving tech adoption:** Traction in tech adoption is driven by multiple disruptions in other markets - there is clear case of disruption in logistics via freight exchange, IOT based tracking and other efficiency enhancements

2.2.2 Express Parcel Delivery Market

Express Parcel delivery refers to delivery of parcels in eCommerce & eB2B shipments, Speed Post, and other document with typical turnaround time of less than 3 days. Tech-enabled new-age logistics companies have disrupted the market by providing quicker and cost-effective order deliveries, increased geographical reach, better planning, & processes and better operating leverage.

Total express parcel delivery market in FY2021 is estimated at ~3.8 Bn shipments, leading to US\$~3.2 Bn logistics market. This market is projected to grow at ~29% CAGR by value to become US\$10-12 Bn by FY2026



Note: 1. eCommerce shipments represent shipments in eTailing, D2C, Omni channel, Formalized Social Commerce shipments 2. C2C & B2B parcels, packets and speed posts include non-eCommerce shipments, 3. Express Parcel delivery market size refers to the sum of total fee charged by the logistics company for delivery of the parcel in eCommerce (B2C, B2B), C2C & B2B parcels and speed posts.

Source(s): RedSeer Research, RedSeer Estimate

The Express Parcel delivery market is estimated to be ~\$3.2 Bn in size in FY 2021 and projected to reach \$ 10-12 Bn by FY 2026 at a CAGR of 28-31%.

This segment has emerged in the last decade in response to the growth of marketplaces, direct-to-consumer, and social e-commerce. The following drivers will continue to support the robust growth of this segment:

Internet economy: Proliferation of smartphones and localization of the internet in non-English languages is drawing in new consumers from non-metro locations into the internet economy and creating new demand for online commerce

Category expansion: As more categories go online, consumers are able to shop for an increasing share of their requirements online

New business models: New models such as D2C, social commerce and video and influencer-based commerce are creating new touchpoints and drawing in new consumers to the market

New payment methods: Availability of multiple payment options such as UPI, no-cost EMI, BNPL etc. are driving adoption of digital commerce by more consumers

Value added services: Availability of value-added services such as return logistics and easy replacement policies are enabling e-Commerce players to provide a superior experience to their customers

Third party logistics service providers currently service 66% of the Express Parcel shipments⁶ and are projected to retain their dominance. The Express Parcel delivery market has high entry barriers as it requires cutting-edge, integrated technology implementation enabling faster order deliveries.

Some of the key market trends are summarized below:

Markets	Key trends
eCommerce	<ul style="list-style-type: none"> Other than 2 horizontal e-commerce marketplaces, other players increasingly relying on third-party players
D2C and Social Commerce	<ul style="list-style-type: none"> 100% parcels delivery is outsourced to ensure complete focus on the core product. Players follow the "Plug-n-play" model here.
eB2B	<ul style="list-style-type: none"> Outsourcing is higher as 3PL models serve as a Plug and Play option for fast growing eB2B companies
C2C, BFSI	<ul style="list-style-type: none"> Shifting from traditional players to tech-enabled 3PLs due to faster delivery and lower costs

Market Structure	Entry Barriers	Key Client Segment
<ul style="list-style-type: none"> Organized market dominated by tech-enabled new-age logistics providers 	<ul style="list-style-type: none"> High entry barrier as Express deliveries require large network capabilities, control in supply-chain and tech capability 	<ul style="list-style-type: none"> eCommerce, eB2B, D2C, Social Commerce, Omni Channel, C2C

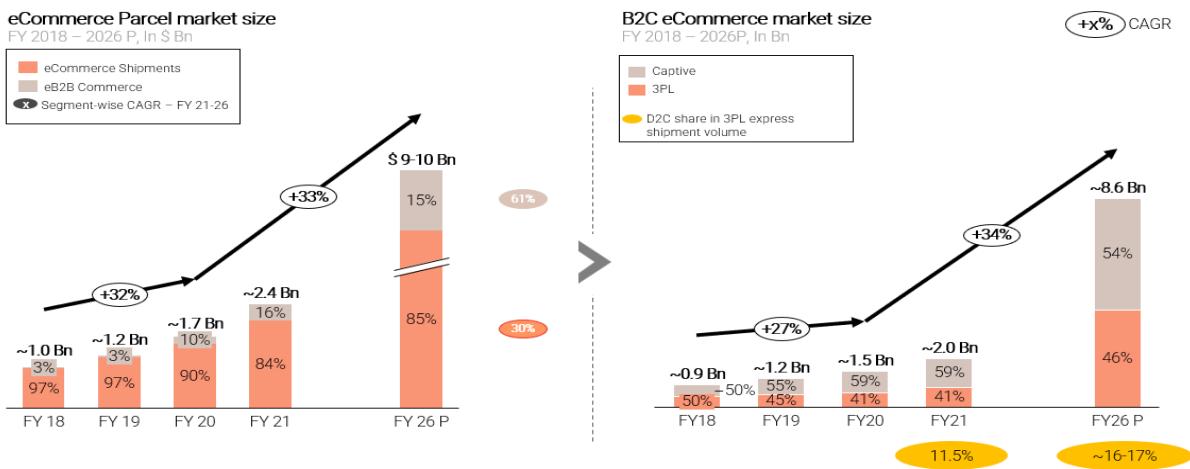
Top players in the express parcel delivery market (based on shipment volume)

The express parcel delivery market is mostly catered to by organized players, who are expected to maintain their share of the market. Major e-commerce marketplaces fulfilled 75%+ of their parcel deliveries through their in-house captive logistics arms. Further, ~59% of total e-commerce shipments in India in FY2021 were handled by captive logistics arms of the various e-commerce companies. 3PL players handled 41% of e-commerce shipments in FY21, which is expected to rise to ~46% by FY26, as e-Commerce companies focus increasingly on core business operations and new-age logistics companies continue to build scale, expand reach and improve delivery timelines. New-age, technology enabled 3PL providers have scaled-up and flexible networks that can better handle multiple models, product types and volume fluctuations, compared to networks which are designed for relatively limited internal use cases

In addition, barriers to entry in this segment have become high, since express parcel delivery requires large reach, scale operations, flexibility, deep technology integration and the ability to provide bespoke value-added services. Delhivery was the largest and fastest growing 3PL express parcel (and heavy parcel) delivery player in India by volume and revenue as of Fiscal 2021 and the nine months period ending December 31, 2021. Delhivery had 16% and 20% share of the overall e-commerce volumes (including captive players) and 39% and 42% share of the e-commerce volumes handled by 3PL players for the fiscal year ended 2021 and first quarter of Fiscal 2022 respectively. As of Q2 and Q3 of Fiscal 2022, Delhivery had ~22% and 24-25% share of the overall e-commerce parcel volume (including captive players) respectively.

⁶ 66% of total shipments (eCommerce – B2B & B2C, C2C, Speed post etc.) are serviced by third party

Within Express Parcel, eCommerce Parcel delivery market is estimated at ~\$2.4 Bn in FY21 and is projected to reach \$9-10 Bn by FY26.

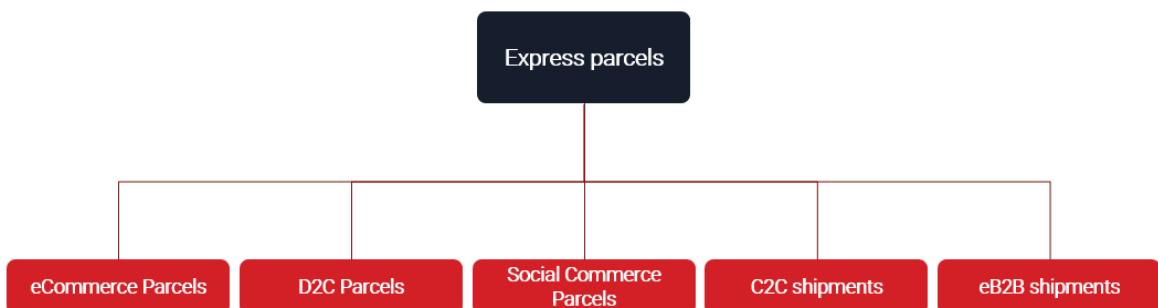


Note(s): 1. Express parcel delivery refers to parcels ordered on B2C and B2B eCommerce platforms in India, 2. Parcels in eCommerce refers to volume of parcels dispatched by the eCommerce platforms and returned by customers

Source(s): RedSeer Research, RedSeer Estimate

Express Parcel market includes 5 broad attractive segments

Express Parcels Market – Deep Dive



The market caters to eCommerce, D2C, Social Commerce, Hyperlocal grocery, eB2B players and offline players who adopted digital channels due to COVID and other key growth drivers such as faster delivery, higher flexibility as customers can order anytime (24/7) and cancel it within limited time frame, and higher retention as SDD⁷ and NDD⁸ improves customer experience and delight.

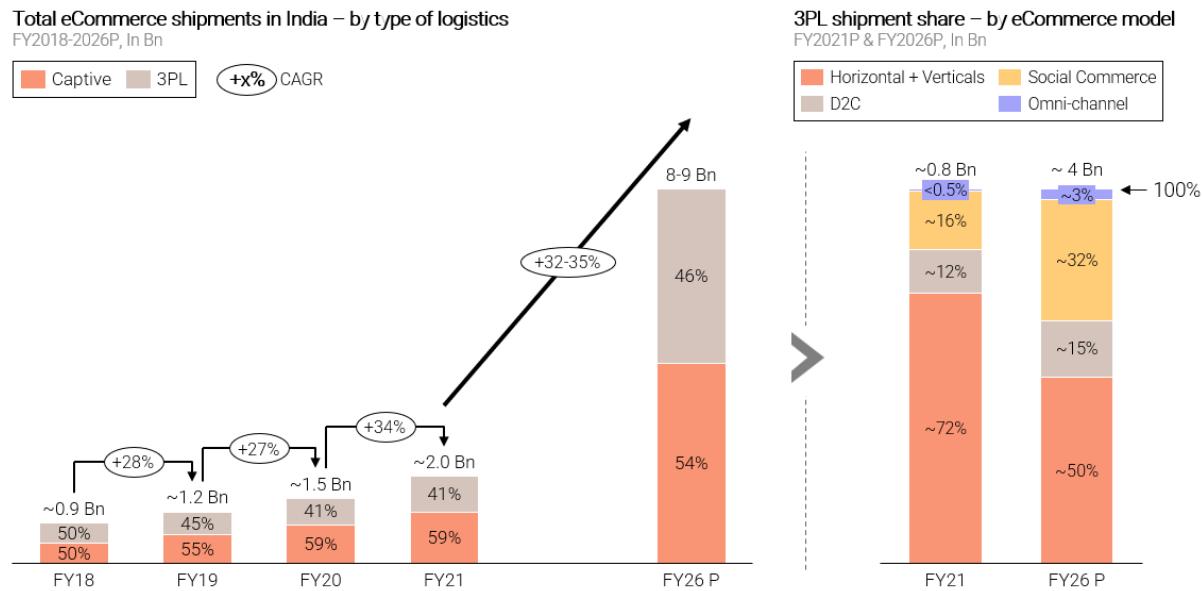
Emerging segments such as D2C and social commerce are expected to witness 6-10 times growth in annual shipment volumes between Fiscal 2021 and Fiscal 2026,

India eCommerce handled ~2.0 Bn shipments in FY21, which is projected to grow more than four-fold to 8-9 Bn shipments in next 5

⁷ Same day delivery

⁸ Next day delivery

years. 3PL shipments in eCommerce to grow faster and reach 5x to 4 Bn shipments.



Note: 1. Horizontals refers to eCommerce platforms that offers multiple categories of products on its platforms, 2. Vertical refers to eCommerce platforms that focus on offering single category of products (e.g. fashion & accessories) on its platforms, 3. Social commerce refers to eCommerce platform that uses social network/ communities to sell its products, 4. D2C or Direct-to-customer refers to brands that sells directly to customers through its own eCommerce platforms. D2C are considered as brands that do more than 10% of its sales from own eCommerce platforms

Source (s): Expert discussions, RedSeer IP and RedSeer analysis

The eCommerce market in India grew by 30% CAGR from FY19 to FY21 and is estimated to further grow at 28-32% from FY21 to FY26. The total eCommerce market was estimated to be 1.5 billion shipments in size in FY20 and expected to reach 8-9 billion by FY26 at a CAGR of 32-35%

Led by exponential growth of eCommerce and increasing volume of low value items, shipment volume is projected to grow faster than overall eCommerce GMV in next five years (32-35% for shipment volume). Growth in shipment volume over the last few years have led to increasing per-capita shipments. Per-capita shipments to grow to 5-6 by FY2026 from FY 2020 level of ~1.5 (a growth of 4x).

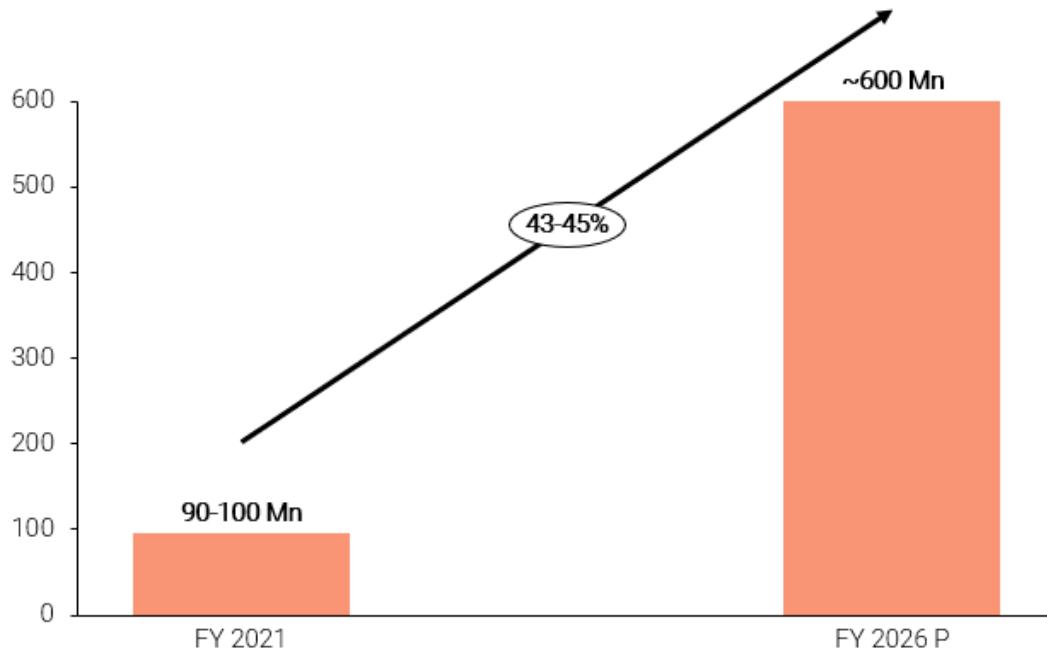
After the ban on movement of goods due to COVID-19 lockdown, the market saw a spike in order volume due to pent-up demand release and preference for home delivery of products which led to shipment volume growth of 34% in FY21.

D2C market to become ~600 Mn shipments in next 5 years

D2C¹ market shipment volume

In Mn, FY 2021, 2026P

+X% Indicates CAGR



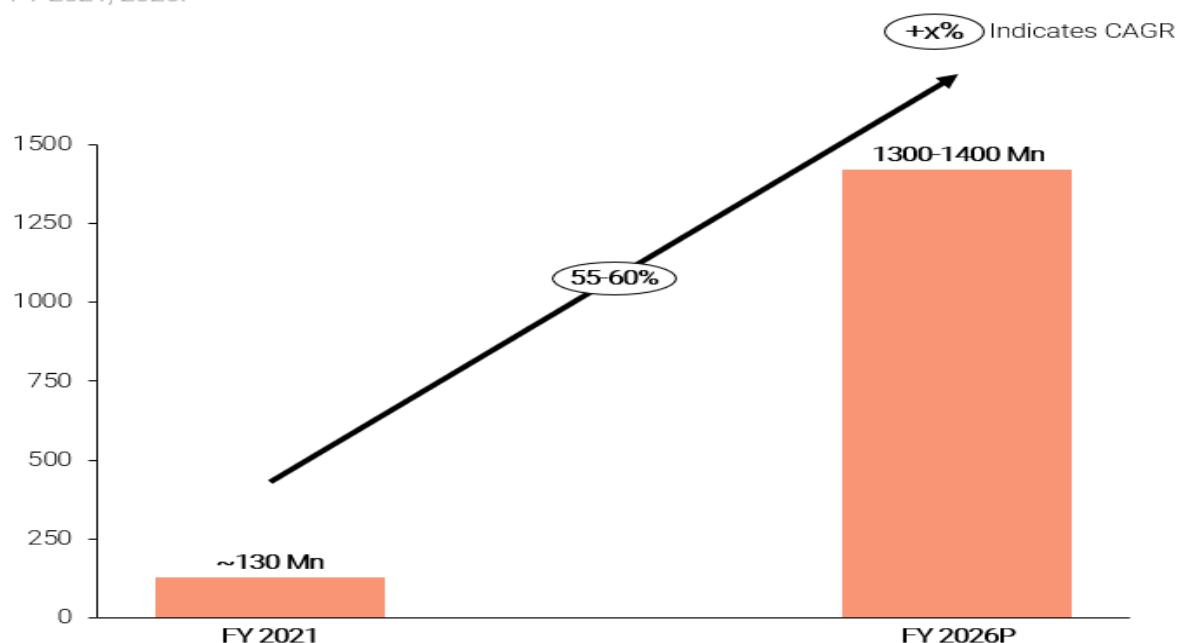
Note(s): 1. D2C shipment volume refers to products sold on D2C platform only
Source(s): RedSeer Research, RedSeer Estimate

Last 5 years have seen the emergence of niche and specialized direct-to-consumer (D2C) brands disrupting retail models. Estimated at 90-100 Mn shipments in FY21, D2C market is projected to become ~600 Mn in next 5 years, growing at a CAGR of 43-45%. Multiple drivers of growth existing for the D2C market:

- Users in metros and tier-1 cities, who are digitally savvy, have mid- high disposable incomes and want to try and use curated products/ experiences has reached a critical mass, and they will drive demand for D2C brands
- Development of new marketing channels by fintech players like Cred enable focused targeting.
- Availability of plug and play options from new-age logistics players provide warehousing and other logistics support to D2C players
- Logistics Aggregators have formed an interfacing layer to aggregate orders from merchants/ D2C brands that is fed into 3PL logistics
- Covid tailwinds – Online, in general, has seen boost during COVID, and D2C players are uniquely positioned to cater to niches and fence-sitters who have specific needs

Social Commerce to ship 1.3-1.4 Bn shipments by FY2026

Shipment Volume - Social Commerce Platforms¹
FY 2021, 2026P



Source(s): RedSeer Research, RedSeer Estimate

Affordable pricing, community driven purchase process, peer recommended products would be the key drivers of social commerce market growth.

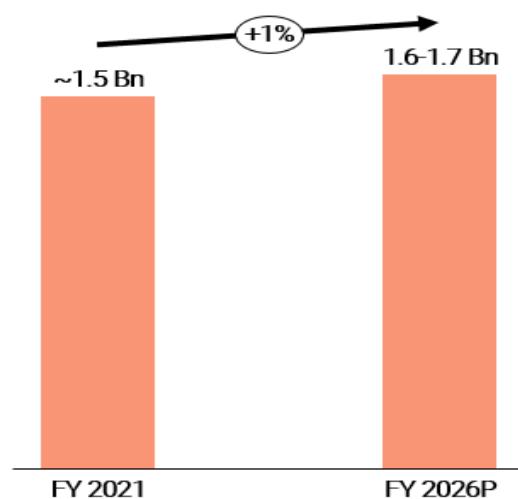
Social commerce is heavily focused in Tier-2+ cities due to nature of products and price points. Players with strong presence in lower tier cities to attract social commerce players and offer their delivery network and technology expertise.

An estimated ~\$ 0.7 Bn C2C parcel delivery market opportunity is present in FY 2021 which is projected to become \$0.8-0.9 Bn by FY 2026

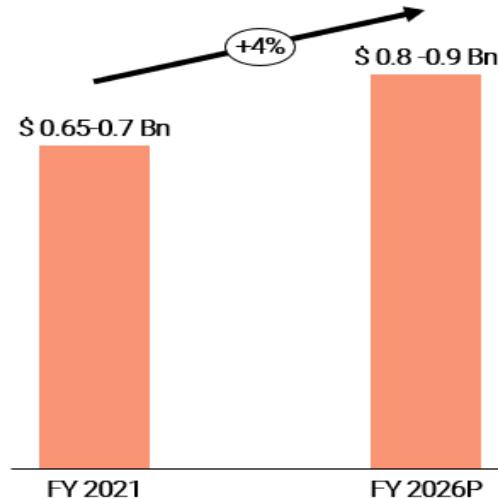
Note: 1. Parcel Packets and Speed Post market are considered the C2C market, 2. B2B and eCommerce parcel estimates have not

Indian C2C market – Shipment Volume
In Bn, FY 2021, 2026P

+x% CAGR



Indian C2C market size
In \$ Bn, FY 2021, 2026P



been considered, 3. Letters and Postcards and equivalent low ticket size shipments have not been considered

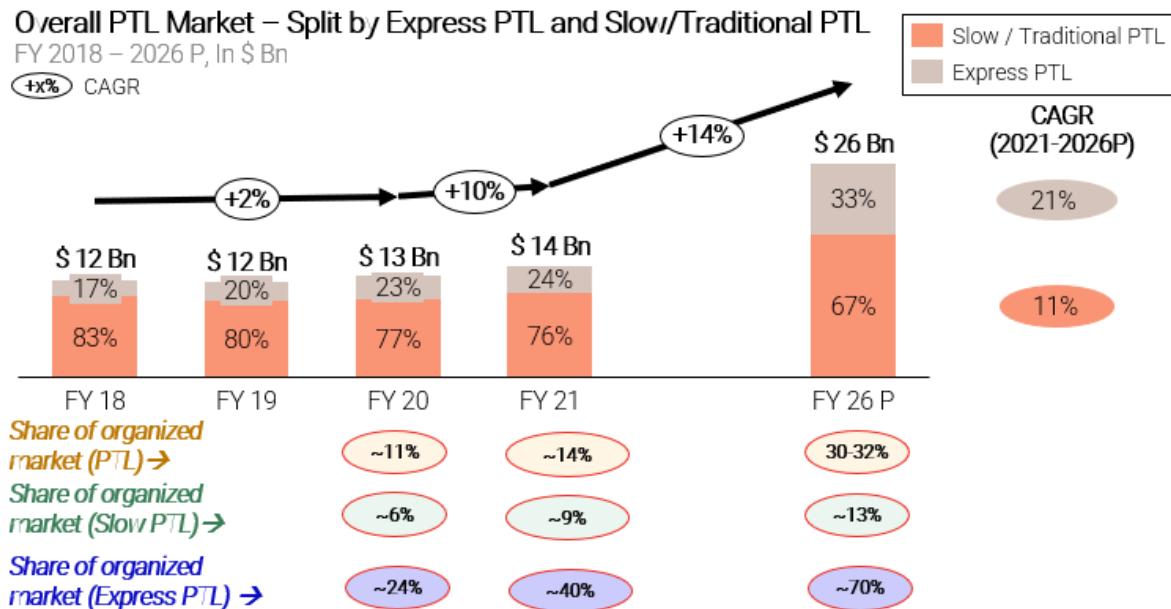
Source(s): RedSeer Research, RedSeer Estimates

C2C market is projected to deliver 1.6-1.7 Bn shipments and reach US\$0.8-0.9 Bn opportunity by FY 2026.

C2C parcels are typically small parcels sent from a customer to another customer. Direct (C2C) parcel shipping is growing as customers migrate to cities and increase their focus on convenience. This market is currently served by traditional parcel delivery companies and offers opportunity for new age 3PL players who offers faster delivery and better experience (packaging, shipment tracking etc.)

2.2.3 Part Truck load (PTL)

Part Truck load (PTL) market to outgrow overall road transportation market growth at ~14% CAGR to become US\$ 26 Bn by FY26. Express PTL to be the key driver.



Source (s): RedSeer Analysis, RedSeer Research

PTL freight delivery refers to delivery of typical consignments with weights between 10-2,000 Kgs. It is a domestic road transportation service of which subject shipments do not occupy full truckload, thereby allowing multiple shippers to ship between locations using a network of terminals and trucks to consolidate freight traveling in similar directions. PTL provides benefits of lower unit transportation costs, higher flexibility, and better demand-supply matching.

PTL market is estimated at US\$~14 Bn in FY21 and is projected to grow at a CAGR of ~14% for next 5 years. Overall, organized players accounted for 11% of the PTL market in FY20, which is projected to increase to 32% by Fiscal 2026, growing at a CAGR of 34% compared to 13% for the overall market. Following drivers are expected to catalyse consolidation of market share by organised players along with driving overall growth of the segment:

- **Changes in Supply Chain structures:** Larger, consolidated warehousing has led to increasing need for speed and reliability over longer distances
- **Changing customer expectations:** Brands and retailers with omni-channel operations increasingly need to match turnaround times of e-commerce players at affordable costs
- **Infrastructure improvements:** Improving Road infrastructure combined with availability of larger truck sizes is leading to higher capacity utilization and lower cost of operations for organized players
- **Penetration of technology:** Availability of data such road network information, weather data and telemetry data from IOT devices enables organized players to make better decisions on route and fleet management
- **Category expansion:** Newer e-Commerce categories such as appliances, home and furniture are better suited to move through PTL networks due to their large parcel size

After acquisition of Spoton, an express PTL freight service provider, Delhivery was third largest PTL freight player in India in terms of revenue as of FY21, with a share of ~8.3% in organized PTL market. Delhivery operated the fastest growing PTL freight service amongst the top 10 PTL freight service provider as of FY21.

The PTL market can be further divided into:

- Express PTL: Represents movement of PTL freight, and delivered on fast-track basis, typically within 4 days
- Slow/Traditional PTL: Represents movement of PTL freight in comparatively slower timelines, typically focused on heavier consignments

Express PTL market

Express PTL is the fastest growing freight logistics market. It has grown >1.5x from \$ 2Bn in FY18 to 3.3 Bn in FY21 and is projected to reach ~\$9Bn by FY 26 at 21% CAGR. The growth is primarily driven by sharp growth in adoption of Just-In-Time distribution by apparel retailers and auto parts industry.

The Express PTL market is ~40% organized in FY21. Organized penetration in express PTL is projected to increase to ~70% by FY26.

Market Structure	Entry Barrier	Client Segment	Indicative players ⁹	Market Challenges
<ul style="list-style-type: none"> • Organized market with growing penetration of new-age tech enabled logistics players 	<ul style="list-style-type: none"> • High as fleet owners / aggregators need to ensure quick TAT at lowest costs 	<ul style="list-style-type: none"> • Apparels, Pharma, Electronics, Furniture industry clients 	<ul style="list-style-type: none"> • Safexpress • Delhivery + Spoton • TCI Express • Rivigo 	<ul style="list-style-type: none"> • Poor demand discovery • Low truck utilization and fleet oversupply • Poor price transparency

⁹ It is an indicative list of players, and the listings are in no particular order. These players may also be providing other logistics and supply chain services

Slow/Traditional PTL market

The Slow PTL market grew from USD10 Bn in FY 2017-18 to \$10.5 Bn in FY 21. This market is projected to become US\$17 Bn by FY26 at 11% CAGR. In FY21, Slow PTL services substituted part of PTL services due to low vehicle availability during COVID lockdown.

Rising number of small businesses and MSMEs will drive the growth of the Slow PTL market due to multiple benefits such as, high network flexibility for smaller consignments, lower costs, additional savings due to lower inventory carrying costs, including significant savings on warehousing costs as small businesses and MSMEs can periodically send ship smaller shipments without having to carry large levels of inventory.

Market Structure	Entry Barrier	Client Segment	Indicative players ¹⁰	Market Challenges
<ul style="list-style-type: none"> Fragmented market with increasing share of organized market post COVID Market dominated by small fleet owners (<20 trucks) 	<ul style="list-style-type: none"> Low Ease of business driven by access of vehicle financing and large network of middlemen/agents in the local market 	<ul style="list-style-type: none"> Textile, Pharma, Stationeries, FMCG, Electronics, Automobiles Industrial solvents and paints 	<ul style="list-style-type: none"> V-Trans VRL Logistics 	<ul style="list-style-type: none"> Poor demand discovery Low truck utilization and fleet oversupply Poor price transparency

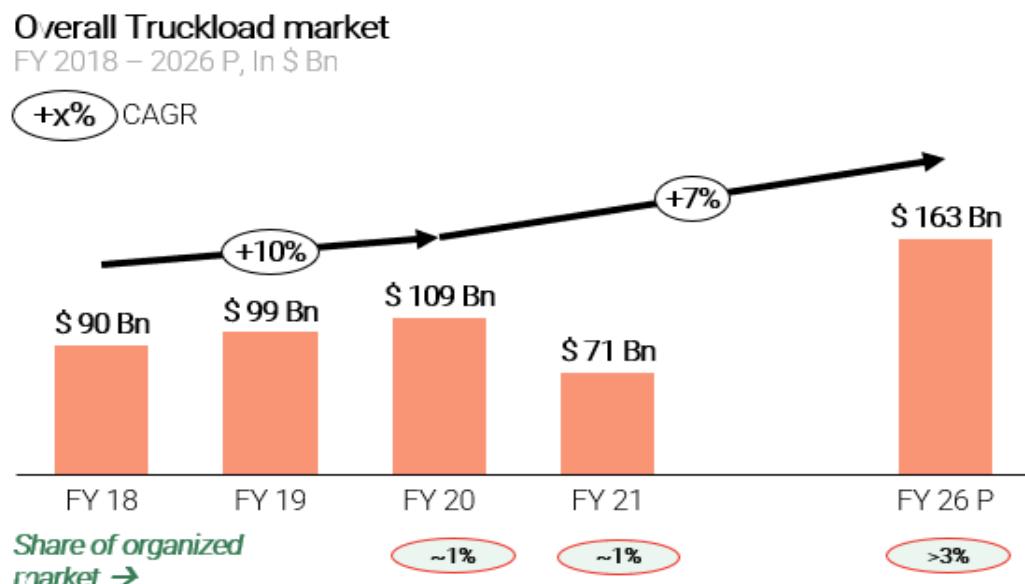
Currently, the slow PTL industry is highly fragmented with organized market accounting for less than 10% of the market (FY21). New-age logistics providers to play crucial role in consolidation of unorganized slow PTL market through key market disruptions such as:

1. High quality infrastructure:
 - a. Dedicated service center network for PTL
 - b. Automated material movement in large hubs to minimize in transit damages
2. Cutting edge technology:
 - a. Automated sorting centers
 - b. Tech-enabled manifestation
 - c. Real-time tracking, and exception management
 - d. System directed load and route planning in FM and LM operations
 - e. System directed hub and truck loading and unloading operations to maximize yield
3. Value added services
 - a. Freight and invoice amount collection on delivery
 - b. Unique differentiators like appointment management and returns processing
 - c. Scheduled deliveries and End to End service via integrated service platform.

¹⁰ It is an indicative list of players, and the listings are in no particular order. These players may also be providing other logistics and supply chain services

2.2.4 Truckload (TL)

Estimated at US\$~109 Bn in FY20, TL constitutes the lion's share of the road transportation market and is projected to reach \$163 Bn by FY26.



Source (s): RedSeer Research, RedSeer Estimates

Truckload (TL) is the largest segment of road transportation. TL market is expected to grow by 7% between FY2020 and FY2026 from US\$109 billion to US\$163 billion, with the market share of organized players to increase from approximately 1% in Fiscal 2020 to more than 3% in Fiscal 2026. The market growth is driven by multiple value propositions such as optimized TAT, higher reliability and reduced scope of damage and pilferage of goods. During COVID, TL lost its share to railways and slow PTL market as drivers shifted to their hometowns and truck availability reduced sharply.

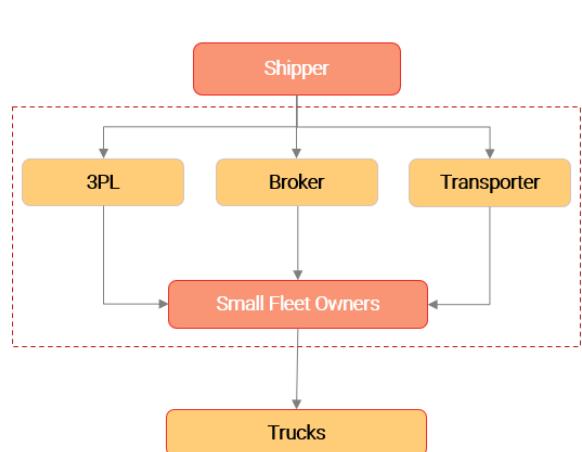
Market Structure	Entry Barrier	Client Segment	Indicative Players ¹¹	Market Challenges
<ul style="list-style-type: none"> Highly fragmented market, dominated by small fleet owners (<20 trucks) Heavily dependent on spot market and middlemen/agents for demand discovery 	<ul style="list-style-type: none"> Low Ease of business driven by access of vehicle financing and large network of middlemen/agents in the local market 	<ul style="list-style-type: none"> Automobile, FMCG, FMCD, Agriculture, Manufacturing, Oil & Gas 	<ul style="list-style-type: none"> TCI Blackbuck Rivigo Aegis 	<ul style="list-style-type: none"> Poor demand visibility Price volatility High cost of financing

The TL market is highly fragmented (with organized players accounting for ~1% of the market) and impacted by structural inefficiencies. This market is highly dependent on intermediaries/ brokers where 80% of demand is serviced through them. Key challenges in TL market:

¹¹ It is an indicative list of players, and the listings are in no particular order. These players may also be providing other logistics and supply chain services

- Inefficient matching of supply and demand, especially on backhaul lanes
- Significant price volatility for customers and earnings volatility for fleet-owners due to seasonality and other supply shocks
- High cost of working capital financing
- Inconsistent service quality and long wait times

Structure of the Logistics Freight Market



Structural inefficiencies in Logistics Freight Market



Note: Arrow represents flow of demand of trucks in TL market

Source: RedSeer Research

TL markets globally are witnessing disruption from new-age, technology-enabled logistics providers. The drivers for this disruption include:

- **Digitization of Supply Chain Operations:** New-age players provide Transportation management systems (TMS) to customers and mobile applications to suppliers of fleet capacity (including self-owned fleets), thereby creating real-time visibility and more efficient matching of demand and supply and reducing overhead costs through digitization of previous offline processes
- **Real-time visibility and control:** Telemetry data from GPS systems, SIM-based tracking and smart-tag data enable new-age players to ensure service quality and maintain continuous visibility of supply
- **Data-led efficiencies:** Analysis of current and historical performance data of fleet-owners, more accurate demand forecasting, and real-time supply visibility enable new-age players to provide better pricing estimates and also provide working capital financing to fleet-owners at lower costs
- **Large internal demand:** Integrated players are able to provide captive internal demand from their other business lines and thereby better lock-in suppliers of truckload freight capacity to their platforms

These drivers are expected to increase share of organized players from ~US\$1 billion in FY 2020 to US\$7 billion in FY2026.

2.2.5 Domestic Rail Transportation

Domestic Rail Transportation market has seen a steady growth till FY 2020 to reach ~\$21 Bn market size and projected to reach \$45-50 Bn in the next 5 years

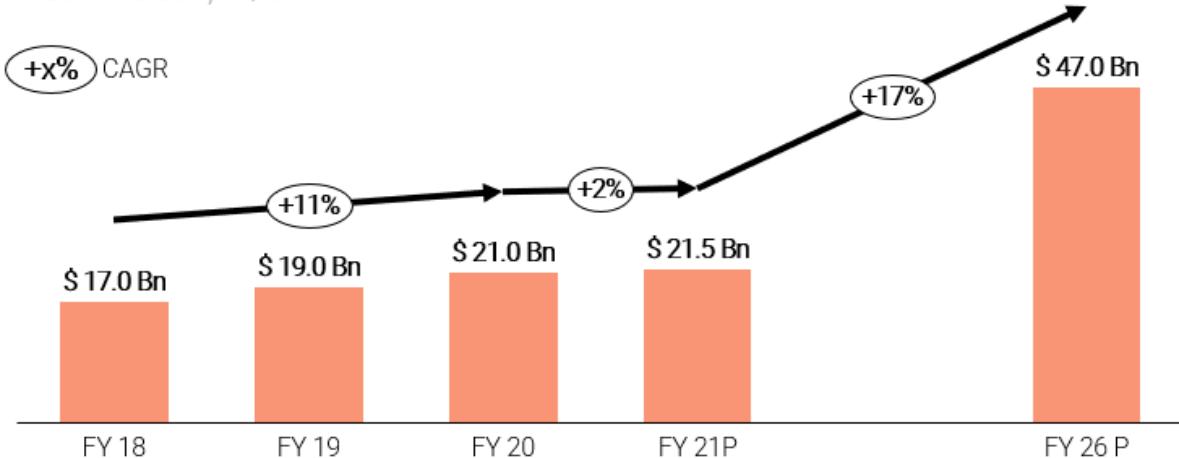
Rail transportation a cost-effective mode for bulk freight transportation, primarily commodities such as coal, iron ore, cement, fertilizers, food grains, mineral oil etc.

India has the 4th largest railway system in the world and is also the 4th largest rail freight carrier in the world¹². However, rail's share in freight has been declining since the 1950s and stood at 18% in 2020 compared to 71% for roads. This is due to insufficient rail capacity, especially on certain high-density routes. However, several factors suggest that rail could be a cost-effective and efficient alternative for a significant share of India's freight in the future:

- Commodity mix that has a high share of bulk goods – suitable for rail's bulk-handling capabilities
- Freight travel is often over longer distances – suitable to rail's economies of scale relative to road transport
- India has a low coast-to-landmass ratio – between the two low-carbon freight modes, rail and coastal, India's geography makes rail more feasible in many areas as compared to coastal.

Size of the Rail transportation market

FY 2018 – 2026 P, In \$ Bn



Source (s): RedSeer Research, RedSeer Estimate

Despite the challenges, domestic Rail transportation market has grown steadily from \$17 Bn in FY 18 to \$ 21 Bn in FY 20 & \$ 21.5 Bn in FY 21¹³, largely driven by the increase in demand for commodities. Implementation of dedicated freight corridors and increased capital outlay by the government to be key enablers for growth. This market is projected to grow at a CAGR of 17% to \$ 47 Bn by FY 2026. However, the industry requires enhanced capabilities like faster cars, wider set of routes for double stacking, etc which demand high CAPEX investment.

¹² Source: Invest India

¹³ FY21 estimate is moderate confidence

Further, the delay in DFC constructions and their limited reach in Western and Eastern corridors have limited the growth prospects for Rail Transportation in the near term.

The Indian government has made rail a key investment priority, with several initiatives such as development of the Dedicated Freight Corridor and introduction of roll-off-roll-on (RORO) capabilities on select routes. Several factors suggest that rail could be a cost-effective and efficient alternative for a significant share of India's freight in the future:

- Commodity mix that has a high share of bulk goods – suitable for rail's bulk-handling capabilities
- Longer travel distances are suitable to rail's economies of scale relative to road freight transport

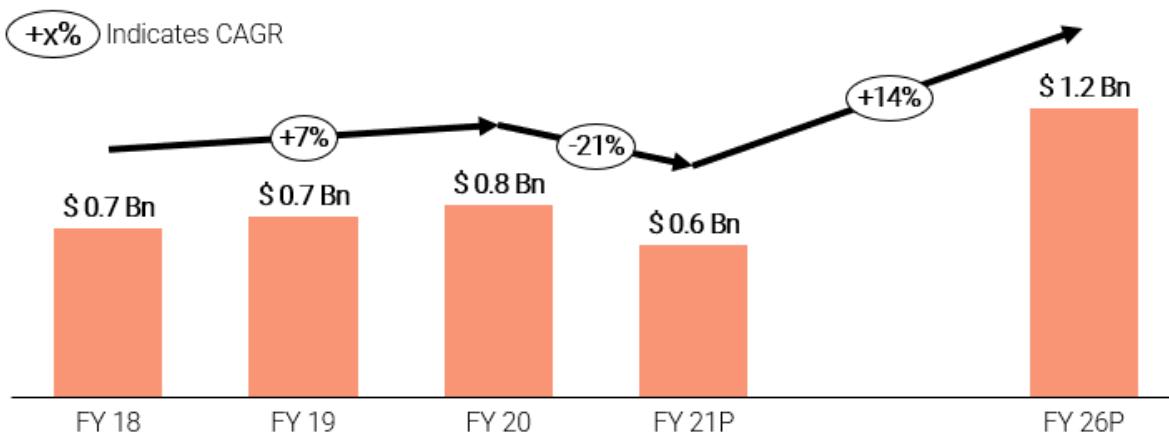
Market Dynamics:

Industry Structure	Entry Barrier	Key Clients	Indicative players ¹⁴	Key characteristics of the market
<ul style="list-style-type: none"> • Organised 	<ul style="list-style-type: none"> • High 	<ul style="list-style-type: none"> • Manufacturing, Automobile 	<ul style="list-style-type: none"> • Concor • Gateway Distriparks • DPW • Pristine • Adani 	<ul style="list-style-type: none"> • Ideal for bulk commodity movements, i.e., low value and high volume • Has seen recent adoption for shipping automobile spare parts

2.2.6 Domestic Air Express Transportation

Domestic Express Air Logistics market has been growing slower on account of movement transitions to road due to greater flexibility and lower costs.

Size of the Domestic Express Air Transportation Market
FY 2018 – 2026 P, In \$ Bn



Note: 1. Only air logistics (domestic express) has been included here

Source (s): RedSeer Research, RedSeer Estimate

¹⁴ It is an indicative list of players, and the listings are in no particular order. These players may also be providing other logistics and supply chain services

Domestic express air logistics provides the quickest delivery (< 3 days) across all types of haulage (short, medium, and long). It is highly effective for long distance transport of goods as Air transport offers convenience, reliability, and high standards of security with a low risk of robbery and injury.

The domestic air-express transportation market was estimated to be US\$0.8 billion in Fiscal 2020 and is expected to touch US\$1.2 billion Fiscal 2026. Air-express is a relatively niche service suitable for highly time-sensitive shipments requiring reliable, mid to long-distance transportation.

Air cargo in India is moved through dedicated cargo aircraft as well as belly capacity available on passenger planes. The market is serviced mainly by scheduled and a few charter cargo operators and domestic passenger airlines. A large and fragmented base of domestic freight forwarders also function as booking and fulfilment agents for air-express capacity. The sector faces increasing competition from infrastructure and speed improvements in road transportation, which is significantly more cost-efficient. As a consequence, this segment is projected to grow at a slower rate than the overall logistics market between FY20 and FY26.

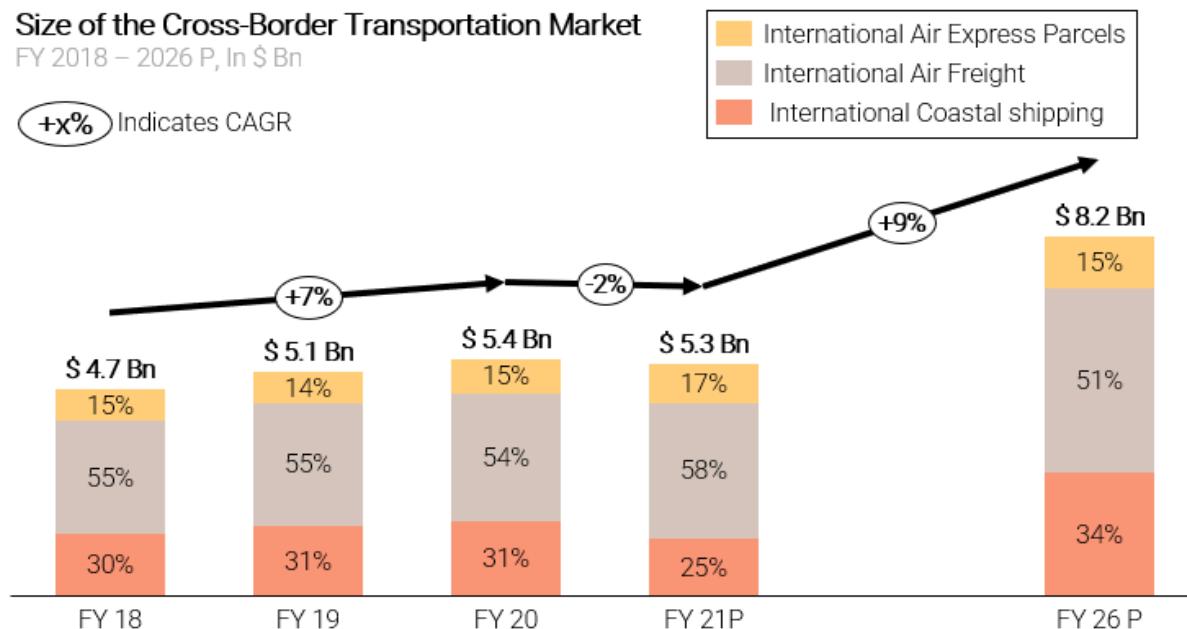
Market Dynamics:

Industry Structure	Entry Barrier	Key Clients	Indicative Players ¹⁵	Key Challenges
<ul style="list-style-type: none"> Organized yet fragmented, domestic air market has presence of many local/regional players 	<ul style="list-style-type: none"> Moderate Easy for road freight forwarding players to provide air express couriers as additional product offering 	<ul style="list-style-type: none"> Pharma, Perishable Goods manufacturers, eCommerce 	<ul style="list-style-type: none"> BlueDart VTL Logistics 	<ul style="list-style-type: none"> Loss of revenue due to COVID followed by recovery.

¹⁵ Indicative players and listings are in no particular order. These players may also be providing other logistics and supply chain services

2.2.7 Cross-Border Freight Transportation

Cross-Border Shipping market has seen a steady growth till FY 2020 and is projected to reach ~\$8.2 Bn by FY26



Existing Challenges:

- Lack of end-to-end logistics solutions for exporters, importers and service providers
- Low attractiveness of the segment for parcel movements due to high shipping charges

Note: 1. Note (s): International Air freight market considers export only

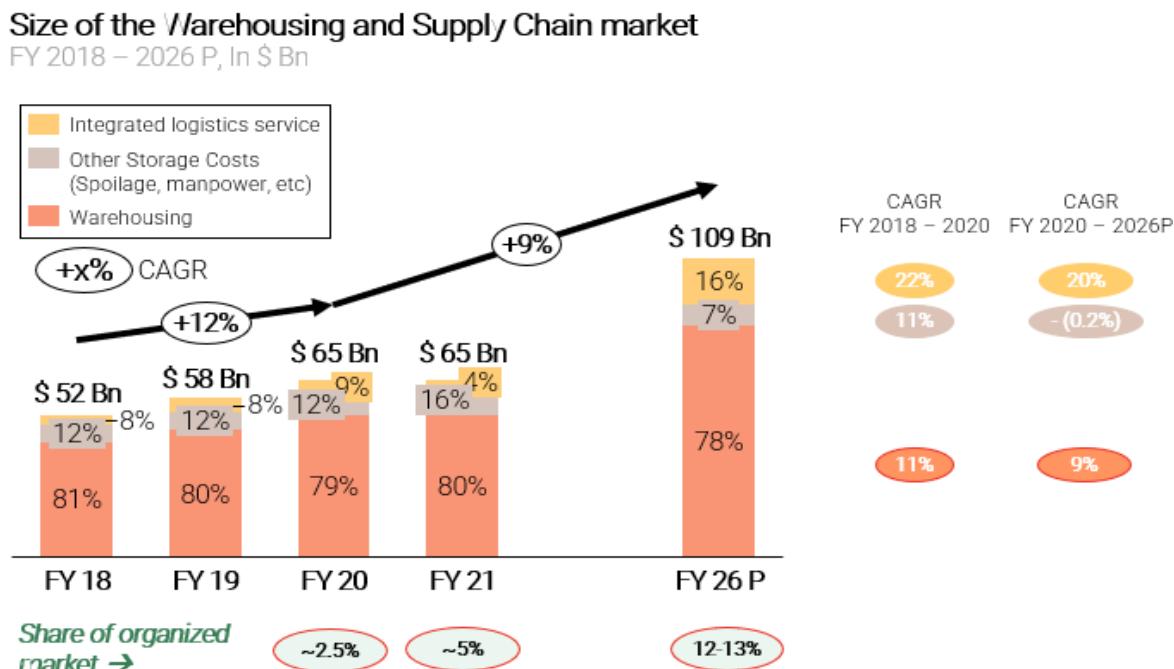
Source (s): RedSeer Analysis, RedSeer Research

Cross-border transportation is done primarily through air and ocean shipping. The cross-border air transport market stood at ~US\$5.4 billion in Fiscal 2020 and is expected to reach US\$8.2 billion by Fiscal 2026. Airports Authority of India handled ~2 million MT of international freight movements (import + export) in Fiscal 2021. The international air freight market is driven by growth in trade, especially cross border e-commerce (import as well as Indian sellers selling in global markets). Ocean freight is significantly more cost-efficient than air-freight, and suited for larger, less time-sensitive freight movements. Ocean shipping forms 25-30% of the total cross-border transportation market.

Capacity in the cross-border transportation market is quite consolidated in both air and ocean segments. Air freight is dominated by international integrators such as FedEx Express and DHL and domestic and international passenger airlines, while ocean freight is primarily serviced by large liner companies such as AP Moeller Maersk. However, as with domestic air express, a large network of domestic booking agents and freight forwarders function as re-sellers of this capacity to enterprise and SME customers across the country.

2.2.8 Warehousing and Supply Chain

Warehousing and Supply chain market is estimated at \$65 Billion in FY2021 and is projected to reach US\$~109 Bn by FY2026



Note: 1. Integrated logistics service includes management of first mile, line-haul, last mile shipment movement and warehousing, packaging & processing of shipments, 2. The market includes services by Captive logistics arm and third-party logistics players
Source (s): RedSeer Analysis, RedSeer Research

Supply chain services comprises integrated logistics services (transportation, warehousing, fulfilment, tech management etc.) and warehousing offerings.

The Indian supply chain services market reached \$ 65 Billion in size in FY 2021. It experienced a CAGR of 12% till FY20. It is projected to reach a market value of \$109 Billion over the next six years. The share of organized players is expected to increase from US\$1.6 billion in FY 2020 to US\$ 13-15 billion in FY2026 at a CAGR of 42-45%

Integrated supply-chain services

Traditionally, businesses have faced multiple challenges in their supply-chain like excessive layers in the distribution channel, lack of demand forecasting leading to inventory mismanagements, and pilferage & damage of goods. Companies used to offer specific contracts for services but are now moving towards integrated supply chain service providers for overall optimization of their supply chain processes.

Unlike isolated supply chain logistics service providers, an integrated supply chain service provider has the expertise across full spectrum of supply-chain services ranging from Express Parcel delivery, full truckload, and less than truckload transportation, last-mile delivery, warehousing, and other value-added services (such as home installation and aftersales services), which are offered to customers in the form of integrated solutions tailored to their varied needs.

Even though the majority of demand for third-party logistics services comes from single logistics services, demands from enterprises for outsourced supply chain services have

gradually transitioned from homogeneous to manifold, leading to the rapid growth of integrated supply chain services market.

In FY20, the integrated supply chain services market size is pegged at US\$~6 Bn and projected to reach US\$~17 Bn by FY 2026 growing at a CAGR of ~20%.

Integrated supply chain services have the following benefits over isolated or mono-line service providers:

- **More integrated and End to End services:**

Isolated supply chain service providers are usually specialists of one service line. Enterprises with complex and sophisticated logistics demands need to engage multiple isolated logistics services providers. Integrated supply chain service providers fill the need-gap by covering end-to-end demands of customers including manufacturing, distribution, warehousing, and inventory management solutions. This allows enterprise customers avoid the cumbersome process of engaging multiple services providers.

- **Advanced technology and data analytics:**

Traditional isolated supply chain logistics services are largely labor intensive with relatively lower levels of automation, especially for tasks such as loading and sorting, which create inefficiency and error in their processes. These service providers have a limited usage of data and technology. Integrated supply chain logistics services players typically utilize technologies and unmanned solutions to improve operational efficiencies. Also, with advanced IT infrastructure, the collection, integration, and analysis of data across different links of the supply chain and among different partners are much more sophisticated as compared to traditional service providers.

- **Industry expertise and insights:**

Integrated supply chain logistics service providers have a deep understanding towards various industries (such as end customer needs, unique feature of goods, inventory, and sales cycle, among others) enable them to provide tailored solutions to address different industry pain points. Isolated supply chain logistics service providers, in contrast, are typically more industry agnostic as they provide limited scope of supply chain logistics services from a product perspective.

- **Value added services empowering business operations:**

Integrated supply chain logistics service providers can offer additional valued-added services and empower customers' business operations in multiple aspects, including sales forecast, production planning, SKU and inventory management, end customer order management, among others, which helps them deepen their relationship with customers, thus increasing customer stickiness and cross-selling or up-selling opportunities.

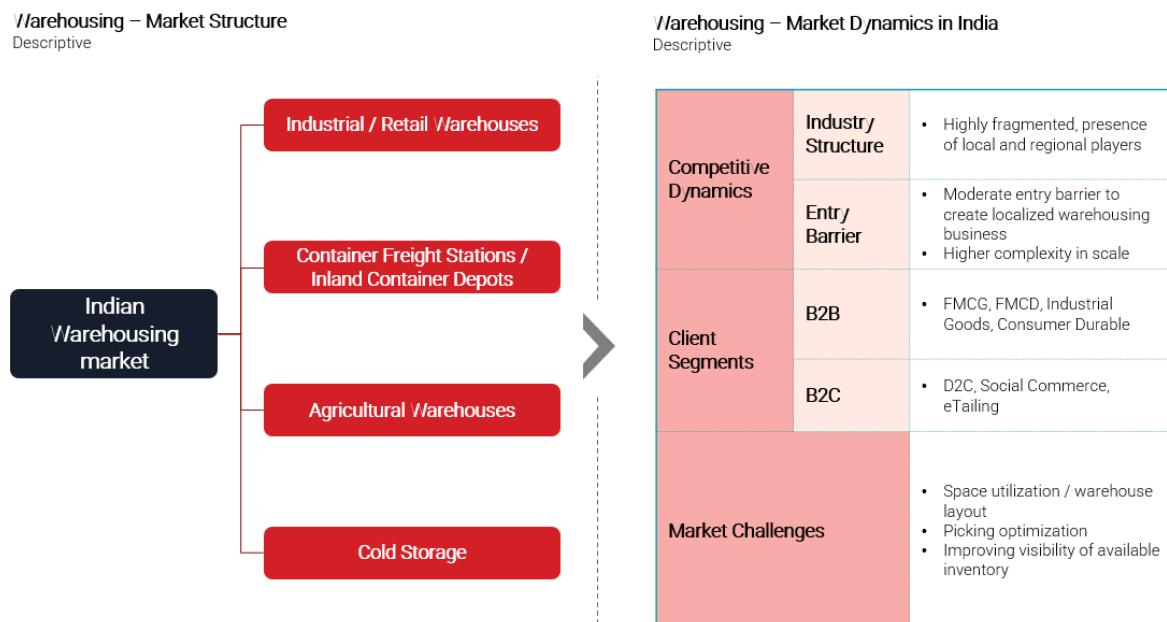
- **Emergence of large-scale integrated logistics service providers post GST implementation**

Key enterprise segments adopting integrated supply-chain services are eCommerce, FMCG, FMCD and Automobile manufacturers etc.

Warehousing and Fulfilment services

Warehousing and fulfilment services refers to the renting / leasing of pure warehouse space for inventory management and fulfilment services is the addition of packaging and processing as a service.

Indian warehousing is at a very nascent stage. As of 2020, India has a per capita warehousing stock of just 0.02 sq m compared to the USA, China and the United Kingdom that have 4.4 sq m, 0.8 sq m and 1.09 sq m respectively. While warehousing space taken up in FY20 fell by 11% YOY, it has grown by a robust 44% CAGR in FY 17-20.



Source(s): RedSeer Analysis, RedSeer Research

Warehousing market comprises 4 key segments with a sharp demand-led growth opportunity.

- Industrial / Retail Warehouses
- CFD/ICDs
- Agricultural Warehouses
- Cold Storage

The growth in warehousing in India is primarily being driven by the burgeoning manufacturing activity, robust international trade, and the emergence of organized retail in the country. Increasing private and foreign investments in infrastructure and easing government regulations are further bolstering the growth of the warehousing sector in India

Warehousing is a highly fragmented market in India due to participation from thousands of local operators as local and regional players face multiple challenges in scaling up. The market is characterized by a large number of small warehouses (less than 10,000 square feet) that account for nearly 90% of the warehousing space in India. This is largely due to the operational complexity involved in large-scale capacity management.

Increasing private investments from domestic and foreign investors and easing of regulations are further driving consolidation and growth of the sector, including specifically:

- Rollout of GST leading to demand for large, consolidated warehousing
- Increasing shift towards optimization of “total-cost” of supply chain (both direct and indirect costs), leading to preference for integrated and scaled-up logistics players
- Increased demand for high volume, low cost operations for e-commerce fulfilment with flexibility to handle multiple categories of goods

- Increasing adoption of technology such as Warehouse Management Systems(WMS) and Warehouse Control Systems(WCS) systems, data analytics and automation

Impact of GST on Warehousing:

Historically, due to multiple indirect taxes, Indian companies set up several localized warehouses in order to minimize inter-state movement and associated taxes. Since GST establishes a single tax regime, warehouses are likely to be consolidated to benefit from economies of scale and facilitate interstate movement of goods. Larger and centralized warehouses are better suited to benefit from warehousing systems compared to sub-scale and disparate warehouses. As a result, Indian warehousing is expected to undergo major reorganization, with large hubs in key locations and smaller warehouses nearer to production and consumption centers.

3PL (driven by FMCG and retail sectors) and e-Commerce are the biggest adopters of organized warehousing – absorbing ~60% of the overall demand.

Technology is disrupting warehousing market through multi-location warehouse models which allow clients to efficiently scale operations across the country rapidly with no fixed costs. Big Data, AI and analytics is being used to integrate different parts (Fulfilment, first & last mile, line haul) to create integrated cost-effective supply chains. There is a higher adoption of automation in various processes, therefore removing the scope of manual error and optimizing labor costs. New-age tech enabled logistics players are leveraging technology to drive the above structural changes in warehousing and fulfilment.

2.2.9 Logistics Market – Supply Side Characteristics

Comparative analysis of logistics segments – Road, Rail and Air logistics

Domestic Logistics market in India – Comparative Analysis

	Road Logistics			Rail Logistics			Express Air Logistics		
Cost per shipment									
Flexibility									
Speed									
Security									
Suitability	Suitable for distribution by manufacturing and retail and for door-to-door delivery by eCommerce players.			Suitable for commodity movements (Raw materials and finished goods) like coal, iron ore, cement, raw material for steel, etc.			Suitable for long distance emergency freight movements by manufacturing, retail or eCommerce players		
OPEX % Expenses excluding finance costs	~85%	~75%	~75%	~70%	~63%	~68%	~63%	~52%	~49%
EBITDA %	~8%	~10%	~15%	~21%	~9%	~8%	~30%	~15%	~21%
ROCE %	~21%	~18%	~22%	~12%	~13%	~7%	~16%	~12%	~17%
Asset Turnover Ratio	140%-160%			50-60%			90-110%		

Note (s): 1. Cost per shipment is considered for long haul movements (>500 Km distances) for large volumetric weight movements to get a like to like comparison

2. Asset turnover ratio ranges are typical ranges observed for businesses in each segment and is not an exhaustive assessment of the market.

Source(s): RedSeer Research, RedSeer Analysis

Road logistics is most convenient form of logistics offering with high flexibility on routes, timings, and price points, satisfactory delivery speed and freight security offered at a moderate cost per shipment. The speed of shipment delivery is comparative to air logistics for short and medium (<800km) logistic movements.

Across supply side, players with a focus on road logistics are found to be more profitable than for rail logistics. This can be observed as we find such players generating ~15% EBITDA margins and 22% ROCE against a mean of ~8% EBITDA by rail logistics focused players and ~7% ROCE by Rail logistics players. Road logistics focused companies have a typical asset turnover ~140-160% which is significantly higher than Air logistics (typically, 90-110%) and Rail logistics companies (50-60%).

Peer Benchmarking

Parameters	BlueDart Express Ltd.				TCI Express				Mahindra Logistics				Delivery			
	FY19	FY20	FY21	9M, FY22	FY19	FY20	FY21	9M, FY22	FY19	FY20	FY21	9M, FY22	FY19	FY20	FY21	9M, FY22
Pincode reach	14000+ pincodes	14000+ pincodes	14000+ pincodes	14000+ ⁽¹⁾ pincodes	~40000 pickup and delivery points ~95% pincodes	40000 pickup and delivery points 95% pincodes	40000 pickup and delivery points 95%+ pincodes	40,000 locations	-	17,000	21,000+	-	13485 ⁽²⁾	15875 ⁽²⁾	16677 ⁽²⁾	17517 ⁽²⁾
Manpower	13,000+	12,000+	12,000+	12,500+	3,000+	3,000+	~3,000	3,000+	17,840	17,067	18,649	-	28,830	40,416	53,086	86163
Area under management	-	-	-	-	-	-	-	-	15+ million (mn) square feet (sq. ft) of warehousing space	16 million (mn) square feet (sq. ft) of warehousing space spread across our pan-India network of multi-user built-to-suit warehouses, stockyards, network hubs and cross-docks.	17+ mn sqft of warehousing space spanning the pan-India network of multiuser warehouses, built-to-suit warehouses, stockyards, network hubs, and cross-docks.	Additional 4Mn + sqft of warehousing space contracted	5.96 million (Mn) square feet (sq ft)	9.85 million (Mn) square feet (sq ft)	12.23 million (Mn) square feet (sq ft)	14.27 million (Mn) square feet (sq ft)
# of Customers	-	-	-	-	-	-	-	-	300+ customers	300+ customers	300+ customers	300+ customers	4,867	7,957	16,741	23,113
Fleet	11122+ vehicles 13000+ drivers 6 Boeing 757-200 freighter aircraft	22336 vehicles 12000+ drivers 6 Boeing 757-200 freighter aircraft	11122 vehicles 6 Boeing 757-200 freighter aircraft	11,100+ vehicles 6 boeing 757-200 freighter aircraft	5000 containerised vehicles	5000 containerised vehicles	5000 containerised vehicles	5000 containerised vehicles	-	10,000+ Vehicles deployed every month	10,000+ Vehicles deployed every month	5500+ vehicles deployed per day	-	-	-	-
# of facilities (include warehouses, sorting centers etc)	1665 facilities and hubs	2173 facilities and hubs	2113 facilities and hubs	2100+ facilities	28 sorting centers 700 branch offices	28 sorting centers 800+ branch setups pan India	28 sorting centers 800+ branch setups pan India	28 sorting centers 850+ branches	75+ Stockyards In-factory stores and line-feed at over 50 manufacturing locations 35 hub locations 50+ stockyards 200+ warehouses	In-factory stores and line-feed at over 50 manufacturing locations 35 hub locations 50+ stockyards 200+ warehouses	In-factory stores and line-feed at over 50 manufacturing locations 35 hub locations 50+ stockyards 200+ warehouses	50+ hubs	73 gateways	83 gateways	88 gateways	82 gateways

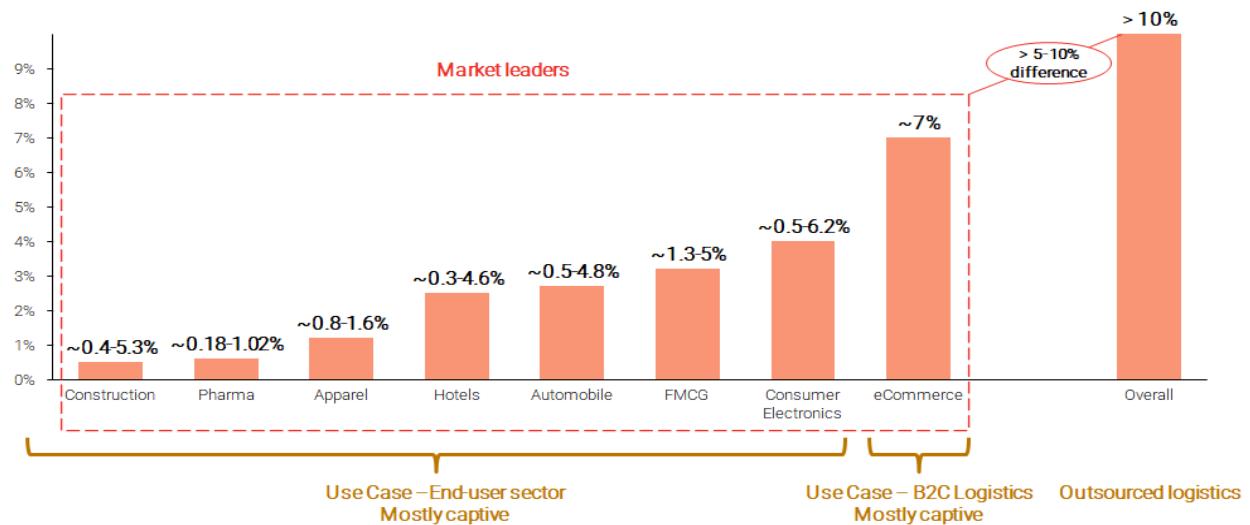
Source (s): Annual report, Investor Presentations

Note (s):

1. Since Pin code (Zip Code) coverage data is not disclosed for BlueDart Express Ltd in the filings for 9MFY22, we have provided the latest data available for 6MFY22 / As of September 30, 2021
2. Includes permanent employees & contractual workers (excluding daily wage manpower and security guards and Spoton) as of the last day of the period, as well as last mile delivery agents in the last month of the period.
3. Information for the players have been sourced from either of annual reports and/ or investor presentation as available latest on the website and BSE.
4. The peer comparison table has been added as per the advice from SEBI

Top 5 players across end-use sectors are optimizing their logistics spend with technology adoption and outsourcing to organized logistic players.

India logistics spend – Top 5 players in end-use sectors and eCommerce VS Others
% of total revenue for companies, FY 21



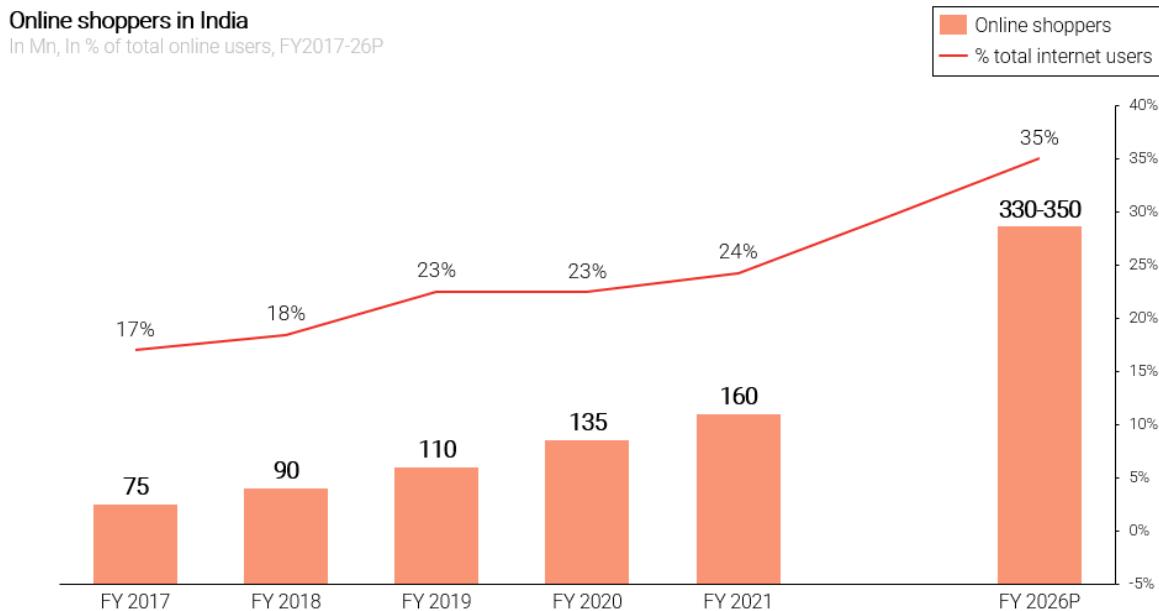
Source(s): RedSeer Analysis, Annual reports of Logistics players

Top B2B players spend 1 to 5% towards logistics spend in India whereas eCommerce companies spend ~7%. This is lower than the logistics spends incurred by the long tail players indicating high room for improvement for the unorganized long tail.

3. eCommerce in India and Express Logistics

There is an estimated ~160 Mn online shoppers in India, which is projected to become 330-350 Mn by the end of FY2026

Online commerce (or eCommerce) in India has come a long way since its inception in the early last decade with an estimated 160 Mn online shoppers in FY21, approximately ~24% of internet users in the country of which 50%+ shoppers are from Tier 2+ towns as of FY 2021. Driven by multiple enabling factors, online shoppers are projected to become 330-350 Mn by FY2026. e-commerce, D2C and social commerce, which are expected to form a larger proportion of overall commerce in India]



Note: Online shopper is defined as a customer who buys products on eCommerce platform at least once in 12 months
Source(s): Primary Research, RedSeer Analysis

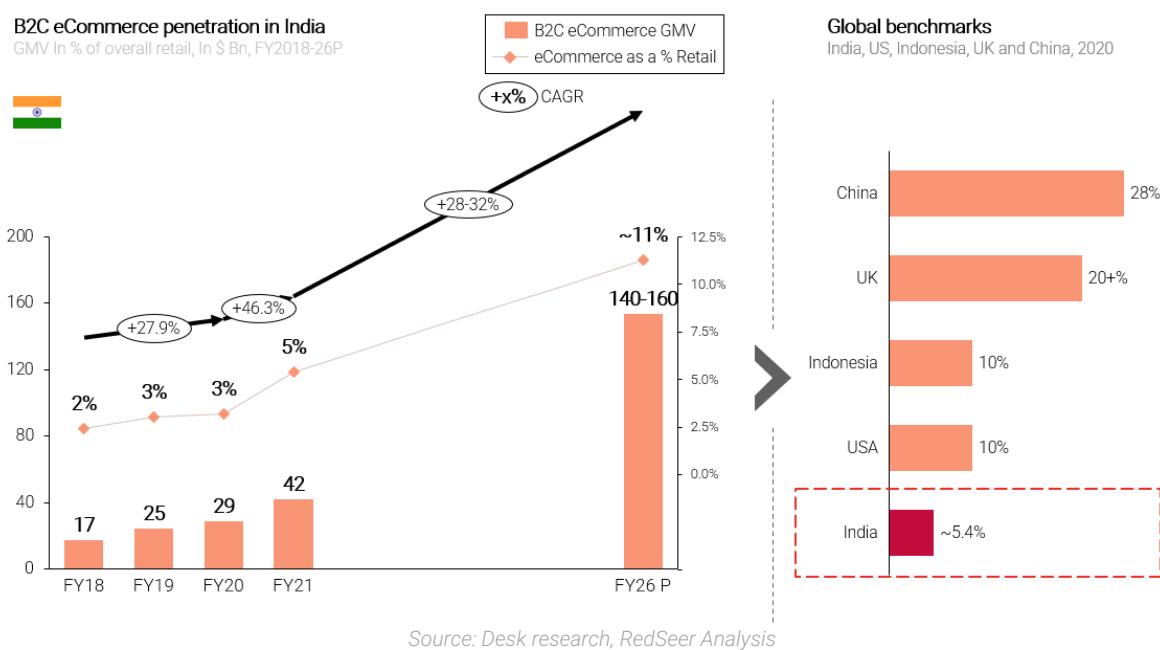
Factors driving the growth of Indian online shoppers are:

- **Internet economy:** Proliferation of smartphones and localization of the internet in non-English languages is drawing in new consumers from non-metro locations into the internet economy and creating new demand for online commerce
- **Increasing coverage of eCommerce:** Customers in cities beyond Tier-2 are able to shop online due to serviceability of eCommerce logistics providers covering pan India pin code. With cutting edge tech adoption, these logistics providers can deliver products within 3-5 days. It is expected that next wave of eCommerce shoppers would come from Tier-2+ cities
- **Category expansion in e-commerce:** As more categories go online, consumers are able to shop for an increasing share of their requirements online. Over the past few years, categories such as home furnishings and décor, groceries, FMCG etc have witnessed accelerated migration to online
- **Increasing consumer comfort for online purchase:** Customer centric product offerings and higher satisfaction post order checkout on eCommerce led to comfort in the minds of shoppers recommending eCommerce to friends/ family

- **Evolving Payment Methods:** Platforms are increasingly providing flexibility of payments options (No cost EMI, UPI payments, Buy-Now Pay-Later etc.) across modes led to customers adopting eCommerce
- **Emergence of new business model:** Emergence of multiple models (horizontal, vertical, Direct-to-Consumer, Omni-channel, Social Commerce and Quick Commerce) and product offerings led to faster adoption of eCommerce across the country. Traditional eCommerce model (horizontals and vertical), D2C and Social commerce is expected to form a larger proportion of the overall eCommerce market by FY2026.
- **COVID-19 leading to online preference:** COVID has been a true enabler for eCommerce adoption across city-class and household income. Led by lockdown imposed in March 2020, many households shifted to buying products online

eCommerce GMV to become USD 140-160 Bn by FY26

eCommerce in India has seen an upsurge in the last five years and there is significant headroom for further growth. eCommerce is ~5% of India retail, it lags UK, US, China, and Indonesia. Led by multiple growth drivers, online retail penetration is projected to cross the 10% mark in next 5 years, amounting USD 140-160 Bn of gross GMV.



Growth in the number of online shoppers, increasing share of wallet spent online and changing customer behavior towards online will drive the growth of the market. The market will further be driven by emergence of multiple business models, increasing adoption of long-tail categories (grocery, home & furniture, pharma etc.) and supply side innovations like vernacular-based interfaces, voice, and visual search.

Technology enabled innovations across digital payments, analytics driven customer engagement and digital advertisements are expected to drive growth in the sector. One of the key enablers for eCommerce growth is the efficient and supply-chain infrastructure built by new-age tech-enabled logistics service providers that delivers products on SDD/ NDD¹⁶ to 3-4 days.

¹⁶ SDD: Same day delivery, NDD: Next day delivery

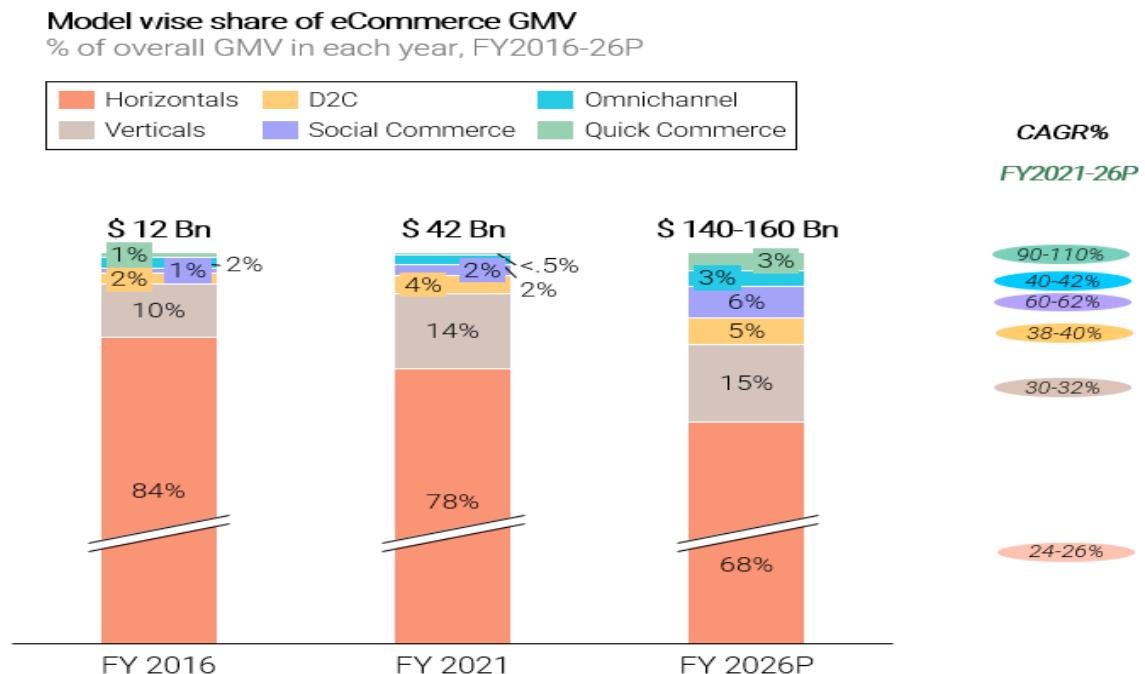
Indian eCommerce players operate across six different models

Over the last decade, India eCommerce adopted and evolved into multiple models. Starting with the “Horizontal model (that offers multiple categories on the platform)” to the recent model of “Quick commerce (delivery within 20-45 minutes)”. Broadly, eCommerce platforms are bucketed under 6 models.

Type of players	Emerging models / Long Tail					
Horizontals	Verticals	D2C	Social Commerce	Omnichannel	Quick Commerce	
8+ Players	25+ Players	800+ Players	10+ Players	30+ Players	4-5 Players	
Customers across geographical and income cohorts	Seekers of super category level value and experience	Customers seeking a high-quality value offering	Emerging online users who need trust and video experiences for online shopping	Convenience seeking brand loyal customers	Convenience seeking higher income customers who want instant delivery of essentials	
Largest category selection	Deep selection and customized experience within a specific category	High quality product and community benefits	Solving for trust and UI/UX with resellers, community and live commerce	Fast delivery of products from neighborhood stores of trusted brands/retailers	Instant delivery of daily essentials from partner stores	

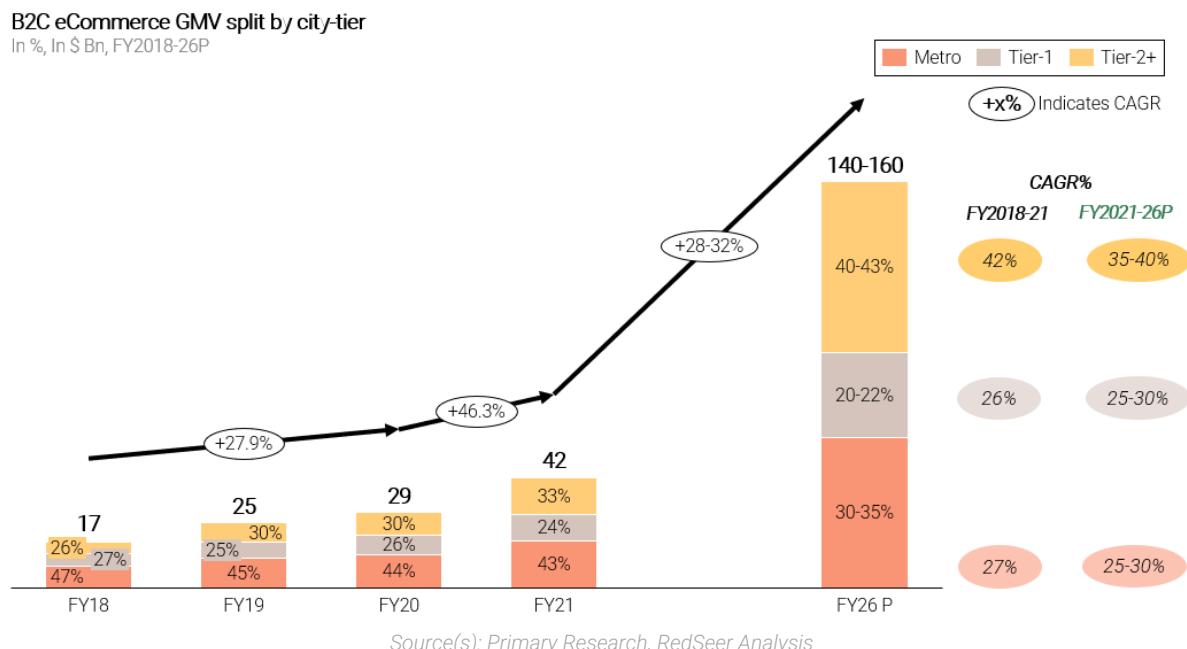
Source (s): Primary Research, RedSeer Approach

Horizontal players dominate the market with 75% share, it is projected to grow slower than market (~25% vs. 28%) in next 5 years



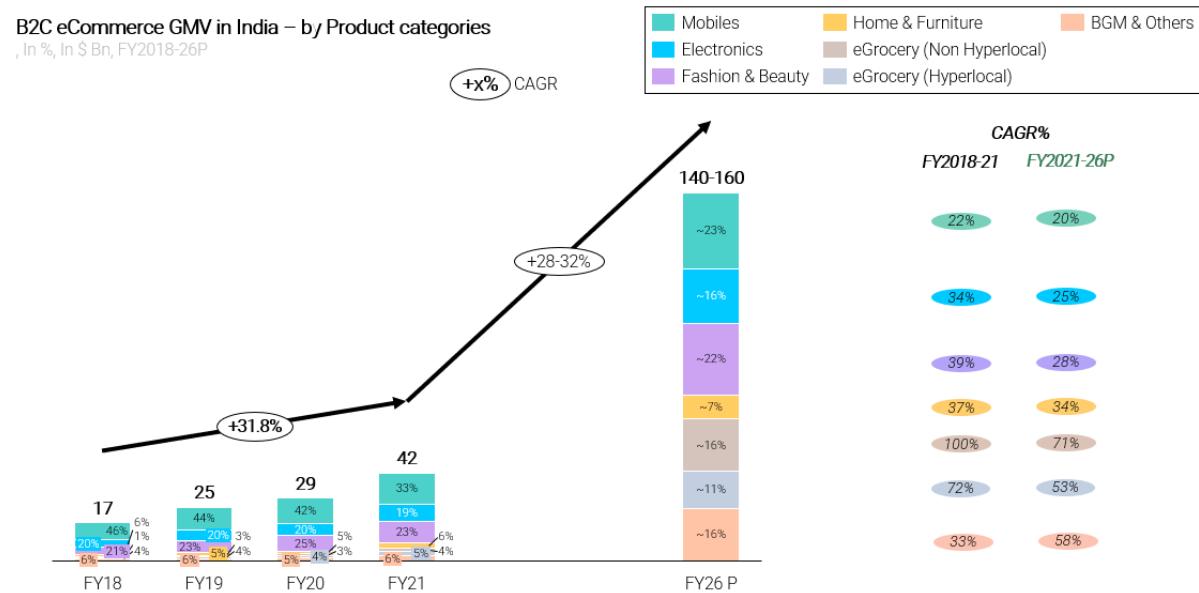
Source (s): Primary Research, RedSeer Approach

Tier-2+ cities to be the driver of growth of eCommerce for next 5 years



Driven by growth in first-time internet users in Tier-2+ cities who are young and are keen to experiment with multiple services online, Tier-2+ cities would be the driver of eCommerce growth in the next 5 years. Emergence of eCommerce models focused (e.g., Social Commerce) in Tier-2 cities would drive faster adoption of eCommerce in these cities. eCommerce logistics play a pivotal role in serving these customers who are buying for the first time.

eCommerce market is dominated by mobile & electronics

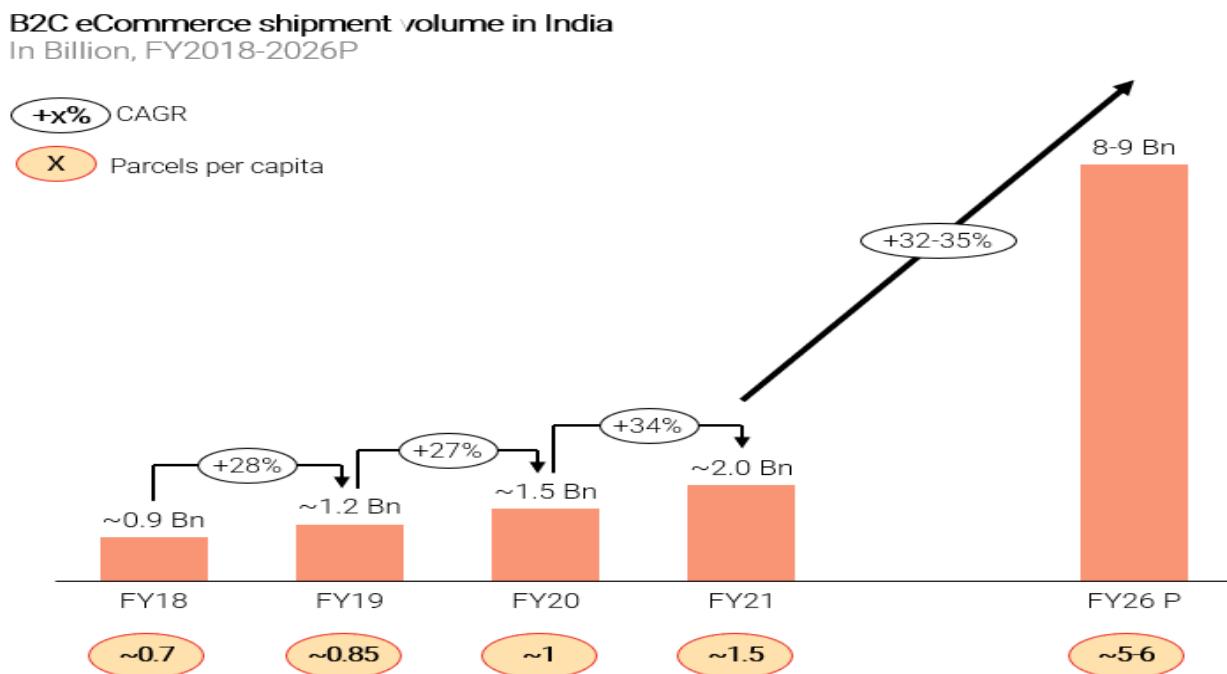


Mobile phones were the highest selling product in terms of volume in the last 5 years. With increasing comfort in online purchase and adoption of other categories online, category-mix for India commerce to become balanced in next 5 years. Grocery, Home & Furniture, Books

& General Merchandise (BGM) and Fashion & Beauty & personal care (BPC) to grow faster. E-commerce volumes, which were historically dominated by mobile phones (46% in FY18) and electronics (20% in FY18) are witnessing rebalancing as purchase for new categories are increasing. Large Appliances or white goods and furniture are amongst the emerging and fastest growing categories in e-commerce. Share of mobile phones is expected to reduce from 33% in FY21 to 23% in FY26, whereas share of eGrocery (hyperlocal) is expected to increase from 5% in FY21 to 11% in FY26. Books & General Merchandise (BGM) and others is expected to increase from 6% in FY21 to 16% in FY26. These newer e-Commerce categories (appliances, home and furniture) are better suited to move through PTL networks due to their large parcel size.

Indian eCommerce market shipped ~2.0 Bn parcels in FY2021, shipment volume is projected to grow at 32-35% CAGR for next 5 years

Note (s): 1. Shipments include total volume of shipments across eCommerce, D2C and Formalised Social Commerce, Omni-channel



Source(s): Expert Discussions, RedSeer IP, RedSeer Analysis

India eCommerce delivered an estimated ~2 Bn shipments in FY2021. Led by explosive growth of eCommerce and increasing volume of low value items, shipment volume is projected to grow faster than overall eCommerce GMV in next five years (32-35% for shipment volume). Growth in shipment volume over the last few years have led to increasing per-capita shipments. Per-capita shipments to grow to 5-6 by FY26 from current level of ~1.5(a growth of ~4x)

After the ban on movement of goods due to COVID-19 lockdown, the market saw a spike in order volume due to pent-up demand release and preference for home delivery of products which led to shipment volume growth of 34% in FY21.

With the rise of eCommerce in the last decade, need for specialized delivery service emerged

eCommerce supply chain demand and limitations with existing supply
Descriptive

eCommerce Needs		Limitations of using traditional logistics providers (2010-2020)	
	Faster Delivery	Inertia to change	<ul style="list-style-type: none"> There was inertia to change and embrace the new opportunity Unwilling to invest in technology and capacity to invest in growth required for services eCommerce
	Last-mile capability	No ecommerce centric model	<ul style="list-style-type: none"> 3PLs have been focusing on courier/ document delivery They didn't have ready-to-scale operations to handle high shipment volume and manage non-document category of shipments
	Cash handling	Only forward logistics	<ul style="list-style-type: none"> Logistics providers focused only on forward delivery With no capability for return pickup, it became difficult in managing delivery
	Return Management	Cash-handling a challenge	<ul style="list-style-type: none"> Majority of eCommerce shipment were CoD and cash handling was something traditional platforms didn't do at scale Unable to do cash reconciliation and settlement on a near real time basis leading to working capital issues with eCommerce platforms
	Pin code coverage	Not ready tech for last-mile	<ul style="list-style-type: none"> Less focus on tech for last-mile delivery putting them at poor delivery efficiency and route optimisation

Source(s): RedSeer IP

Last decade saw rise of eCommerce as alternate channel for shopping products online. This required specialized need for faster delivery, last-mile capability, cash handling for Cash-on-delivery (COD) orders, ability to manage return shipments and wider coverage across India. Traditional logistic providers were mostly catering to PTL/ TL and document deliveries. They had limitation to scaling operations and cater to eCommerce. There was gap in the eCommerce logistics market.

Large horizontals rely on captive logistics and rest of eCommerce uses tech-enabled new-age third-party logistics providers (3PL)

eCommerce shipment delivery model – Value proposition analysis
Descriptive

		Definition	Operational Capabilities	Economic Utility	Efficiency
	Captive Logistics	<ul style="list-style-type: none"> In-house logistics capability of eCommerce platforms for delivery / order fulfilment Platforms started captive in early last decade as there was no eCommerce centric logistics service available 	<ul style="list-style-type: none"> Handles delivery in high order density pin codes Does not have high geographical reach. Capacity is built keeping in mind the peak order volume during festive season 	<ul style="list-style-type: none"> Capital intensive operations and act as cost centre for the eCommerce companies Lower capacity utilization as it is built to handle peak shipment volume during festive season 	<ul style="list-style-type: none"> High control in quality and delivery experience High efficiency
Third Party Logistics (3PL)	New-Age 3PL (e.g. Delhivery)	<ul style="list-style-type: none"> Third-party logistics service with eCommerce tailored service offerings Provides express parcel delivery and fulfilment service to all eCommerce 	<ul style="list-style-type: none"> Capable to provide need for all kind of express parcel delivery (incl. eCommerce) and fulfilment Covers pan India pin-code Tech-enabled logistics provider have plug-n-play tech for D2C and social commerce players Can handle higher variance of demand 	<ul style="list-style-type: none"> Asset-light scalable model Serving all kind of players make them better utilize their capability and better unit economics Logistics providers with express LTL capability are further able to reduce cost of delivery due to better utilization of their line haul operations 	<ul style="list-style-type: none"> For leading tech-enabled logistics providers, there is high control and transparency in shipment High efficiency
	Traditional 3PL	<ul style="list-style-type: none"> Traditional logistics providers, that started offering eCommerce delivery A large part of their express parcel delivery still follows legacy / manual processes Specializes in excelling in a part of the overall logistics solution offerings 	<ul style="list-style-type: none"> Mostly service delivery in Metro, Tier-1 city pin codes Utilized their traditional capability for parcel delivery/ line-haul for eCommerce Limited tech-automation in their sortation centers, leading to longer time for delivery 	<ul style="list-style-type: none"> Asset-heavy business 	<ul style="list-style-type: none"> Low control Low efficiency

Source (s): Expert discussions and RedSeer analysis

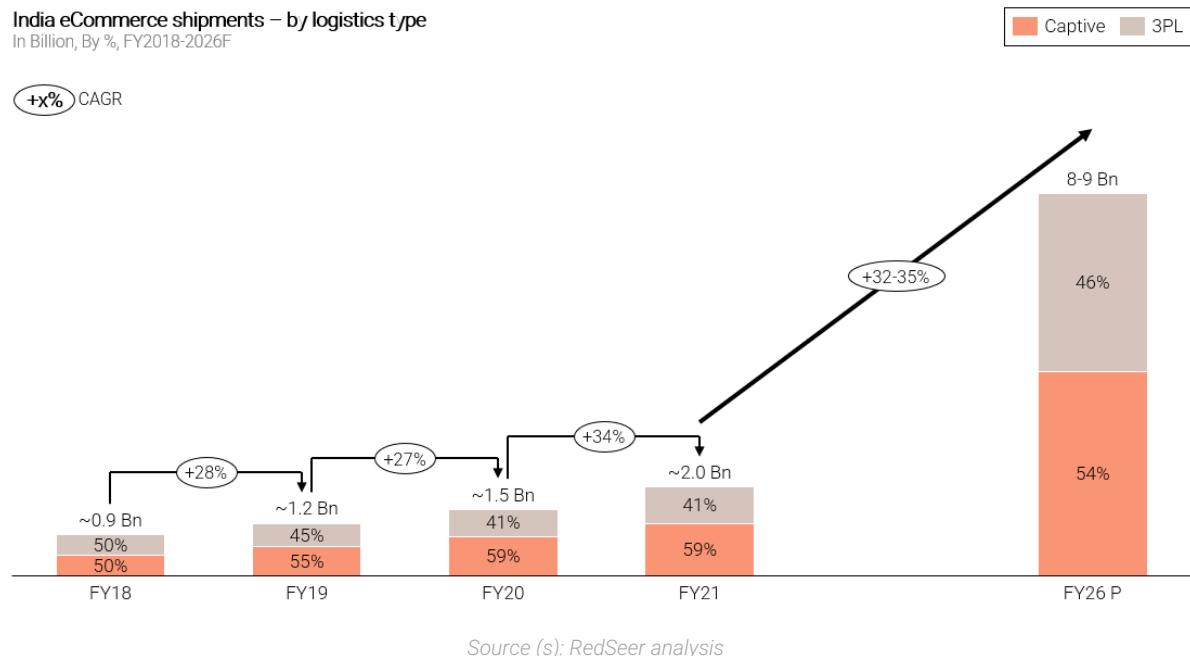
Top 2 eCommerce platforms have captive logistics and manages the order fulfilment for the parent platforms.

New age 3PL providers emerged to serve logistics needs for eCommerce and provide integrated supply chain services to eCommerce with technology solutions.

Key differences between captive and new age 3PL providers are below:

- New age 3PL have access to Pan India Pin codes (19,000+), as compared to captives, which currently has total pin code coverage of 14,000-15000. Delhivery operates the largest network for heavy parcel (Large Appliances or white goods, appliances, home & furniture and sports equipment.) delivery in India.
- Capacity for captive eCommerce logistics is built to handle the peak order volumes (festive sales etc.), new-age 3PL players build scalable networks whose capacity can be flexibly ramped up
- As captives are built to handle peak order volume, they remain under-utilized during non-peak periods compared to 3PLs networks which are optimized for better capacity utilization
- Other eCommerce companies prefer 3PL due to neutrality they offer compared to captives' arms

3rd party logistics providers handle ~41% of eCommerce shipments in FY21. This is projected to stabilize at 45-46% by next 5 years



Shipment handled by 3PL to grow faster due to following factors:

1. Increasing share of verticals and brands in eCommerce
2. 100% reliance of fast-growing social commerce, D2C, Omni-channel and long-tail players on 3PL for shipment fulfilment and delivery. Given the value proposition of tech-enabled logistics players, non-horizontals would continue to rely on them in the long-term.

Factors above would lead 3PL players to contribute ~46% of eCommerce shipments by FY 2026

New-age 3PL players are tech-enabled full-service logistics companies that offers many advantages to eCommerce players

Value prop of New-age 3PL Descriptive

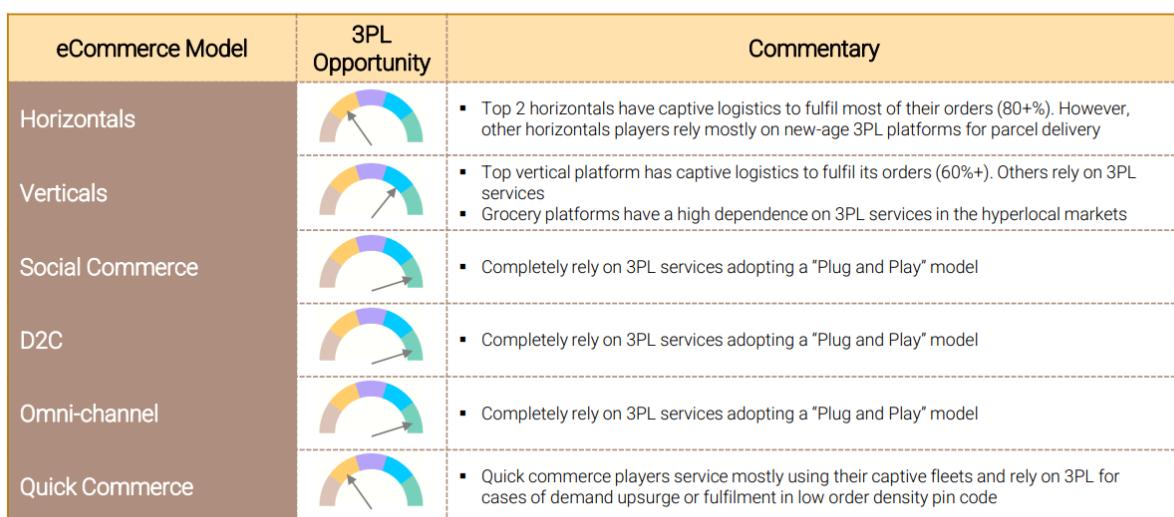
New-Age 3PL Value prop to eCommerce	Description
	Pan India Access <ul style="list-style-type: none"> ▪ 3PL partners unlock access to pan India network for their eCommerce player ▪ Their eCommerce centric offerings and ease of tech integration helps the platforms start delivering products for the platform easily
	Speed & Flexibility <ul style="list-style-type: none"> ▪ 3PL players have supply chain across road, rail and air in place and provides flexibility of delivery times ▪ A few of 3PLs provide integrated solutions which can result in lower cost and better service levels (e.g. common line haul across express parcel and LTL leading to better truck utilization and faster truck departures)
	Managing demand uncertainty <ul style="list-style-type: none"> ▪ 3PL handles the orders in demand uncertainties during festive sales, weekend order volumes for larger number of eCommerce companies ▪ They manage demand and utilize existing capacity across various clients
	Business Continuity/ Uncertainties <ul style="list-style-type: none"> ▪ eCommerce platforms with captive logistics need 3PLs to step in during any business disruptions caused by strikes, floods etc.
	Expertise & Tech in Supply Chain <ul style="list-style-type: none"> ▪ Supply chain requires scale and integrated offerings to realise synergies which is a function of investments and a dedicated team. Many eCommerce players prefer not to have it in-house (verticals, omni-channels, D2C, longtail hyperlocal players)

Source(s): RedSeer Analysis

New age 3PL are tech companies that have democratized access to cutting-edge logistics for eCommerce companies. In addition to pan-India coverage, it offers speed & flexibility, manage demand uncertainties, business continuity during uncertain times and provide expertise and tech in supply chain.

All eCommerce shipments from eCommerce platforms other than large horizontals are handled by 3PL

3PL opportunity landscape in eCommerce – Split by verticals



Note (s): All data as per FY 2021 status quo

Source (s): Primary Research, RedSeer Approach

Vertical eCommerce and Long-tail commerce is expected to consistently utilize 3PL logistics for their fulfilment and shipment deliveries. These are platforms who would mostly be focusing on core business (product, customer experience and expansion into multi-category and geography) than investing and building capabilities in logistics.

4. Competition Benchmarking

New-age, tech-enabled Logistics players in India are asset light and exercises selective ownership of strategic technology partner assets

Comparison of business models between US, China and India

	US	China	Traditional 3PL	Delhivery
Typical Network Design	Hub-Spoke	Hub-Spoke	Hub-Spoke	Mesh network
Typical Nature of Asset Holdings	Asset-heavy; self-owned infrastructure and fleet	Self-owned infrastructure; mix of self-owned and partner operated fleet and last-mile	Asset-light; mainly partner operated assets	Asset-light; leased infrastructure and fleet, selective ownership of strategic technology assets
Automation	High degree of hardware automation	High degree of hardware automation	Low automation; mainly manual operations	High degree of automation with full control over the value chain

Note:1. Asset light is defined as a business model with low ownership of physical assets 2. Degree of automation is defined as intensity of reduction in manual processes using technology to perform iterative tasks.

Source: Annual Reports of Logistics players, RedSeer Research, RedSeer Estimate

Source(s): RedSeer Research, RedSeer Analysis

Indian logistics players have evolved differently compared to counterparts in other large economies. Logistics providers in China generally own infrastructure across both first mile and last mile which makes them asset heavy. They offer integrated express logistics and one-stop solution from warehouses to financing, therefore having strong partner penetration, automation, and technology capabilities. Further, logistics services providers are unable to access customer transaction data since ownership of the data vests with the customers. On the other hand, US logistics integrators have a limited penetration for last mile partners and tend to own last mile infrastructure as well, them asset heavy.

Comparison between US, China and India logistics markets

Parameter	US	China	India
GDP ⁽¹⁾	US\$21 trillion	US \$14.7 trillion	US\$2.7 trillion
Logistics market spend ⁽²⁾	US\$1.6 trillion	US\$2.2 trillion	US\$390 billion
Total logistics spend as a % of GDP	~8%	~15%	~14%
Direct spends as % of GDP	~7%	~10%	~8%
Indirect spends as % of GDP	~1%	~5%	~6%
Share of top 10 organized players ⁽³⁾	~15%	7-10%	~1.5%
Average size of warehouse (sq.ft.)	100-200k	20-50k	8-12k
Average size of truck (ft.)	48	45	24-32
Average daily distance travelled by trucks (kms)	500+	423	325
Per Capita Logistics Spend	~US\$ 4860	~US\$ 1540	~US\$ 280
Per Capita Direct Logistics Spend	~US\$ 4460	~US\$ 1050	~US\$ 150
Per Capita Indirect Logistics Spend	~US\$ 400	~US\$ 490	~US\$ 130
Indicative Set of Listed Players ⁽⁴⁾			

Express Parcel Delivery	FedEx, UPS, USPS, Amazon	ZTO Express, Best Logistics, JD Logistics, SF Holdings, YTO Express, STO Express, Yunda	Delhivery, Blue Dart
Part Truck Load	FedEx, UPS, XPO Logistics, Old Dominion, SAIA	ZTO Express, Best Logistics, Deppon Logistics	Delhivery, VRL Logistics, TCI Express, Gati
Truckload	FedEx, UPS, Knight Swift Logistics, J.B. Hunt, Werner Enterprises	Best Logistics, SF Holdings, Full Truck Alliance	Delhivery, TCI, VRL Logistics
Supply Chain Services	UPS, GXO Logistics, FedEx	JD Logistics, Best Logistics	Delhivery, Mahindra Logistics, DHL Supply Chain

Notes: (1) CY2020 for US, China and India, (2) CY2020 for US and China, FY20 for India; (3) Share of top 10 organised players is based on domestic road transportation, warehousing and supply chain revenues only; (4) All players mentioned in the table above, other than Delhivery, are either listed or are unlisted subsidiaries of listed MNCs

Source(s): RedSeer Research, RedSeer Estimates, World Bank

While the US and China markets have large players that integrate across the logistics value chain, the Indian market is unique in that most incumbents are regional or vertical focused and are unable to offer a wide range of services. In a market dominated by monoline logistics service providers, Delhivery is a leading player offering services across entire spectrum of logistics services, in line with global integrated logistics players.

While Traditional players have experience in serving the B2B market, new-age tech enabled players have created a strong foothold in both serving B2C Express Parcel and B2B market requirements

The top India logistics players are broadly divided into three major categories based on the primary focus sectors

B2C/ C2C eCommerce logistics companies are tech-enabled with a primary focus on Express Parcel delivery, PTL and Warehousing services. They have expanded rapidly and increased their offerings by leveraging technology to optimize and improve the efficiency of the process. New-age tech enabled players like Delhivery dominate this segment with fixed routing and cutting-edge technology adoption. Few traditional players also services eCommerce shipments and are increasingly creating in-house analog tech capabilities.

B2B Tech Enabled companies majorly work on an aggregator model and offer Slow PTL, TL & cross border services.

B2B Traditional companies have significant presence in TL, Slow PTL, Warehousing and Cross Border.

Amongst all players, Delhivery offers the widest variety of services starting from express PTL and C2C to warehousing and end to end services and even cross-border logistics. Amongst Independent eCommerce focused logistics players, Delhivery has made the highest investment in technology and automation (in warehouse and sortation centers) and has built the largest technology team of engineers and developers, data scientists and is well positioned to gain share across business lines.

Due to its fully integrated stack of services, asset-light model and technology-led control of network assets and partners, Delhivery has developed the ability to address all aspects of the supply chain, thereby catering to a large part of the overall logistics market in India.

New age logistics players have grown exponentially and are sharply cutting down on losses

Players like Delhivery have grown ~ 2.8x from FY 2018 to FY 2020 with a sharp decrease in losses from -98% in FY 2019 to -58% in FY 2020. Transportation and warehousing are the major services offered by the new age logistics players.

Traditional logistics players have remained stable and EBITDA positive for the past few years

Traditional Indian players exercise high supply chain control using self-owned fleets but lack the technological flexibility – a moat created by new age logistics players.

New-age, tech-enabled players in India have built asset light models wherein they retain full control over operational decisions while network partners provide the assets.

India's new age 3PL players have grown exponentially over the past few years and have been consistently reducing operating losses as they scale up through use of technology. Delhivery was the largest and fastest growing fully integrated logistics services player in India by revenue as of FY 2021.

Traditional incumbents are less likely to consolidate to a single integrated platforms and gain meaningful share due to the limitations in their business models. The business models of incumbents have been built around an infrastructure-first mindset wherein strategies have been engineered towards building and owning physical assets without significant efforts towards developing technological capabilities and creating networks. Their logistics are currently less capable of dealing with the dynamic needs of modern supply chains with longer development & deployment cycles. Tech-enabled logistic players are better positioned than traditional mono-line service providers on account of their better organisational design and technology capabilities to build complementary services and integrate them into a unified offering of technological capabilities and networks.

Building technology-led integrated logistics platforms require sophisticated technology stacks comprised of operating systems, scalable architectures that can be exported and adapted to markets with similar characteristics, APIs that can integrate with a large universe of customer systems, relevant business applications and application market places, data analytics capabilities which require strong network effects and feedback loops built over long periods of time and serving a large number of customers.

New-age players have built sophisticated proprietary technology systems and are investing in data sciences (AI & ML), cutting edge engineering & automation and new age technologies – Vision ML, drones and robotics with APIs that can integrate with a universe of customer systems, business applications and partners, along with advanced data analytics capabilities. These systems also contain feedback loops built over long periods of time and serve large number of customers that enable them to become more intelligent with time and react faster to changing customer needs.

As a result, organized, new-age, and technology-enabled logistics players in India are positioning themselves for growth in digital consumption across eCommerce, D2C, omni channel and other digital commerce as well as in offline commerce.

Tech-enabled Integrated Logistics Players are well positioned to disrupt the market

Evolving need of customers for integrated logistics services

As businesses evolve and adopt technology across operations, demand for flexible and scalable logistics services becomes increasingly important. Until a few years ago, logistics requirements of Indian businesses were catered to by logistics players who either offered disaggregated mono-line services or regional presence with high degree of manual interventions resulting in significant inefficiencies and sub-optimal customer experience.

As digitization permeates across large and small businesses, businesses require logistics service providers to provide integrated services which can enable a holistic view of their business and provide actionable business intelligence from customer and transaction data to deliver a seamless solution across the value chain. Further, businesses are increasingly looking for logistics service providers who can cater to their requirements across sourcing and distribution channels, across regions, both domestically and internationally and also cater to both B2B and B2C requirements.

Technology-led integrated players are well positioned to address evolving customer needs

These service providers operate distinctly different business models compared to traditional logistics service providers in terms of capabilities, supply-chain management, and adoption of disruptive technologies and are best-equipped to address the changing requirements of businesses while also enabling the country's vision of creating an efficient, cost-effective and enabling logistics infrastructure

New-age logistics service providers adopt a full-stack tech-enabled approach to offer a gamut of supply-chain services with their extensive network of asset partners, in-house assets backed by technology and data analytics. Scale is at the core of building efficiencies and hence these players build integrated offerings to derive economics of scale of their investments in technology and the network. Further, tech-enabled new-age logistics providers outsource majority of the non-critical operations to maintain their asset-light nature whilst undertaking mission-critical operations in-house and owning strategic assets which enables them to maintain close control and also constantly innovating across their partner network. Further, these players are also able to full ownership and control over the data generated at their partners' end and thereby also able to eliminate inefficiencies within the network. With adoption of big data and technology, these providers can optimize the network to service businesses in the cost and time efficient manner.

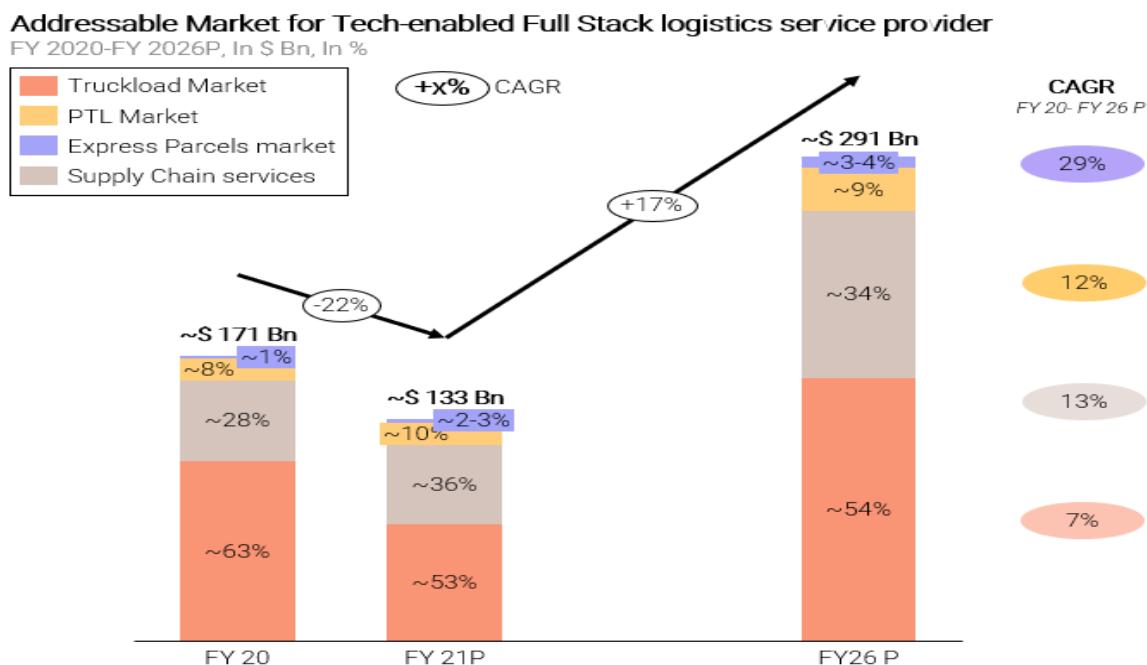
Among such players, Delhivery is well positioned at the cross-section of the various logistics sector growth drivers including infrastructure, offline commerce, digital consumption, and adoption of technology & data sciences. It has made the highest investments in technology and automation (in warehouse and sortation centers) and has built the largest technology team of engineers, developers and data scientists and is well positioned to gain share across business lines.

5. Addressable Market

Full stack/ integrated tech-enabled new-age logistics service provider offers entire breadth of supply-chain services with their wide network of asset partners, in house assets backed by tech and data analytics. Scale is at the core of building efficiencies and hence, businesses are required to provide multiple integrated services, optimized further with technology.

With the adoption of big data and technology, these providers can optimize their network capabilities to service businesses in the most cost and time efficient manner thereby creating a strong moat against traditional logistics providers.

Tech-enabled full-stack/ integrated logistics service provider has total addressable market (TAM) of US\$ ~133 Bn in FY21, which is projected to become US\$~290 Bn by FY 26



Source (s): Expert discussions, RedSeer IP and RedSeer analysis

Tech enabled full-stack logistics providers like Delhivery offer five types of logistics and supply-chain services:

1. Express Delivery service

Primarily serviced by new-age tech enabled logistics providers. Typically used by eCommerce and Retail B2B companies.

2. Trucking Tech services (TL and PTL)

Widely fragmented markets, primarily serviced by unorganized players. Enabled by tech, they provide better capacity-utilization, price transparency, route optimization in road transportation collectively leading to better efficiency and reduced cost. TL services are typically used by Automobile and Manufacturing sectors whereas retail and consumer goods clients use PTL services.

3. Hyperlocal Deliveries

Refers to small distance (<10km radius) deliveries by FoodTech, eGrocery players who are directly delivering to customers. Customer delight is a key metric for these players. New age 3PL players are dominant in the market with large headroom to grow in future.

4. Supply Chain services:

a. Warehousing and Fulfilment services

Traditionally serviced by unorganized local players and managed by 3PL. Growing need for rapid quick fulfilment by eCommerce business will drive the growth of fulfilment market which will be available to new-age logistics providers due to their tech driven proposition and existing relationships.

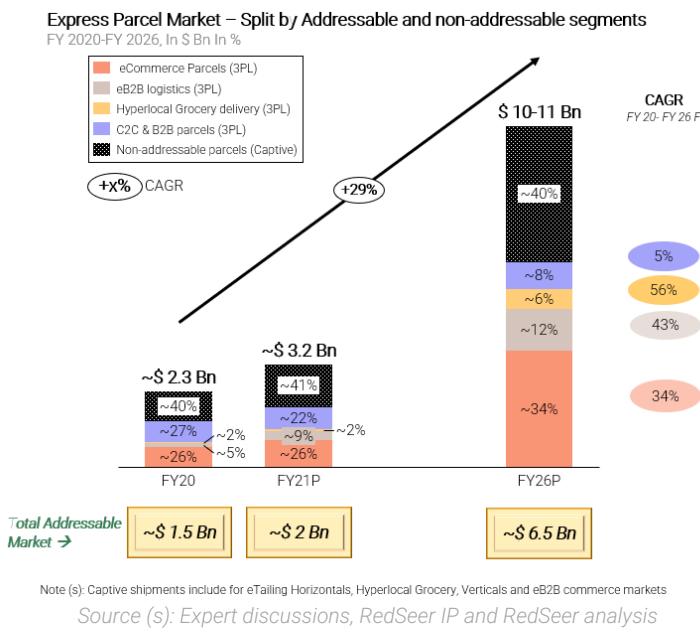
b. Integrated logistics services

With the adoption of technology, full-stack tech-enabled new-age logistics service providers can integrate multiple segments of the supply-chain a business and optimize the overall time and cost of the deliveries using data and network effects. This creates a “Plug and Play” ecosystem for client companies to utilize them.

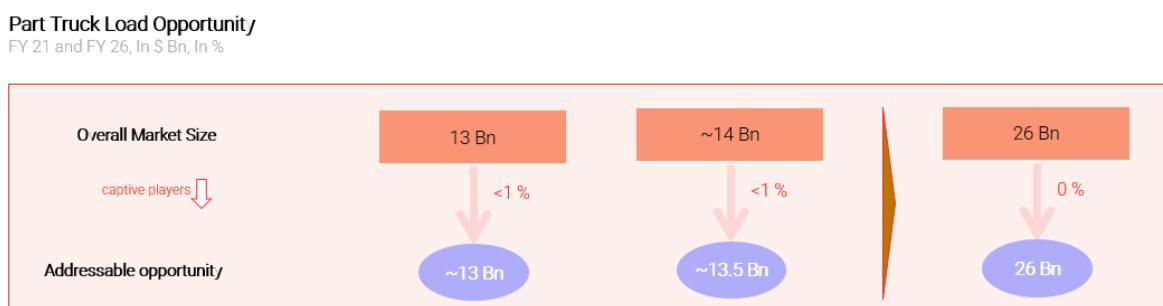
5. SaaS enabled optimization services

Logistics in India is very inefficient and requires SaaS offerings to create innovative solutions for optimization.

Express Parcel opportunity is estimated at ~\$2 Bn and projected to become a \$6.5 Bn opportunity by FY 26 driven by growing D2C and Social Commerce companies and rapid eCommerce growth in Tier 2+ markets



TL and PTL market combined is a US\$~120 Bn addressable opportunity in FY20 and projected to grow to US\$~190 Bn in the next 5 years.

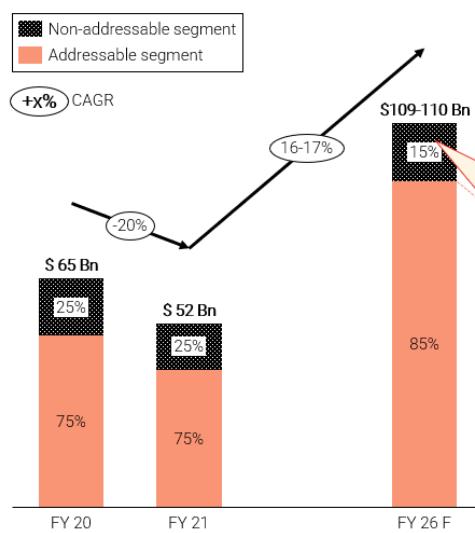


Note (s): PTL market is considered to have no captive logistics by FY26
Source(s): Expert discussions, RedSeer IP and RedSeer analysis

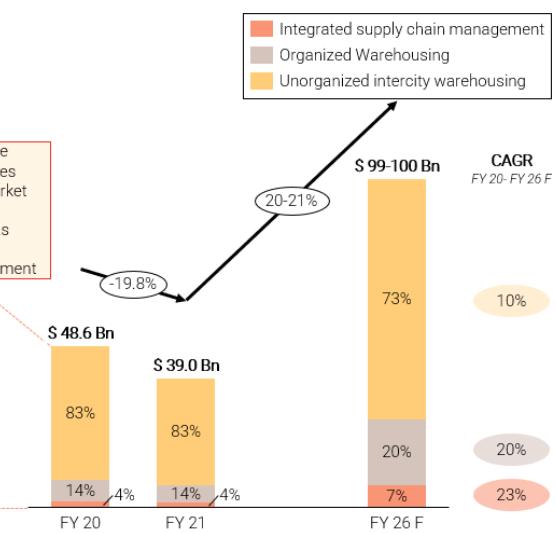
Traditional B2B companies use logistics services for four key shipment movements: Raw material movements, Finished goods movements, Primary and Secondary distribution. New age 3PL players are expected to add significant value in reducing the overall cost and transit time by structurally changing the logistics network. With the increased adoption of six sigma strategies and shift towards omnichannel business models, industries like Pharmaceuticals, Electronics, Apparel and Furniture are utilizing new age 3PL services to improve their fill rates and reduce inventory carrying costs. These types of movements are popular in shifting goods between MBOs (multi-brand outlets) by retail brands who move small amounts of goods frequently from one outlet to the other.

Integrated supply chain opportunity is projected to become a \$95-100 Bn opportunity in next 5 years growing at a CAGR of 15.6%

//arehousing and Supply Chain Market TAM
FY 2020-FY 2026, In \$ Bn In %



//arehousing and Supply Chain Market TAM – split by segment
FY 2020-FY 2026, In \$ Bn In %



Note: 1. Intracity transportation refers to the transportation done by vehicles with <3T of payload and within 200kms (one side movement) with a round trip of less than 24 Hrs.

Source (s): Expert discussions, RedSeer IP and RedSeer analysis

6. Future trends impacting the logistics sector

Logistics SaaS

India's trade, transportation and supply chain processes are largely manual and have become complex as businesses have inducted increasing number of network and channel partners into their supply chains through disparate and non-standardised systems and processes. Some of the largest inefficiencies include:

- Inefficient utilization of trucking capacity due to sub-optimal load and route matching
- Manual paperwork for invoicing, regulatory filings and record keeping
- Non-integrated systems for functions within the supply chain which impedes a holistic view of the supply chain
- Large number of brokers and agents who intermediate transactions

Productization of logistics technology through a Software as a service (SaaS) model has the potential of creating a much-needed unified industry standard to address these inefficiencies. These SaaS solutions can provide operating platforms for omnichannel operations, tools for enterprises to manage their distribution and optimize transportation, manage inventory and automate manual processes

Inefficiencies of Indian Road logistics and Impact of SaaS			Intensity of impact
Descriptive	Description	Impact of SaaS	Existing Solution
1 Inefficient truck utilization	Trucks on an average run on 70% utilization due to operational and planning inefficiencies	SaaS players increase the truck utilization rate by improving load matching, optimizing route and forecasting demand through analyzing the data collected with the help of advanced AI tools	
2 Premium Freight	Last minute rail/air logistics spend due to planning inefficiencies	SaaS Improves the planning process by offering end to end visibility and identifying inefficiencies across the customer's supply chain, e.g., inventory, stock damage, unoptimized load, etc.	
3 Variance in agreed rates, Invoice raised and paid	Lack of integration in procurement and financing departments leads to variance in agreed rates to final paid rates	By digitizing payment, invoice generation and integrating digital documents, SaaS enables seamless billing and invoicing process, and efficient tracking of inefficiencies in final paid rates	No off-the-shelf plug-n-play solution available
4 Debits- KPI, Damage	In-transit and loading/unloading damages due to lack of driver orientation on safety standards	SaaS partly helps in improving the awareness of safety standards by digitizing all the relevant standards and making it accessible to all the key stakeholders	
5 Supplementary bills	Additional halting and second shift driver/co-driver charges incurred due to vehicle stoppages at the plant site	SaaS provides an integrated order and warehouse management systems which helps in reducing the wasted time at warehouse and pick up points, and helps in improving efficiency	

Note: Intensity of impact is defined by the share of potential margin savings which SaaS can bring on cost head / loss making area in road logistics

Source (s): RedSeer research

Tech enabled logistics players can integrate network reach and trade intelligence with technology to create cloud-based logistics and supply chain management solutions and reduce these inefficiencies.

The logistics SaaS opportunity is estimated to be ~US\$18 – 25 billion as of FY20



Source(s): Primary Research, RedSeer analysis

Supply Chain Finance

Scaled-up, organized players have gained proprietary access to large sets of customer, product and geographic data which are valuable to lenders or to these organized players themselves to provide financing to various participants in the supply chain. This could include working capital or asset financing to partners in the logistics value chain or even to counterparties trading with each other via the supply chain platform.

Greening of the Industry

The Indian government is increasingly encouraging adoption of electric vehicles in logistics operations to reduce emissions. Organized players are well-positioned to lead the transition to electric vehicles in cargo as well as pick-up and delivery operations.