

RSM INDIA WHITE PAPER

OPTIMISING SUPPLY CHAIN COST - ROAD TRANSPORTATION



THE POWER OF BEING UNDERSTOOD

1.0 Introduction

India has second largest road network across the world spanning over a 5.5 million Km⁽¹⁾. The road network transports 58% of the freight movement.⁽¹⁾ It is largely preferred transport option in India as it can provide door to door transport flexibility. Road transportation has gradually increased over the last few years with the improvement in connectivity between cities, towns and villages. A strong transportation network can boost the Government's efforts towards "Make in India" and is expected to play a vital role in driving the Indian economy.

There have been significant changes in India's logistics land scape in general and road transportation in particular in the past couple of years. RSM's on-going research, combined with experience through its clients across industry sectors provides interesting insights, indicating that the customers as well as service providers are evolving to adapt to the change. We intend to bring into focus current trends of Indian transportation sector, challenges faced by sector, how external factors contribute to road transportation & key strategies relevant to the Indian business climate to enhance transportation efficiencies.

2.0 Current Trends in Logistics and Transportation sector in India

Road transportation is a part of Logistics Sector. Indian Logistics sector is valued at approximately INR 6,37,000 Cr. by 2017⁽²⁾. Key macro-economic statistics are given below:

2.1 Logistics Cost Benchmarks

India's share of logistics cost to GDP is on higher side if we compare it with developed economies.

- A. Share of Logistics cost to GDP: Share of Logistics cost to GDP is 13.5% ⁽²⁾ (7% in Transportation, 6.0% in Inventory, 0.5% in Admin and overheads) in India, whereas in developed economies it ranges between 8% and 10% (5-6% in Transportation, 2-3% in Inventory & 0.5-1.0% in Admin and Overheads).
- B. Share of Logistics cost to GDP (Considering final price of the goods): Share of Logistics cost to final price of the product is 18% in India whereas in developed economies, it ranges between 9% and 10%.

2.2 India's Logistics Performance Index (LPI) is in the mid 40s

Logistics Performance Index (LPI), an interactive benchmarking tool developed by World Bank which rates countries based on the efficiency of domestic and international freight logistics. The rating criteria are logistics service quality, timeliness of delivery, quality of infrastructure, ability to track and trace consignments, efficiency of customs and border management clearance and ease of international shipment. LPI 2018 gives relative ranking of 160 countries across the globe.

India's Logistics Performance Index (LPI) had improved from rank 54 to 36 between 2014 and 2016 due to improvements in infrastructure, programs like Make in India and techno-logical and digital improvements in the logistics supply chain. However, India is ranked 44 in LPI in 2018 with a score of 3.18 while Germany has the highest score of 4.2.⁽²⁾

Fig.1 LPI Comparison India Vs. Germany

Fig.2 India's Performance on various LPI parameters





2.3 Ranking of states based on ease of logistics named LEADS (Logistics Ease Across Different States)

The Transportation & Logistics team at Deloitte, State Cell, Department of Commerce, the Ministry of Commerce and Industry, Government of India has recently developed a framework called LEADS to measure the logistics performances of different states in India. Based on these indicators, Gujarat ranks the highest followed by Punjab, Andhra Pradesh, Karnataka, Maharashtra and Haryana in 2017 rankings.⁽²⁾

QUARTILE 4 QUARTILE 3 QUARTILE 2 QUARTILE 1 4.0 3.8 3.6 SCORE 3.4**EADS INDEX** 28 2.6 24 2.2 2.0 Upper bound Karnataka Odisha Iharkhand Lower bound Maharashtra 🕑 Kerala West Bengal Score 6 Haryana Uttar Pradesh 💿 Assam Rajasthan Madhya Pradesh Bihar Gujarat Tami Nadu Uttarakhand 🐵 Jammu & Kashmir 🚯 Goa Punjab Telangana Andhra Pradesh Chhattisgarh Imanchal Pradesh LEADS score for 22 states

Fig.3 LEADS score for 22 states in India (2017)

Key parameters evaluated in LEADS index are

- Quality of transport and logistics infrastructure (capacity and connectivity)
- Quality of services offered by logistics service providers (availability, competence, efficiency and ease of access)
- Efficiency of regulatory processes (speed, simplicity, transparency in processing, ease of documentation)
- Favorability of operating environment
- Ease of arranging logistics at competitive rates
- Timeliness of cargo delivery
- Safety and security of cargo movement
 - Ease of track and trace

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2.4 Freight Modes

Freight mode's %share in India

Freight transport in India is road-dominated, accounting for 58% of freight movement. 35% of freight demand is met by rail, 6% by waterways and less than 1% by air. Cost of Freight Movement by Road: INR 2.58 / MT / Km, rail Transport : INR 1.41/MT/km, Water Ways: INR 1.06/MT/Km.⁽²⁾

6% 1% Road freight 2.58 3 Railways 2 Waterways 1.41 1.06 Airways 1 35% 58% 0 Road freight Railways Waterways

Mode wise Freight INR/Tonne/Km

Despite largest share in transportation is by road transportation, the cost per MT per km (RS.2.58/MT/Km) is highest among the modes of transport in India.

2.5 Ownership Profile

Out of the total 5.6 million trucks on the Indian roads, approximately. 80% of the truck operators are with less than 5 trucks⁽³⁾ The trucks are usually driven by family members or hired drivers. The drivers are generally assisted by cleaners. They depend upon brokers, direct company customers or transportation companies to get the business. Moreover, about 75% of the Indian goods vehicles are 2 axles vehicles with average 9 MT weight capacity, whereas in European countries majority of goods vehicle falls into 5 axle, with average 40 MT weight capacity. ⁽⁴⁾

3.0 Challenges for Road Transportation

Transport is the backbone and lifeline of Indian economy, however, it is the most unprofessional & unorganised business as well. The road transportation system of our country is facing real challenges, leading to cost inefficiencies.

3.1 Economies of Scale

The Indian transport industry is a USD 91 billion industry, yet it suffers from business trade-off loss due to its lack of technology. For instance, there is an immense scope in equipping vehicles with GPS trackers as lack of a transparent network between vehicle owners and those in need of transportation services often leads to transporters making empty or less than truck loads (LTL) journeys. The existence of a route/location tracker will help customers to engage transporters on the same

3.2 Vehicle Selection and utilisation



Trucks are one of the critical assets that offer the greater value in transportation network. Companies usually don't spend time in evaluating what all types (Tonnages) trucks are needed for their dispatches. Typically truck type selection and allocation is left on market availability and historical usage.

3.3 True Price Discovery of Transportation Cost

In India, freight cost is generally determined by shipper requesting for quote from multiple vendors and selecting a lowest value quote for vendor selection. However, fewer efforts are taken to evaluate if cost provided by transporter are realistic or not. There is no practice to derive the most realistic transportation cost for a route. This leads to higher supply chain cost getting built into the final product.

3.4 Shortage of drivers

Since the launch of taxi services app like Ola & Uber, major shift is happening in driver community. Drivers prefer to drive for taxis and earn lucrative income than driving trucks with lower wages and lesser work life balance. This has resulted in shortages of drivers for transportation business. The number of drivers fell from 900 drivers per 1000 trucks in 2002 to 600 drivers per 1000 trucks in 2017.⁽²⁾

3.5 Inefficiencies in the Final Mile Delivery:

Urban logistics or Final mile delivery is the process of delivering products to the retail outlet or the doorsteps of consumers. This involves different driving patterns, vehicles types, and supply complexities. This is significantly different from long haul trucking. Though Urban Logistics is very short link of Supply Chain it is critically important, because of following reasons:

- It is very high cost (for e.g. In E-commerce Supply Chains Final mile counts 53% of the Logistics Cost)⁽²⁾
- it is growing very rapidly due to accelerating urbanisation ,which increased from 29% in 2007 to 34% in 2017 & market is projected to grow from current INR 2.6 trillion to INR 13.6 trillion by 2026)⁽²⁾
- It creates significant externalities such as congestion and pollution

Major Inefficiencies in Final miles Deliveries are

- Underutilisation of resources (Vehicles/People/Time)
- Lack of Infrastructure at the delivery points
- Location of Warehouse from which shipment originates: Logistical sprawl phenomenon resulting lower deliveries per trip
- Regulatory Environment
 - Restrictions for Truck entry and exit within city boundaries
 - for 2 wheeler which are currently used for urban deliveries

3.6 Lack of Cold Chain Infrastructure leading to wastage

India loses 40% of agricultural production to wastage in the supply chain, whereas In OECD countries, the loss of agricultural products during shipment is on the order of 2% to 3%, while many developing countries experience losses of up to 25%. High wastage leads to Income loss and inflation of over all prices for final consumer.⁽²⁾

E.g. 1] In the U.S., 80–85% of the fresh fruits and vegetables are transported through cold chain logistics, whereas in India, this number is a mere 4%. The total value of India's wasted fruit and vegetables is INR 44,000 Cr per year.

E.g. 2] A similar problem is the wastage of vaccines due to lack of proper cold chain logistics infrastructure. India loses 2 million lives each year to vaccine-preventable deaths. At least 25% of the vaccines get wasted before they can be put to actual use by doctors. Lack of cold chain and inefficient last mile distribution have restricted basic vaccines penetration to 60–70%. ⁽²⁾

3.7 Uncertainties and inefficiencies due to Driver related issues

Several issues related to driver related to drivers lead to delays, safety and security issues and other supply chain disruptions. Cost to customers is inflated due to these issues. Some of them are listed below.

- More than 25% of drivers return to their home base only after eight days, reducing quality of life and leading to poor outcomes in both physical and psychological health⁽²⁾
- Around 50% of the truck drivers face driving-related health issues
- In 2017 approximately 67% of truck drivers did not have any medical check-up
- Truck drivers are also poorly paid, earning only half as much as cab drivers.
- Poor logistics practices often lead to unsafe practices such as overloading of trucks, which compromise road safety both for truck drivers and those with whom they share the road—over 20% of the 1.4 lakh fatalities in 2014 were truck drivers⁽²⁾

3.8 Toll Plazas and RTO Posts

Even after GST regulations passed, two major bottlenecks remain: RTO posts have not been abolished in all states, checks continue at interstate borders. Besides, a lot of time is wasted at toll plazas in waiting, cash payments etc. Toll has become the second largest expense of the transport community only after fuel over the past decade, which over 374 toll plazas having sprung up across India to collect a charge on most of the national highway network. According to a transport sector expert, delays at toll plazas and extra fuel consumption result in annual loss of over INR. 1 lakh crores. Frequent breaks and poor road infrastructure results in loss of transport efficiency.⁽⁵⁾

Efficiency Indicator	India	Global
Average Truck Speed (Km/hr)	20-40	60-80(Developed Countries)
Average Truck Distance Covered in a years (Km/year)	60,000-1,00,000	4,00,000-6,00,000
Average Truck Distance per day (Km/day)	225-400	500 (BRICS), 700-800 US & Europe
Total Length of Expressways	>1000	74,000 (China)

3.9 Internal (Process) Inefficiencies

When transport vendors develop pricing, they typically assume a **2 hour load window**. But if the transport vendor knows they're picking up at a place where goods will get loaded in **more than 2 hours**, that affects the price. It automatically encourages the transport vendor to give a freight rate adjusting the delays faced at loading site.

In India, many of the cases loading unloading is labor intensive and takes more man-hours and time to load goods in to the truck. Sometime internal delays, forces truck to spend more than 5-6 hours within the system to get loaded or unloaded. Every hour in standby situation leads to lesser Km run by truck and business loss to Transporter. For a truck owner *moving truck is always better than a standing truck.*

3.10 Month End Dispatch Skews

Most supply chains suffer from a high degree of month-end skews in their dispatch patterns. Many companies have more than 50% of their monthly sales in the last week. In addition, distributors often wait till late into the month for the special month-end discounts that companies might offer, which further accentuates the skew. This high skewness in dispatches puts a lot of pressure on the company's supply chain and makes it sub-optimal. Because of month end load skew, supply of truck becomes lesser than demand leading to higher transportation costs for spot rates.

3.11 Fuel Cost Management

Many truck operators do not keep their vehicle properly maintained. This leads to decreased mileage and increases trip cost. If mileage of goods vehicle were at desired levels, savings to economy would be in the order of INR 240 billion per year. ⁽⁵⁾

However, Truck mileage improvement is a complex issue. Mileage is low due to, lack of good quality roads, slow speeds of vehicles, stoppages at tollgates and lack of training for drivers regarding proper usage and maintenance of trucks etc.

Another barrier in reducing transportation cost is inability of Indian manufacturers to develop higher mileage vehicles. Imported brands of trucks are higher on mileage; however they are not affordable because of higher import duties.

3.12 Inadequate Infrastructure

India's roads are congested and of poor quality. Lane capacity is low – majority of national highways are of two lanes or less. A quarter of all India's highways are congested. Many roads are of poor quality and road maintenance remains under-funded and often neglected. This leads to the deterioration of roads and high transport costs for transporters. Roads are significant for the development of the rural economy – Rural India home to almost 70 percent of India's population. Although the rural road network is extensive, one third of India's villages do not have access to all-weather roads and they remain cut off during the rainy season. The problem is more acute in India's northern and northeastern states which are poorly linked to the cities.

India has 1.7% of its total road network in the form of expressways and highways, whereas the same figure for the US is 5.7%, UK: 12.6%, South Korea: 16.9% and China: 2.6%. This comparison can give us the idea of how much our Road Infrastructure is underdeveloped as compared to



4.0 External Factors Contributing to Road Transportation

Several initiatives, enablers have been announced and some of them implemented by the regulatory authorities during the past few years. Some companies are aware of and are enjoying the benefits. Enlisted below are some of them:

4.1 Load Carrying Capacity

The load carrying capacities of heavy vehicles, including trucks, have been increased by 20% to 25% at par with global standards, and it would help in reducing logistics costs. ⁽⁷⁾

4.2 Fitness Certificates

Requirement for annual fitness certificates for trucks has been done away with and Fitness Certificate needs to be only renewed every two years.

4.3 GST Regime

Until recently the main barrier against seamless movement of goods was the practice of collecting taxes at state borders. Moving goods across state borders incurred tax charges that more than outweighed the financial benefits of inventory centralisation. As a result, supply chains were designed to be tax efficient, not inventory efficient. After the implementation of GST, that barrier has largely been removed and industry is beginning to react to new opportunities for efficiency.

Removal of check posts has led to reduction in transit times of trucks by almost 30%, enabling a larger DC service footprint, and reducing transport costs by about 3-7%. Also, a change in optimal network design after GST has helped in consolidating warehousing footprint. This leads to reduction in inventory levels and increase in inventory turnover, hence increasing profitability.⁽⁷⁾

4.4 E-Way Bill

E-way bill is a simple system which establishes direct linkage between what is declared and what is actually moved. It will bring greater transparency and enable smooth movement of goods.

4.5 Highway Construction on Rise

Construction of national highways in India hit a record 10,000 km in the year ended March 31 2018, after the government stepped up the pace of implementation and awarding contracts. On an average, 27.5 km of highways were constructed per day in 2018, while contracts were awarded for an average 46 km per day.⁽⁷⁾

4.6 Multi-fold fine for violations, Increased compensation after accidents, etc.

Loksabha approved bill on 2018 to bring radical changes in road transport that will usher multi-fold fine for violations, compensation for 5 Lakh for grave injuries and check bogus license and vehicle theft. The bill, seeks to amend nearly 30-year-old Motor Vehicle Act 1988, also calls for 100% e-governance and will cap maximum liability for third party insurance at INR 10 lakh in case of death in a motor accident. ⁽⁷⁾

4.7 Future Plans to enhance further Road Transportation Efficiency

- Air Conditioned Truck Cabin: The Minister of State for Road, Transport, Highways and Shipping is considering that, all N2 (3.5-12 tons) and N3 (upwards of 12 tons) category goods carriers should be fitted with air-conditioned cabins to improve the driver comfort and reduce fatigue.
- Uniform Road Taxation: Currently, each state has its own taxation for Commercials vehicles. For example, Delhi has 3 different slabs for vehicles prices placed in up to INR 6 Lakhs, INR 6-10 Lakhs, above INR 10 Lakhs. Whereas J&K, W.B. and H.P. have tax distinction based on engine displacement. One Nation One Price for vehicle model (Truck) may be realty after U.R.T. bill is passed. Currently, pricing difference of vehicle model between Mumbai and Delhi 7-8%, Mumbai price being on higher side. Uniform Tax Code will unlock the supply and demand across the country.
- Incentivise scrapping of old vehicles.
- Have a provision for real-time traffic information in vehicles for better traffic management
- Introduce electronic toll collection on all major highways/expressways to reduce inefficiency
- Install weigh-in-motion of goods carriage vehicles on roads to reduce unnecessary stoppages
- Road pricing and rate of user fee should be fixed purely on the basis of additional benefits accruing to users on account of facility upgrades, as compared to the existing Facility (not on the basis of entire existing facility).
- Consider undertaking a sound cost allocation study of providing and maintaining roads in the context of their use by cars, buses and trucks.
- Review reduction in the rate of tolling after recovery of capital cost of vendor for publicly funded projects



5.1 Vendor Rationalisation

Optimisation of share of business to drive cost efficiency is one of the key strategies used by evolved corporates. Providing higher volumes in similar geography or for similar category of products may improve transporter's efficiency. The transporter should be pursued to pass on the benefits to reduce the overall costs. Typical strategies applied are listed below:

- Transporter wise volume consolidation
- Optimising number of service providers for the transport network
- Introduction of new vendors

5.2 Vehicle selection and utilisation

Trucks are one of the critical assets that offer the greater value in transportation network. Typically truck type selection and allocation is led by market availability and historical usage. Depending upon the product densities and volumes to be shipped following strategies can be deployed to reduce number of trips thus reducing the per unit freight costs:

- Selecting higher capacity truck for high volume regular dispatch routes
- Monitoring and improvement in the volumes per pallet dispatched through trucks
- Optimising the truck mix based on weight, rate, volume capacity and load density (in case of multiple truck type usage)
- Consolidating the smaller or partial pallet loads with other goods on the same route
- Standardisation of vehicle body for maximum utilisation

5.3 Freight cost benchmarking

Freight cost benchmarking, simply put, is comparing freight costs you're paying to what your industry peers are paying. While comparing and shopping for the best rates is part of being a responsible business owner, having access to current and reliable market rates isn't always the most straightforward process.

Here are some other strategies for companies for using benchmarked freight rates:

- Market intelligence Freight cost benchmarking offers a comprehensive analysis of spot rates and long-term contracted rates as it measures freight averages over time
- **Exploring new service providers** Periodically seeking quotations from the new service providers to evaluate current rates

5.4 Market vs Dedicated trucks

There are cost advantages of using a dedicated fleet instead of using market trucks. This decision will depend on conducting in depth cost analysis. There are other factors like consistency in volumes, frequency of trips, expected reliability, TAT (turnaround time) which also play the role in deciding for dedicated truck movement. As an example, we found that destinations up to 200 km provide cost advantage in using dedicated fleet for a particular business.

5.5 Route optimisation

Businesses often struggle with visualising where everyone is located in their list. At times, simply looking at a spreadsheet or CRM doesn't give the exact picture of the geographical locations of the clients or customers. Route optimisation is the method of using technology and computers to figure out the most direct and the most efficient route to all the stops and destinations. It optimises time and energy for each trip from one location to another. Route optimisation tools also can be used to tactically decide changes / modifications in case of contingencies.

5.6 Intelligent Transportation Systems

Intelligent transportation systems use information technology to improve the efficiency of transportation. Several solutions are being used by transporters or their customers to drive cost efficiency, service efficiency and mitigate risks related to safety & security. Some examples are listed below:

- Weigh-in-motion (WIM) devices can quickly and effectively identify overloaded trucks
- Transport management software
- GPS / RFID tracking and tracing in real time of dispatched trucks
- Route planning systems
- Location monitoring systems

5.7 Outsourcing the transportation to 3PL

A 3PL, is a 3rd party logistics service provider. A 3PL helps the organisation by providing expertise and best practices that can effectively integrate into the existing supply chain. 3PLs can specialise in various logistical areas such as road transport, warehousing, chemical handling etc. They can be also specialised for operating in particular geographic regions.

Outsourcing freight management helps in transferring the financial burden of staffing and capital expenditures. A 3PL's assistance is ideal for cost control, improving customer experience or expanding routes.

5.8 Price variance

Getting competitive freight rates for dispatching goods is utmost important. Price variance strategy deals with the various alternatives which can be explored to optimise the freight costs of a company. Price variance can be managed in following ways:

- Route wise, transporter wise freight rate variances to be analysed consistently
- Ensuring that the curve plotted for freight rate measured as INR per ton per km (PTPK) is smooth and all the peaks are analysed for potential reduction
- Seasonal variations can be addressed through tactical initiatives
- Going for a reverse auction to get one single agreed freight rate for a particular destination which can be optimal (in case multiple vendors are to be deployed on same route)

5.9 Bottom-up costing of freight rates

The Bottom-up costing approach is based on a detailed analysis of various elements of the cost structure. A detailed analysis gives better understanding of real needs of the actual cost elements and a grasp of the "optimal" level regarding attainable benefits. A mathematical tool can be developed to estimate the most realistic cost to be borne by the company for a particular route. This tool can be used for calculating the freight rates between a given origin and destination using "Bottom-up" approach. The tool computes fixed as well as variable costs associated with the route.

Companies can use such tools in their transportation network for creating a baseline of freight rates across different shipping destinations. It could enable companies to evaluate existing rates against true price discovery arrived from the tool. Our experience of applying this tool to varied set of businesses and routes indicates about **3% to 15%** potential for freight cost reduction.

5.10 Dispatch on off-peak days

Dispatching a day later or earlier can yield measurable savings. Usually there is a peaking phenomenon observed in the month end dispatches till the 1st week of next month. Based on the historic dispatch patterns one can plan their dispatches in a 30%-30%-40% or 30%-40%-30% (with ten days *interval*) to take care of month end peaking and distribute an even dispatch load across the month. Some companies strategically change their performance periods to address the month end skew.

For example, (1) Changing from monthly to weekly performance evaluation. (2) Changing the month end to 15th of the month etc.

5.11 Contract steady lane volume

If transport vendor knows he is going to work with the customer every day, and is going to get a regular flow of goods in the same lane, he can market those backhauls and build out his network. As a result, customer will pay less because the transport vendor is more efficient.

Furthermore, with capacity as tight as it is these days, these vendors will focus on moving the freight of the people who are loyal and have reliable steady freight volumes.

5.12 Efficient fuel management

Fuel is the most critical component of the transportation cost. Usually it takes **25 to 30%** of the total freight cost of the trip. Following ways can be explored to reduce the transportation costs by managing fuel expenses:

- Strategically drafting a fuel escalation / de-escalation clause based on actual contribution of fuel in INR per ton per km (PTPK) derived from the Bottom – up costing. This will enable win – win situation for companies and their transporters
- If the shipments involve heavy and light goods to be dropped on similar routes; changing the drop sequence can reduce heavily laden mileage, reducing the fuel costs/km
- Approaching / selecting the transport vendors having proven track record of maintaining their vehicles / fleet
- Strategically selecting fuel filling locations within particular route to minimise fuel costs

5.13 Reducing the truck TAT (Turn Around Time) at plant, warehouse and for the trip

Distance travelled by a vehicle defines the allocation of fixed costs on the total freight rates. We have observed that turnaround time within the plant, warehouse and the trip has a direct relationship with efficiency of internal processes. It can be improved through following:

- Truck scheduling with specific time windows to avoid the cross flows of trucks with local traffic / people / employees movement, etc.
- Sharing advanced shipment notice with suppliers for consistent and timely unloading of goods at the company or warehouse.
- Planning packaging and palletisation of goods well in advance before generating the truck indents
- Offering night time loading (if possible) to increase the dispatches within a particular day
- Exploring the options for increasing the number of loading / unloading points to ease out high peaks of dispatches or in flow of goods
- Usage of advanced material handling devices at loading / unloading points for easy and faster movement
- Eliminating NVA (non-value added) time spent within plant / warehouse premises

5.14 Standardisation of logistics practices

Logistics involves the movement of both physical goods as well as information between many parties. Standardising both physical assets and information allows seamless movement of goods from one party to the next and is critical for truck productivity. For example, harmonisation of pallet and truck standards allows for high load factors, standardisation of trucks and trailers allows for drop-and-hook operations, and standardisation of data allows for automation of admin processes. In the case of data standardisation, which has been a critical component of the logistics revolution of recent decades, a range of players are involved in the production, transport, storage and sale of goods; efficient supply chain management requires seamless communication between those players. Easily shareable, real time data updates enable reduced inventory, better management of asset such as pallets or truck trailers, better dispatch of trucks, reduced paper documentation and faster completion of admin tasks.

5.15 Improvement in driver's productivity leading to enhanced trip efficiency

Driver's productivity is a critical factor determining the trip efficiencies. Unhygienic, unhealthy and rough working conditions lead to higher costs. Improvement in these conditions has been observed to give measurable benefits to the transporters and their customers. Some examples are given below:

- **Driver relay model** where drivers can be changed during the long haul transportation with intermediate pit stops along the journey; giving fixed hours duty and comfort to drivers reducing the driver fatigue and improving trip efficiency
- **Rationalisation of driver salaries** benchmarking driver salaries with other transport segments such as taxi / cabs etc.
- Provision of driver rest room , water and food / snacks at factory or warehouse
- Air conditioned driver cabins, ergonomically designed seating arrangements

5.16 Contract Management

It is always recommended that company's all logistics and transportation services be performed under contract, regardless of the transportation mode, carrier, or logistics service provider. Efficient contract management could benefit the company in terms of costs and to cover up the business risks associated.

Following are the strategies that can be used in efficient contract management:

- Extended payment terms, achieving additional savings by avoiding late fees
- Multi-year contracts, which reduce or eliminate annual rate increases
- Minimum insurance requirements; increased liability coverage for your protection
- Confidentiality provisions, preventing your competitors from learning the terms of your contract agreement
- Fuel escalation and de escalation clause built in contract to tackle the fuels costs component

5.17 Vendor Performance Evaluation

Vendor Performance Evaluation is a methodology to optimise the execution of business strategy. It consists of a set of integrated, closed-loop, analytic processes, supported by technology, addressing financial as well as transactional data. It enables a business to define measure and manage its vendor's/supplier's KPIs.

Following are the few KPIs used to track the transport vendor performance:

- Freight cost per unit shipped
- Transit time
- On-time Pickup Percentage
- On-Time-In-Full (OTIF) delivery

6.0 Conclusion

The transportation landscape in India is undergoing fast paced transformation, thanks to several regulatory as well as industry driven initiatives. India's road transportation, despite being the most preferred mode of transport, is the costliest mode among available options. Bringing cost efficiency has been a very difficult task in the fragmented and unorganised business. Transporters as well as their customers are fast evolving to adopt to the changes and applying strategies to optimise costs. Our experience of working closely with the industry reveals that there is very high potential to reduce inefficiencies and bring cost competitiveness.



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