

# Effectiveness of Supply Chain Management on Infrastructure and Services – An Analysis



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*Supply Chain Management (SCM) is the management of the flow of goods and services. It includes the group and storage space of raw materials, work in process inventory, and finished from point of origin to point of consumption. Some of the factors that are taken into consideration are reliability, responsiveness, assurance, tangibility, of an industry. This paper analyses the reliability of industry about their services and the responsibility, assurance and also analyses the company have an equipment facility that satisfies the needs of customers and it was found to be good. Based on analysis providing the customers in the industry.*

## 1. Introduction

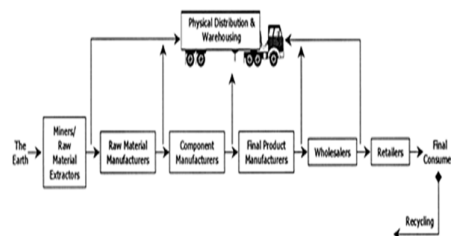
Supply chain management (SCM) is the management of the flow of goods and services. It includes the movement and storage of raw materials, work-in- process inventory and finished goods from point of origin to point of consumption.

Supply chain management is an interconnected or interlinked network which deals with design , planning, execution ,control and monitoring of its chain activities. With a massive objective of creating net value, building a competitive infrastructure, leveraging world logistics, synchronizing supply with demand and measuring performance globally.

(some reference)\*\*SCM draws heavily from the areas like operation management, logistics, procurement, information technology and strives for an integrated approach. It actually deals with coordination and collaboration with its channel partners which are specifically the suppliers, the intermediaries, the third party service providers in sense their customers. This integrates supply and demand management within and across its channel. Supply chain management is an integrating function with primary responsibilities for linking major business functions and major business processes within and across its chain of companies to form a high performing and business model.

**“SCM is the management of network of interconnected business involved in the ultimate provision of product and service packages required by end customers “**

As in industries that concern supply chain management refer to the fact of improving the orchestration of customers, supply chains and governing of the consignment from the time of arrival till the time of delivery at its final destination. This totally leads to satisfaction of the consigner. The companies are expected to have a proficient team to manage their chain throughout its biorhythm. When these things are consummated the company is expected to focus on its constant chain of supply and bring contrasting and revolutionary opinions which can develop its supply chain.



**Figure 1** Activities and "rms in a Supply Chain.

Source: New and Payne (1995).

## 2. Literature Review

The notion of SCM first appeared in the literature in the mid 1980's. However, the fundamental hypothesis on which SCM rests are significantly older. They include managing inter – organizational operations which can be traced back to channels research in 1960's; systems integration research in the 1960's; and the more recent ideas of sharing of information and exchange of inventory for information.

The SCM literature can be categorized in a number of ways, but in this article, it will be examined in relation to; scope of the supply chain; inter - organizational integration; objectives; and, the evolution toward an integrated supply chain. These characteristics were selected for the specific purpose of comparing SCM with integrated logistics management.

In the 1950s and 1960s, most manufacturers emphasized mass production to minimize unit production cost as the primary operations strategy, with little product or process flexibility. New product development was slow and relied exclusively on in-house technology and capacity. Bottleneck' operations were cushioned with inventory to maintain a balanced line now,

resulting in huge investment in work in process (WIP) inventory. Sharing technology and expertise with customers or suppliers was considered too risky and unacceptable and little emphasis appears to have been placed on cooperative and strategic buyer supplier partnership. The purchasing function was generally regarded as being a service to production, and managers paid limited attention to issues concerned with purchasing (Farmer, 1997). In the 1970s, Manufacturing Resource Planning was introduced and managers realized the impact of huge WIP on manufacturing cost, quality and new product development and delivery lead-time. Manufacturers resorted to new materials management concepts to improve performance within the four walls' of the company.

Fig. 2 presents a summary framework of the evolution of supply chain management along two separate paths that eventually merged into a common body of literature. While it is not an exclusive nor distinctive classification of literature, Fig. 2 illustrates the evolution of supply chain management from the purchasing and supply activities, as well as the transportation and logistics functions, with focus on integration, visibility, cycle time reduction, and streamlined channels (Tan et al., 1998b). The purchasing and supply perspective literature relates to the previously disparate functions of purchasing and supply management functions of the industrial buyers, whereas the transportation and logistics perspective of supply chain management literature evolves from the transportation and physical distribution functions of the wholesalers and retailers. However, there are other means of classifying supply chain management literature. For example, Harland et al. (1999) and Harland (1996) classify research in this area according to the levels of integration (i.e., internal chain, dyadic relationship, external chain and network of suppliers and customers) among supply chain members. This paper speaks about challenges faced in infrastructure supply change and logistics service provider related Issues.

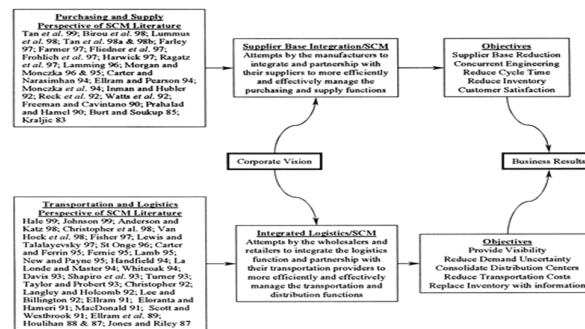


Figure 2 K.C. Tan / European Journal of Purchasing & Supply Management 7 (2001)

### 3. Methodology

#### State of Road Transport in India

India has the second-largest road network in the world; spanning over 4 million km. Roads constitute the most important mode of transport in the country, carrying 60% of the country's total freight traffic and 85% of its total passenger traffic.

State Highways	National Highways	District and Rural Roads
(0.15 million km,	(0.08 million km,	(4.5 million km,
3.3% of total	1.7% of total	95% of total
network)	network)	network)

Figure 3 Ministry of Road Transport and Highway 2012-13

The value of road and bridge infrastructure in India is expected to grow at a CAGR of 22.2% and reach US\$9.2 billion by 2017. While road freight volumes and the number of road vehicles are growing at a CAGR of 9.1% and 10.8%, respectively, the growth rate of the length of roads lags behind at 4%. This indicates that growth of road infrastructure is not keeping up with the growth in demand.

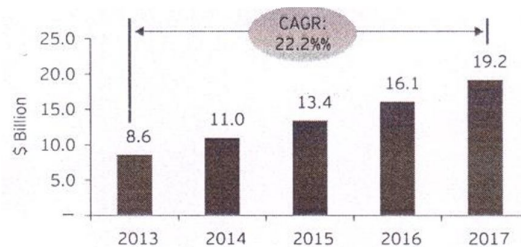


Figure 4 Operational Efficiency of National Highway, Study by Transport Corporation of India and IIM Calcutta

The last few years have been difficult for development of highways in the country and physical achievement has fallen short of its intended target. While the goal was to achieve 20 kms per day, the National Highway Authority of India has been able to complete only 13.7 kms per day (2009–10) and 10.4 kms per day (2011–12).

### How does India Fare against other Countries in its Movement of Goods?

At a macro level, India spends much more than developed markets in terms of logistics costs. This can be primarily attributed to inadequate infrastructure and the fragmented nature of the industry in the country.

### Cost of Logistics as a Percentage of India's GDP

India's road network is dominated by rural roads. The share of the National Highways and motorways in its overall road network is miniscule, when compared with developed markets. Moreover, only ~24% of the highways have four lanes and meet required standards, which further exacerbates the problem.

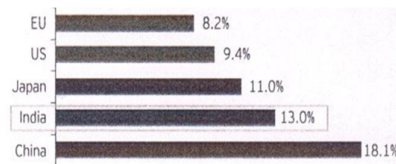


Figure 5 Earnings and Youngs Infra Structure 2012 FICCI

### Share of National Highways Road Length and Motorways in Total

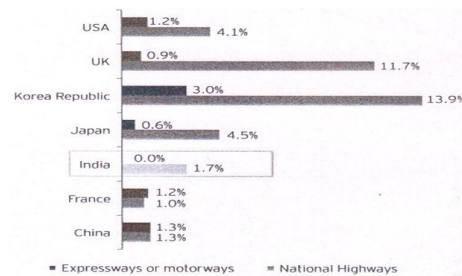


Figure 6 Ministry of Road Transport and Highway Annual Report 2012-13.

There is significant room for improvement in the transit time between major cities as well. The average transit time by road or train between cities in India is significantly higher than the time taken for similar distances in China.

### Business and Operational Challenges and Opportunities

The business and operational challenges have been further grouped under the following heads

1. Infrastructure-related
2. Supply chain-related
3. Logistics service provider-related
4. Shortage of skilled manpower

#### Infrastructure-Related

Infrastructural-related bottlenecks constitute the primary challenge faced by retailers, transport providers and logistics providers. In addition, inadequate infrastructure in the country limits the geographic reach of retailers. Increased investments in development of infrastructure have not yet yielded the desired results in terms of good roads, coldchains, warehouses, logistics parks and hubs, etc.

#### Road Network

India loses significant value every year due to congestion (and wastage of fuel), the slow speed of freight vehicles and the waiting time at toll plazas and checking points. Vehicles being stopped at state border check-posts and on the roads are a major cause for delays. Trucks are stopped frequently to fill forms required by various government departments, checking of documents and physical checking of the vehicles, drivers and consignments by Regional Transport Offices and traffic police, as well as to collect highway toll and taxes. It is estimated that 40% of the time lost on the road is due to stoppages at state border check- posts alone.

- The share of surfaced road —concrete and bituminous — in the overall road network is a mere 54% <sup>11</sup>. Poor road quality leads to wear and tear in vehicles.
- Frequent breakdowns and inefficient vehicular management leads to a slow average speed of 20 kms per hour on Indian roads. Moreover, trucks in ply for 20 days a month against an average of 25 days a month in other developing countries.

## Warehouse Infrastructure



Figure 7 Indian Warehouse Industry Overview October 2013

This high fragmentation and dominance of unorganized players, due to various applicable taxes at the state and central levels, is a pressing concern. It has led to a dearth of quality warehouse infrastructure in the country. India's warehousing sector is plagued with low capital and operational efficiencies (low utilization and poor throughput/unit space). There is limited value addition that is specific to the retail industry. This stems from an inadequate understanding of the sector. Most warehouses are manually operated or have inappropriate levels of automation.

### Other Infrastructure

#### Cold chain infrastructure

India's cold chain market is highly fragmented with more than 3,500 companies. Organized players constitute only ~8%–10% of the market. The absence of cold chain infrastructure leads to wastage levels of around ~40% of agricultural produce and perishables.

It is estimated that the current cold storage infrastructure can only cater to 11% of its total produce.

Moreover, ~80% of storage capacity is for a specific single commodity (potato) and 80% of reefer vehicles only cater to dairy products.

Cold stores are high fixed cost businesses by nature, entailing heavy initial investments in refrigerator units and land.

### Supply Chain-Related Challenges

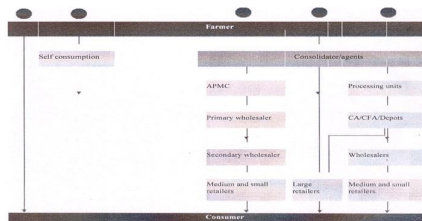
#### Multiple intermediaries in supply chain

India's retail supply chain suffers due to the presence of multiple intermediaries. As seen below, there are as many as five intermediaries in a typical supply chain for perishable commodities such as fruits and vegetables.

Not only do these intermediaries result in a significant time lag in products reaching stores from farms, but they also increase the cost to the final customer by adding their own margins.

### Collaboration and Vendor Management-Related Challenges

- There is no common information exchange platform between retailers and their vendors, which leads to lack of collaboration in the end-to-end supply chain.
- Retailers are many times unprepared and unaware of the delivery schedules of suppliers due to communication- and collaboration-related gaps. Furthermore, day- and time-related scheduling of delivery of stocks is uncertain, and in many cases, time slots are not fixed in advance.
- Another common issue is non-availability of return loads. (Vehicles often have to wait three to four days to get a return load or travel as far as Visakhapatnam from Kolkata or Guwahati without load to secure a load.)
- The practice of sending advance shipping notes is seeing slow adoption in India. Retailers often do not get to know in advance the exact quantities dispatched by vendors vis-à-vis quantities actually received at warehouses or distribution centers.



### How a Global Retailer improved its Collaboration with Vendors by using Technology Case study

#### Background

A leading global retailer wanted to improve the efficiency of its supply chain and reduce its costs. It sought to leverage technology to support its supply chain and business strategy of offering low prices to consumers.

#### Solution

The company developed a supply chain visibility tool in-house to facilitate its communication and collaboration with its supply chain partners. The three major functions of the tool were to store data, to share it with the company's vendors, and help in shipment routing assignments. Through this tool, it provided suppliers with large amounts of raw data relating to their

product sales in the company's stores. It also informed them that all relevant information could be downloaded into vendors' data managing systems, and manipulated and analyzed in any way that would help them manage their products better.

The company also uses another system to automate its replenishment process in its retail stores. According to users, the tool considers two important variables when making inventory-related decisions —the point of sale data and the quantity of inventory in hand. Taking these two factors, along with trends and variability of demand and supply, the tool also made decisions on when and how much inventory to order.

### **Benefit**

With this data, vendors have been able to make their supply chains more efficient and improve their services to the company. The first tool makes collaborative efforts on making vendor-managed and co-managed inventory. The second tool enables the replenishment process to be made more accurate with less human intervention.

### **Demand-Forecasting Complexities**

Retailers find it difficult to forecast the demand for products in different regions due to the varied tastes and habits of customers across India. This leads to inefficient management of inventory at retailers, distribution centers and outlets. Some of the challenges faced include: Seasonal fluctuations in demand patterns for certain products Regional/Local variances in demand patterns geographically widespread nature of the market Low adoption of forecasting tools.

### **Inefficient Supply Chain Management**

Currently, retailers suffer due to pilferage of goods. The quantity of products received in warehouses does not match with the ordered quantity. Moreover, once out of a vendor's location, there is no way in which retailers can track the status of goods in transit. In some cases, the wrong products are loaded on trucks, which results in additional costs for retailers. Furthermore, some of the processes conducted by DCs consume a significant amount of time when executed manually.

## **How a Global Logistics Provider is Enhancing its Customer Service by Leveraging Technology**

### **Case Study**

#### **Background**

A leading global third-party carrier wanted to improve its customer service and reduce its carbon footprint, and thereby, become more efficient in its deliveries.

#### **Solution**

A "smart truck pilot" project was undertaken by the company to test its innovative route planning.

Its implementation of RFID tags and readers first ensures that the right packages are on the right truck. Furthermore, its dispatch team sends out an optimum route, based on real-time traffic conditions, to retailers.

Built-in GPS guides the driver to the first delivery and RFID checks to ensure that the right package is delivered. Turn-by-turn directions are then sent to the truck driver to guide the truck to its second delivery, and so on.

#### **Benefit**

The enhanced visibility provided by the RFID system confirms the status of all the packages at any given time, and ensures that they are delivered correctly. This reduces fuel costs and emissions through optimized routing and reduction in the number of re-deliveries.

## **How an Indian Retailer uses Automation to improve Process Efficiency at its Distribution Centers**

### **Case Study**

#### **Background**

- The company is a big-box hypermarket with three stores covering more than 220 thousand sq. ft. All the hypermarkets have "back-stores" to store merchandize, but these can only hold a day's worth of inventory because retail space is expensive
- The bulk of the company's inventory is maintained at DCs on the outskirts of cities. These DCs handle around a million SKUs from 1,200 vendors in a year
- DCs' processes have to be automated to ensure on time fulfillment of store transfers. The company therefore decided that the solution needed to run on a mobile device to optimize various processes to reduce the time it spends in the DC.

#### **Solution**

- Today, when a product arrives at a DC, the receiving team loads its purchase order on a handheld scanner device. This helps to reduce manual entry (and resultant errors).
- Once items are received, the warehouse management system prints a "put-away" document, which is now available on the scanner and guarantees that a DC staffer puts away products in their right places.
- Finally, a "pick" document is assigned to a "picker" using a wireless hand-held scanner when it is time for inventory to be moved to a store. This document indicates the exact location of a product and the number of pieces that need to be collected. An error message informs the picker if an item is not on the pick list.

### Benefit

- As envisioned, turnaround time fell by 12 hours because errors due to data being “misread” were virtually eliminated.
- Within a month of implementation of the solution, staff costs at the DC fell by 23% and sales rose by 25%.
- The solution also created a unique bond between IT and business processes, and led to happier employees.

### Logistics Service Provider-Related Challenges

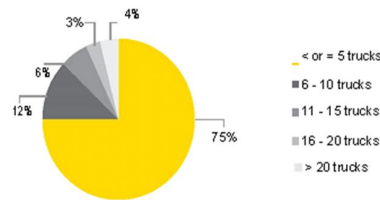


Figure 9 National Skill Development Corporation Forecasting Report 2022 by Human Resource Ministry

### Unorganized and Fragmented Road Freight Transport Market

Around 70% –75% of the trucking industry is dominated by small transport operators with fleet sizes of a maximum of five trucks. At the other end of the spectrum, only about 4% own more than 20 trucks.

Source: National Skill Development Corporation

- This fragmentation of the market leads to overloaded trucks and fatigued drivers, since only one driver per truck is deployed on long trips, whereas two or more drivers should be driving in shifts on such trips.
- This fragmented ownership structure leads to a shortage of established and organized transport providers with adequate capability and a significant presence in the market.

### Only a Few Logistics Service Providers with Pan-India Reach

The 3PL market is at a nascent stage in India. There are hardly any players with a pan-India presence in the country. Therefore, retailers often need to take on multiple local players with expertise in their particular regions, especially in the case of last-mile deliveries. In fact, they frequently have four or more logistics providers catering to different regions.

### Dearth of 3pls Specializing in Specific Product Categories

- According to retailers of apparel, there are only a few logistics providers with the requisite experience and expertise in handling products in the apparel and fashion category.
- E-trailers are facing challenges in their search for logistics service providers who can cater to the former’s specific needs in terms of reach to several pin code areas, last-mile deliveries, processing of cash on delivery and reverse logistics capabilities to manage inventory returns. This has led to some e-tailers developing their own in-house logistics teams.
- Retailers of perishable goods face a similar challenge in finding logistics service providers with the requisite competence and cold chain infrastructure needed to handle such products.
- Several retailers in the market are on the lookout for logistics service providers that also provide a variety of value-added services in the form of warehousing capabilities, inventory and order management, product labeling, packing and assembly, cross-docking, customs clearance, etc. More often than not, most providers only cater to a particular component of the logistics value chain —transport or warehousing. There is therefore a significant demand for integrated end-to-end logistics service providers.

### Shortage of Skilled Manpower

India’s transportation and logistics sector faces a severe shortage of skilled manpower, and this is especially critical in the case of integrated logistics providers.

The unorganized and fragmented nature of the industry has led to problems relating to inefficient organization, lack of leadership, disjointed skills and positions, and lack of process-driven IT systems. This is particularly true at the nascent stage of the industry, which is struggling to overcome critical infrastructure-related and organizational challenges, According to a report produced by the National Skill Development

Corporation, the various skill gaps witnessed in the road transportation sub-segment include:

- Inadequate knowledge of procedures, paper-work for inter-state movement and taxation related aspects
- Lack of knowledge of modern warehousing and inventory management practices
- Inadequate knowledge of new technologies in the IT domain in the transportation sector, and on the RFID, GPS and vendor-collaboration platforms

- Inadequate availability of drivers with sufficient training and experience in handling increasing tonnage and high-capacity trucks, and following GPS directions
- Drivers' ignorance of safe driving practices and special precautionary measures in transportation of sensitive materials such as chemicals and petroleum tankers

### **How an American Manufacturer Partnered with a Specialized Reverse Logistics Provider to Enhance its Returns Capabilities**

#### **Case Study**

Reverse logistics has traditionally been placed low in the supply chain hierarchy. However, apparel businesses, service providers and technology companies have recently begun to understand that strategic reverse logistics management can have a huge and positive impact on their overall operations. Companies do not usually proactively obtain information about products sent back to their warehouses. In the case of apparel companies, in particular, growing their online operations means they need to pay more attention to this process.

#### **Background**

- The company is a leading manufacturer and retailer of women's high-quality, comfortable and fashion-right shoes and boots at affordable prices. It is based out of New Jersey.
- It has three divisions — retail, wholesale and direct marketing — that are engaged in catalog and internet sales.

#### **Problem**

- Before entering the partnership, the company did not have the ability to proactively manage its returns.
- The onus would be on the consumer, who was responsible for packing the order, shipping it back and following up on this.
- The company was not able to provide the required level of customer service for returns it offered on the forward supply chain.
- It was also unable to analyze returns-related data to gauge trends in the merchandise being sent back or prepare its warehouse ahead of time for a large volume of returns.

#### **Solution**

- While searching for reverse logistics technology, the company evaluated the key players, sent out an RFP and searched for a system that would remove the burden of returns from the consumer.
- The company also wanted a solution that was scalable and could provide rich data on the reverse supply chain.
- After a nine-month selection process, it selected a solution from a logistics provider.
- During its implementation, ensuring that the logistics provider's technology was aligned properly with the back-end systems used by the company and its warehouse partners was its top priority.
- The companies went through a long and detailed process to make sure that data files were set up properly, that the systems could "talk" to each other and that data was easy to decipher.
- Currently, almost 75% of the company's returns "come back" through the chosen solution.
- Every order placed on its website or mail-order catalog now comes with a pre-paid, pre-addressed and bar-coded label. When returning orders, customers fix the label to their packages and drop these off wherever the U.S. Postal Service retrieves mail.
- A dynamic bar code links a package to the customer's invoice and enables its visibility from early in the returns process. This helps customer service representatives to proactively address customers' exchanges or credit needs.
- The returns are scanned three times during the return cycle — at the pick-up point, the logistics provider's regional facilities and the company's warehouse. This enables the company to keep its customers updated and manage customer expectations.
- Visibility of this data also helps the company analyze its returns trends to look for badly performing styles or colors and forecast demand more effectively

#### **Unique Supply Chain**

The retail supply chain has a number of components including manufacturers, distribution centers, city hubs, retail stores and consumers. The movement of goods from the place of manufacture to end consumers is managed by various intermediaries including transporters, clearing and forwarding agents and third-party logistic service providers (3PL). Given India's geographical spread, the span of retail stores and the magnitude of consumers, goods have to be maneuvered through various warehouses, storage points, check posts, ownership transfers and bulk splitting. This process is very cumbersome and involves a considerable amount of paperwork to ensure regulatory compliance.

In the case of goods that have to be moved across multiple states to be kept in distribution hubs and/or be made available in retail stores, players have to navigate multiple check posts in each state of transit. In addition, they need to manage a number of road permits/statutory forms/transit pass requirements, as stipulated under respective state VAT legislations. To add to the woes, compliance requirements can often lead to delays (at times running into days), which can severely impair efficiency and can add to the cost of the supply chain.

Most of the state VAT legislations and CST legislation and compliance requirements were put in place between the 1950s and 1970s. These are in line with the then-prevailing “Manufacturing” practice, which involved the bulk movement of goods in a full truck/container load format. VAT was implemented in India during 2005–2008 and makes use of updated terminology and contemporary concepts associated with a sophisticated VAT/GST from a developed economy.

Unfortunately, in India, the basic concepts of the movement of goods’ regulations continue to be outdated. The modern retail supply chain requires goods to be shipped in smaller quantities/portions. In addition, the carton, container or truck load format have now been deemed redundant. However, the current regime in India has not evolved adequately to embrace and incorporate such dynamic requirements. In addition, the compliance needs of invoice, delivery challans, permits, etc., also make it extremely cumbersome for manufacturers and retailers to freely transfer goods to the desired destinations.

The retail industry operates around various business and operations formats, including the traditional stock and sale, consignment and concessionaire models. Each of these models has its own set of practices pertaining to transaction pattern, ownership and the movement of goods. The new VAT/CST legislations can be comfortably applied to the traditional platform of stock and sale; however, it will not be feasible while dealing with new formats of business models, as the various aspects of registration, ownership of goods, storage, invoicing and recording of transactions in books of accounts would be left open to interpretation.

### **Check Posts**

Check posts were traditionally put in place to monitor the movement of goods and prevent smuggling, as well as the illegal entry of spurious products. Gradually, check posts were established under the aegis of commercial tax/sales departments. While check posts are not directly a serious hindrance to the movement of goods, the associated regulations, lack of automation (with the exception of a few states), inadequate staffing, unexplained and in-ordinate delays in clearance of consignments, unbridled powers of the check post officer to detain goods/levy penalty, detention of goods for inconsequential reasons, etc., have, for decades, burdened transporters. This has prevented the free movement of goods across the country for the purpose of trade and commerce.

### **Lack of Procedural Clarity**

Another impediment in the free flow of goods in India is the lack of clarity in procedures with regard to VAT/CST/ET regulations. Every state in India has put in place various forms, permits and other documents that need to be produced /verified for the unhindered movement of a consignment. The paperwork includes the necessary invoice, self-declarations, permits from tax authorities and forms (in the case of specified goods). State governments are ever watchful of goods entering and exiting their borders. Due to high tax implications, goods are subject to heavy scrutiny at the various check posts established by states.

States are faced with the complex task of ensuring sufficient checks for the collection and maintenance of appropriate information/records regarding the movement of goods, while simultaneously maintaining simple and hassle-free procedures.

Businesses are plagued by the lack of clarity in the nature of documents required for movement, the process of obtaining these, as well as the items and persons liable to pay ET. Transactions such as sales, leased goods and intellectual property complicate matters further.

### **Possible Interventions by State/Central Government(s)**

The movement of goods in India is currently teeming with complexities. Stakeholders are aware of the insufficiency of the tax and regulatory environment in India in this regard.

Businesses are pushing for a simplified tax and regulatory framework; however, the federal structure of the country, political conditions and division of legislative power make it a very onerous and cumbersome task. Nevertheless, the Central and state governments could look to step in and facilitate the free movement of goods across the country.

### **GST**

GST, by design, would transform the current indirect tax system from an origin-based model to a consumption-based one.

GST is expected to replace central excise duty (or CENVAT), service tax, CST etc., as well as state taxes such as VAT and ET.

Inter-state transactions, including stock transfers, for which the taxation model is still being debated, may be chargeable as per Integrated Goods & Services Tax (IGST). GST is expected to facilitate the availability of full input tax credit on input taxes paid at the time of purchase (of goods and services), as well as utilize the amount toward output GST liabilities.

GST might come as a breather and help with the standardization, simplification and automation of compliance requirements associated with the trading and movement of goods, especially inter-state movement of goods. GST, when implemented, is expected to automate most of the compliance requirements (including forms/permits/way bills, etc.), thereby reducing the cost and effort for the industry

The GST structure has been the focus of discussion and debate for the Central and state governments for a number of years.

It is imperative that the governments find a collective solution soon to the disputes on the GST structure and proceed with implementation for the benefit of the industry and the country at large.





Figure 10

The GST structure has been the focus of discussion and debate for the Central and state governments for a number of years. It is imperative that the governments find a collective solution soon to the disputes on the GST structure and proceed with implementation for the benefit of the industry and the country at large.

### Self-Declaration

Given that GST might still be a couple of years away from implementation, state governments can adopt measures, in the meantime, to simplify and strengthen the process of moving goods across the country. This could also aid in implementing the GST structure in time.

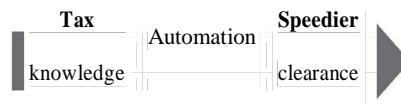
In a number of states, the movement of goods warrants the procurement of waybills, road permits, etc., from the authorities. Such paperwork needs to be filled up manually and needs to be carried with the goods in movement. Even in states where such procurement of waybills, road permits, etc., is automated, authorities intervene to release the online waybill/permit.

Some states that have tested the model of self-declaration by the dealer moving goods into and outside the state, without intervention by VAT authorities, have been successful in simplifying the goods movement process. In the self-declaration model, the dealer moves goods based on a self-declaration (with the details of the goods moved), which is available to the VAT authorities on-line for review/scrutiny at any point in time. Such self-declaration can be assessed for accuracy during the course of the annual assessment process or during any of the audit/ investigation process.

Given the success story of the self-declaration model, VAT authorities in all of the states could consider its implementation to expedite and simplify the movement of goods

### Check post improvisation

The most critical issue faced by parties moving goods through check posts pertains to the delay in the clearance of goods, often on account of detention of carriages at check posts. In most cases, such delays (and detentions in relevant cases) are triggered by the lack of sufficient training and tax knowledge in the case of officers manning the check posts, as well as the inadequacy of computerization. As a result, officers have to rely heavily on the manual checking of goods and documentation.



Check posts have largely remained the same since their creation.

Nevertheless, a few states have managed to bring in reasonable computerization to hasten the clearance of goods and provide online data to VAT authorities for scrutiny. State governments across the country could think about the benefits of investing in deploying suitable computerization at check posts, ensuring adequate staffing for speedy clearance of goods and avoiding unwarranted/unjustified detention of goods.

With GST in sight, it seems to be the right time to ramp up rules and regulations to provide clarity on procedures and simplify the movement process.

## 4. Conclusion

Today's trending society wants India to be a super power in upcoming days for which it has to be the best in all aspects, considering the transportation to be the heart of a country's development the necessary aspects should be rectified in our system of supply chain. The aspects which are to be government are, methodology on which our chain works and sub aspects which are necessary to have a proper logistical service that's modernizing the infrastructure and the road ways which are inter connecting the country with a proper chain network which will help us to give tremendous results. More perfection and delegation is to be maintained to keep up the standard of our service to the peak, the distance between the manufacturers and the consumers is to be shortened as much as possible and new ideas like GST is to be brought in action. The negative aspects like INFRASTRUCTURE CHALLENGES, SUPPLY CHAIN RELATED CHALLENGES, LOGISTICS SERVICE PROVIDER RELATED CHALLENGES, are to be governed in a crucial way and is to be eliminated totally

In more skill full workers are to be employed. If we consider transportation, life of transport system are the low grade workers like loading supervisors and the drivers. These people are totally responsible while loading, unloading and tracking

the consignment, in the absence of consigner and consignee drivers and loading supervisors are the ones who governs everything, if these people are not skill full the service wont be proper and the standard of logistics will go down. Considering and rectifying all these we can make successful system having a excellent supply change, which can lead every industry to the peak of its development.

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