

Many to Tango

A Granular Analysis of National Highway 8 of India¹

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Abstract

An increasing economic activity with all time high gross domestic product (GDP) of nearly US\$2tn in 2015 from US\$63bn in 1970 required expansion of roads and highways across the length & breadth of India. Further positive GDP forecast, around five-seven per cent until 2020 and the Government of India's (GoI) aim to double overall trade from US\$465bn in 2014 to US\$900bn by 2020 have pushed initiation of various connectivity's, logistics development projects across the country. It includes expansion and upgradation of the road network to enable high speed road movement in both passenger and commercial vehicles segments.

Other than this, reforms like passage of Goods & Services Tax (GST), also known as Constitutional Amendment Bill, 2014, once implemented, will expedite freight movement as the entry tax (goods) or octroi would be subsumed into GST and therefore associated check posts would be hopefully eliminated.

Nonetheless, with the much-hyped hopes from GST, it remains to be seen that, to what extent, GST would be beneficial in case of in-country transit facilitation amid trying number of toll plazas; relevant state-level motor vehicle regulations' check posts, notwithstanding, other prevailing issues on the Indian highways.

Also, rebounding importance of Indian highways (generally the road network) in the wake of multiple initiatives will require a series of well-intentioned considerations to meet India's growth aspirations. Until now, no doubt that 'benefits' of road dominant freight transportation have accrued to the public exchequer in form of Goods Tax (central/state value added taxes, excise, octroi, entry tax (goods) etc. and Road Transport Levies (national/state permit, Regional Transport Office's (RTO) entry tax (vehicle), Toll Tax for National Highways Authority of India (NHAI), Public Works Department (PWD), and local authority etc. at various levels.

Conventionally, most of the taxes have been collected by putting government machinery and manual payment mechanisms at ports, state border crossings en route, among others. Several initiatives and reforms are also taken to undertake partial/complete automation for tax collection, checks and automated toll payment. However still, a number of these initiatives, among others, remain below the benchmark of creating high capacity transportation and connectivity throughout India.

Against this backdrop, the paper discusses pertinent 'border' and 'behind the border' challenges and issues, which are ought to be looked at and addressed further in order to optimise the usage of existing (and increasing) road transport network in India.

Introduction

Competitive freight transportation in India is crucial in achieving its aspiration to emerge as a manufacturing hub and develop an efficient supply chain network to be able to spur investment in existing and new productions capacities, in return. Rail, road, air, sea borne and inland waterways are the key freight transportation verticals mainly. Having coastline to its east and west, the largest rail network and notably good air connectivity to rest of the world, India still remains to be benefiting from its developed capacities and geographical advantages. A vast web of inland waterways has also been gaining attention as a potential supply chain network and as an alternative link between coastal areas and mainland. So far, the road network has been dominant in facilitating the inter-state supply of goods as well as the export/import cargo.

According to the Ministry of Road, Transport & Highways (MoRTH)'s Annual Report of 2015-16,ⁱⁱ Indian road network across all categories, as on 2013(p),ⁱⁱⁱ is 5.2 million kms; rural road comprises 60 per cent (*the highest*) while national highways make it to 1.5 per cent (*the lowest*). Appendix-17 of the Annual Report exhibits the expansion of road network from 1951-2013 across categories, such as national/state highways, urban/rural roads, among others. In the National Highways category, the existing length in 2013 (*79,116km*) is almost four times greater than that in the year 1951 (*19,811km*).

Novonous (2015)^{iv} publication states that road freight in India constitutes around 63 per cent of the total freight transportation whereas rail freight constitutes around 27 per cent. Highways play a very crucial role and therefore remain significantly important in view of estimated market valuation of US\$304.70bn of freight transportation by 2020 in India.^v

Given the potential of freight transportation, particularly in context of its current share through road, the Government of India through MoRTH has taken various measures to build, upgrade, maintain and regulate national highways of *79,116km* (as on 2013) through various legal instruments, acts, mechanism and applications.

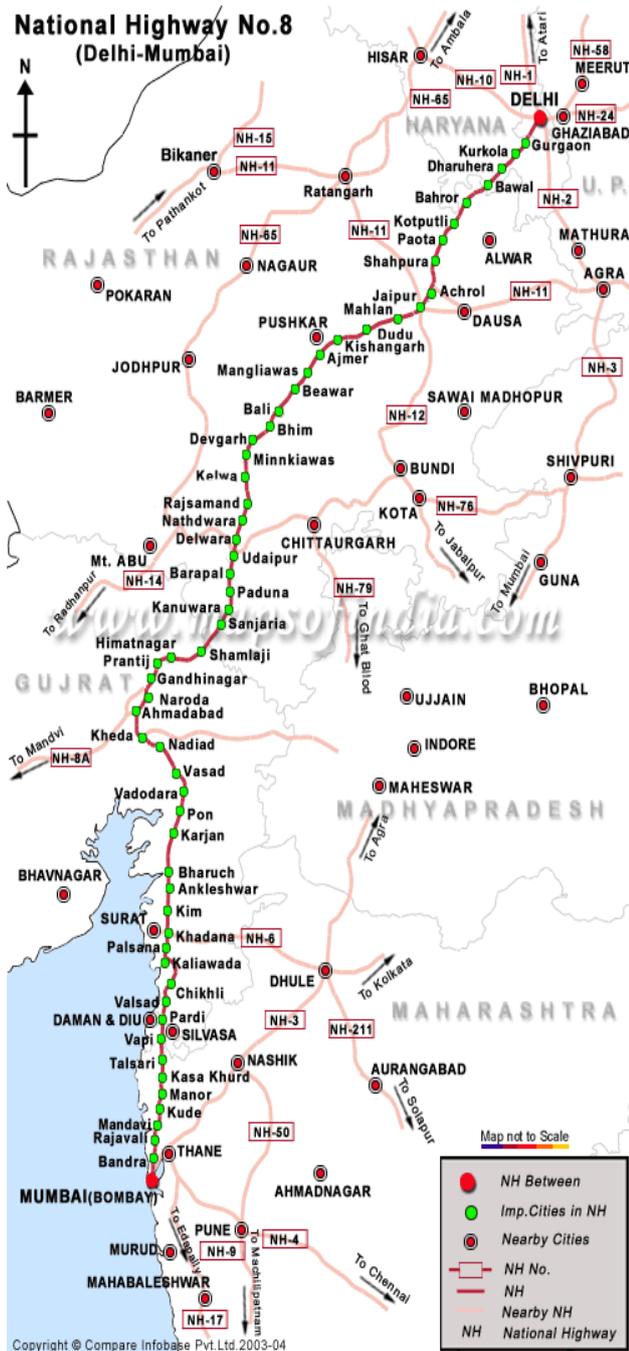
The subjects, to be precise, that are being taken care of by MoRTH include: (i), Compulsory insurance of Motor Vehicles; (ii) Administration of the Road Transport Corporations Act, 1950; (iii) Highways declared by or under law made by Parliament to be national highways; and (iv) Issuance of notifications under relevant clauses of the National Highways Act 1956, among transport research, managing central road fund etc.

MoRTH being the largest regulator of the road transport – both in the passenger and freight segments – work in tandem with the relevant state agencies, under related acts, such as Motor Vehicles (MV) Act, 1988 and Centre Motor Vehicles Rules, 1989 (CMVs) to ensure provisions related to weight and dimension specification, movement of dangerous and hazards goods by road, among others. In addition, it also works with private players under the enabling laws to develop highways, collect usage fee and penalise for overloading.

Other than MoRTH's National Highways Authority of India's (NHAI) empowered toll plazas, agencies which have physical set up include commercial tax department and octroi posts at the state and municipal corporation levels respectively besides forest & environment officials, police and traffic police personnel, and excise department check posts. Besides mentioned agencies, there are also intelligence-based agencies, such as revenue intelligence that do not have physical check posts.

The plethora of agencies not only creates procedural redundancies but also, knowingly or unknowingly, gives space to administrative officials to create subjugating environment out of the notion of insecurity and suspicion. The trucks on the Indian roads are usually prone to procedural inadequacies which are not only making the movement difficult but also deteriorating the health of transport and logistics services.

Also, out of insecurity, suspicion and/or deliberate attempts to fetch illicit gains, 7 out of 10 trucks,^{vi} as informed, are weighed at the toll plazas and states' motor vehicles departmental check posts.



This, is in addition to several other general issues, which are impeding the efficiency of the Indian highways in general and, the National Highway-8 (NH-8), in particular. The following sections on NH-8 describe the pertinent issues in detail.

National Highway-8 of India

As per the NHAI, NH-8 is 1375 kms in length. In the survey, it was found that approx 125 kms of

approach roads put together feed to the NH-8 both in Maharashtra and Haryana between the two custom services of Jawaharlal Nehru Port Trust (JNPT), Mumbai and Tughlakabad Inland Container Depot (ICD) respectively. The overall distance considering the actual length of the highway and approach roads makes it to approx. 1500 kms.

The total stretch of approximate 1500 kms of NH-8, flanked by JNPT Customs, Mumbai and Tughlakabad ICD, New Delhi, directly caters to the movement of road freight across and amongst five major locations viz. Delhi, Gujarat, Haryana, Maharashtra and Rajasthan. It is apparently one of the prominent road sections of GoI's flagship Delhi Mumbai Industrial Corridor (DMIC),^{vii} a US\$100bn investment project, over the next 30 years. DMIC will house various industrial nodes and townships, manufacturing clusters, investment regions, logistic clusters, greenfield smart cities across six states viz. Gujarat, Haryana, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. The GoI aspires to make DMIC a 'Global Manufacturing & Trading Hub' backed by high capacity transportation, connectivity and logistic facility. As per DMICDC,^{viii} a SPV Corporation, Western Dedicated Freight Corridor (DFC) will serve as its backbone supported by the road network.

In addition to above, the selection of NH-8 is on the basis of its nature of catering to both international and domestic cargos. NH-8 directly or indirectly serves many major, intermediate and feeder ports both in Gujarat and Maharashtra, on the western coast of India. The number of registered vehicles in India, as on 2013, is 182,445 thousands (14 per cent) out of which goods vehicle are 8597 thousands (12 per cent) and others^{ix} (including tractors and trailers) are 14551 thousands (10 per cent). The percentage value in brackets depicts the increase as compared to the previous financial year of 2012. In terms of freight transportation by road, NH-8 is said to have been catering to one of the highest freight traffic volumes in India.

Table 1: Importance of the NH-8

States/ NCT	Length of National Highways (in KM)	Distribution of NH-8	%
Maharashtra	7434.79 (also 720 km of coastline)	128	1.72
Gujarat	4970.90 (also 1600 km of coastline)	498	10
Rajasthan	7906.20	635	8.03
Haryana	2622.40	101	3.85
NCT of Delhi	80	13	16.25
Total	23014.29	1375	5.97

Source: NHAI

Out of the total length of various national highways spread across Gujarat, Haryana, Maharashtra, NCT of Delhi and Rajasthan, NH-8 makes six per cent of total 23014 kms. It is vital in a sense of not only being the road section of DMIC but also serving as a lifeline to all states involved. Various development and road up-gradation projects are underway along this highway.

For example, feasibility surveys for upgrading 2 and 4 lanes into 6 lanes at some sections of NH-8

in Gujarat and Rajasthan have been currently carried out, among constructing flyovers, maintenance etc. However, issues like acquisition delay of required land to expand the highway (without the passage of land reform bill by the Parliament) are delaying the implementation. As an outcome, black spots,^x among other traffic management issues, at these junctures cannot be entirely eliminated.



NH 8 two lane section between Udaipur and Rajsamand districts in Rajasthan

For toll collection, MoRTH has implemented measures, such as Electronic Toll Collection, Radio Frequency Identification etc. with provision of passage through a designated area at toll plazas for the benefit of its users.

Given the existing and also increasing importance of NH-8 at DMIC, assessment of cost, time, procedural dimensions including general perceptions about freight's road transportation through this highway can help outline specific issues and challenges along with some practical solutions for the sake of efficiency.

Table 2: EXIM Process and Time Taken for Each Step at the JNPT Port, Mumbai

Import Procedure	Time(Min/Days)	Export Procedure	Time(Min/Days)
Arrival of Ship and Loading of container on Truck at Port and further transportation arrangement	3-4 Hrs	Arrival of Laden Truck and Unloading of Cargo at the selected Container Freight Station	2-3 Hrs
Unloading of Cargo at CFS	2-3 Hrs	Preparation and Submission of Shipping bill and other documents through EDI	1-2 Hrs
Filing of Bill of Entry (BoE) through Electronic Data Interface	3.06 Hrs	Assessment of the consignment by Customs	2-3 Hrs
Filing to Assessment of BoE	1.56 Hrs	Examination by Customs	1-2 Days
Assessment and Payment of Duty	2.77 Hrs	In case of export Food Products	
Payment to Registration of BoE	1.62 Hrs	Inspection and Fee Charges by FSSAI	1-2 Days
Customs Examination and Appraisal	4.37 Hrs	Let Export Order (by Customs)	1 Hrs
Customs Out of Charge	1.10 Hrs	Loading of Cargo, Gate Pass, Departure of Truck from CFS to the Gateway Port	2-3 Hrs
Sampling, Inspection and fee change by Food Safety and Standards Authority of India(Only in case of import Food products) --(and then Customs Out of Charge)	15.45 Days		
Loading of Cargo and Gate Pass by CFS	2-3 Hrs		

Source: CUTS International (2015), *Non-Tariff Measures to Food Trade In India: A Case Study of Selected Ports*, p-50-51 (can also be accessed through [www.cuts-citee.org/pdf/Non-Tariff Measures to Food Trade in India A Case Study of Selected Ports.pdf](http://www.cuts-citee.org/pdf/Non-Tariff%20Measures%20to%20Food%20Trade%20in%20India%20A%20Case%20Study%20of%20Selected%20Ports.pdf))

Facilitation Issues, Challenges and Reasons

NH-8 directly serves the JNPT, Nava Sheva, Mumbai, the largest sea port, in terms of volume, and caters to two categories of freight movement: (i) International Cargo (Export/Import); and (ii) Domestic Cargo (Inter-state supply of goods)

For both types of freight movements, relative lesser en route regulatory compliance plus price factor essentially determines the trader's preference for rail carriage of goods. On the other hand, trader's preference of sending goods by road is determined by the following factors:

- Time (*comprising ease of availability, loading/unloading, time bound movement and other logistic services, among others*)
- Price factor

Road transportation of freight in India constitutes around 63 per cent of the total freight movement. This dominant position of freight transportation by road is also due to Indian railway's apathy towards initiating freight segment reforms. Nevertheless, with identification and construction of dedicated freight corridors, adapting to time bound movement, and addressing administrative delays, railways is catching up.

In the years to come, railway is likely to pose serious challenges as the freight transportation by road remains stagnated owing to unorganised and fragmented transport sector. It is further worsened with administrative delays, haphazard inspection and rent seeking, stoppage delays including at toll plazas, fuel inefficiency caused thenceforth, empty runs, security risk, high theft vulnerability, among others.

Non-Containerised Movement

NH-8 bound freight movement is both containerised and non-containerised while the proportion of non-containerised freight movement is seemingly high. Reasons for high proportion of non-containerised commercial vehicles include lack of container availability and indigenous manufacturing capacities. The primary reason is lack of investment in the quality of truck including containerisation due to the unorganised nature of Indian trucking Industry and low utilisation of vehicles due to incessant delays and hurdles. It forces average Indian truck to cover less kilometers per year than the counterparts elsewhere, meaning less revenue per truck forcing investments inflows.



Non Containerised Cargo Vehicles are on the Move on NH-8

Therefore, among other reasons, small and medium units prefer to send/call full-container load (FCL) and less-than-container load (LCL) trade cargo in open body distribution trucks, including low carrier vehicles, sometimes.

For explanation, if the option for Container Freight Station's (CFS) clearance at the JNPT port is desired, small and medium enterprise (SME)

sector manufacturers respectively send/call their pre (*export*) and post (*import*) clearance consignments of products, such as textiles & garments, handicraft, wood items, non-perishable agriculture commodities, stones, plastic and articles thereof, in the non-containerised commercial vehicles covered by tarpaulin and tied with ropes.

The push and pull drivers behind such a non-containerised cargo preference are as follows:

1.	Lack of immediate container availability options plus high demurrage charges
2.	Sluggish customs clearance at the port of origin forcing SMEs to opt for secondary port clearance
3.	No feeder service between factory gate to the corresponding dry port/rail terminal
4.	High waiting time unless full rack capacity of 140 or 108 containers on rail is ensured, lack of time bound movement
5.	Convenient rates (however risky deal) for ferrying goods in an open body truck

The situation prevails in spite of the fact that regular inspection of NH-8 bound 'international non-containerised freight vehicles' by respective state's motor vehicles departments is relatively thorough. In such cases, freight security, also, remains compromised as stealing goods by barging into the truck through use of cutters/knife is rampant across the highways including NH-8.

Neutralising Methods of Large Operators and Need to make them Common

The freight movement through road is somewhat, a manageable scenario for a few large operators, logistic companies in India due to their ability to scale up investment and achieve 'economies of scale' through co-ordination, service delivery and enforcing compliant regime.

For example, they put Global Positioning System (GPS) installation as mandatory condition before contracting with the vendor (truck owner, transporters) including necessitating two drivers, and proper seal and lock system for each and every consignment. Due to such conditions backed with proper documentations, their operations are far efficient than that of unorganised players. And

they are able to cover long distances in record time, 36-42 hours from Delhi to Mumbai, for instance.

In view of ongoing developments along with NH-8 (including DMIC) high capacity transportation can be immediately achieved by large operators, if redundant regulations and obsolete measures including stoppage delays are further reduced.

In order for encouraging the same level of operational elasticity to be achieved by unorganised and fragmented transporters; truck owners; and drivers, government support would be required. It can be in form of ensuring ease of credit, providing technical assistance and training to enhance logistic competitiveness. Not to mention that it should, at the same time, be complemented by reducing regulatory and procedural bottlenecks to create a conducive environment for seamless freight movement by road.

To begin with, GoI through MoRTH should make it necessary for transporters to install GPS or Satellite Positioning System (SPS) to ensure trackability and traceability of the truck/trailer and its consignment. It is a widely accepted tool to enhance efficiency and eventually cost competitiveness. For explanation, 'United Nations

Economic and Social Commission for Asia and the Pacific (UNESCAP)^{xi} mention that installation of SPS in road vehicles has become mandatory in some countries in the Asia-Pacific region. The Government of China has required all long-distance passenger transport and carriage of dangerous goods to install SPS, and recommended other road transport to install SPS. In Vietnam, the same practice is required for both buses and trucks. According to UNESCAP, SPS empowers transport relating government authorities to easily manage traffic, increase transport security, and flag any traffic accident. Whereas transport operators may provide more efficient and effective transport services, reduce empty runs and secure their operations.'

Statutory En-Route Toll and penalties on NH-8

Under the aegis of MoRTH, there are around 25 NHAI empowered toll plazas on NH-8 to develop, maintain sections of highways and also to collect highway usage fee besides penalising Over Dimensional Cargo (ODC) and Over Weight Cargo (OWC).

The rate of toll varies across different weight categories *vis-à-vis* allowed axle load, heavy duty vehicles, low carrier vehicles in the freight segment and seating capacity in the passenger segment. NHAI concessionaires (or private contractors) are empowered to collect 10 times of the toll charge in case of ODC and OWC commercial goods and passenger vehicles. This is no doubt a good practice to reduce safety hazards to human life, however, as informed, 7 out of 10 commercial trucks, are stopped for legitimate and also for illegitimate gains, against this rule.

In addition, the penalty dues are perhaps unjustified if NHAI empowered concessionaire take exemption to allow ODC and OWC vehicles to pass 'as it is' after penalising. These concessionaires are apparently violating NHAI rule of not allowing overloaded vehicle to make use of the highway section unless the excess load has been removed. But not a single detention was experienced or reported by any of the empowered private concessionaire on the NH-8.

Recent statistics of Transport Research Wing at MoRTH revealed that the ODC, OWC vehicles cause significant amount of road accidents and



Overload and Over Dimension Cargo on the Move on NH 8

deaths. In 2014, ODC and OWC alone caused 91,335 accidents and 26,809 road accidental deaths (MoRTH, 2016). Furthermore, these figures raise big concern and need to review if NHAI's

ODC & OWC penalties are for the sake of contributing to the non-tax revenue receipts which are around 97 per cent of total gross revenue receipts of Rs 6319 crores in FY 2014-15.^{xii}



Over Dimension Cargo on the NH -8

Other than NHAI, check posts or flying squads and/or both of the respective state motor vehicles department, known as regional transport organisations (RTOs), too penalise ODC and OWC vehicles but do detain the excessive load from the truck. All agencies, including NHAI and RTOs, penalise in accordance to the maximum allowed gross vehicle weight and maximum safe axle weight as specified by MoRTH. There is five per cent flexibility in case of OWC as allowed by MoRTH since 2014.

Inter-state Goods Tax

Inter-state supply of goods (goods meant for local consumption, use sale/purchase in a particular territory within India) across the NH-8 is subject to both Goods and Motor Vehicle tax by respective states' commercial tax and motor vehicles departments. For e.g. the consignment moving in a truck from Maharashtra to Rajasthan will affix the liability on the part of the consignor for goods tax [entry tax (goods), octroi, sales tax] and the transporter [for entry tax/ permits (vehicle)] etc.

Several states have facilitated payment of such goods tax and submission of related documents on the respective commercial tax department's websites. States like Gujarat, Haryana and Maharashtra also have designated check posts for the payment of such dues. In Rajasthan, dues are paid online, with provision of random flying squads checks by state's commercial tax department.

In case of export/import cargo, a pre-declaration by the consignor and submission of N-Form^{xiii} (exemption from octroi) is required. The fee for N-Form is applied state-wise while requiring both online submission and manual carriage of documents for export and import consignment. If the N-Form is not closed within the stipulated time, then general octroi rules with penalty of the imposing state will be applicable.

Motor Vehicle Tax, National and State Permit

Other than goods tax, both international and inter-state movement of goods by road requires national/state permit for the registered vehicle. The vehicle registration fee varies across states and collected by states only as per their acts and norms. In case of acquiring national permit, a consolidated fee of Rs 16500 (plus home state authorisation fee of around Rs 1000^{xiv}) is being collected by MoRTH that later disburses the share of states (MORTH, 2016). However, in case of temporary state (transit) permit, concerned states on NH-8 have different transit (or entry tax of vehicle) fees, as per the category of goods and passenger vehicle, as stipulated in their respective motor vehicles legislations derived out from the guidelines of Centre Motor Vehicles Act, 1988 and Centre Motor Vehicles Rules, 1989.

Among the NH-8 states, entry tax (vehicle) is the lowest in Gujarat while, in descending order, in Maharashtra, Rajasthan and Haryana, the charge is

relatively higher. Even the allowed duration of transit and/or delivery differs from state to state. For example, Gujarat has weekly, monthly and yearly arrangement but on the other hand, Haryana has minimum of quarterly arrangement for the entry tax (vehicle). In that case, if a commercial goods vehicle enters into Haryana even for a day, it is liable to deposit the quarterly amount.

As explained earlier, penalties dues for over-load and over-dimension are measured against maximum permissible Gross Vehicle Weight (GVW) and maximum safe axle weight under different transport vehicle categories. It varies according to positioning of axle, its load capacity as per the provided specifications^{xv} by MoRTH. The longest trailer allowed in India has GVW of 49 tonnes.^{xvi} The MoRTH has set an excess load limit of up to five per cent of the maximum GVW beyond which vehicles are subject to NHAI and state motor vehicle's departmental action and penalties and any other authorised government agencies such as Police/Traffic Police.

Table 3 exhibits the procedural requirement along with the time taken for service delivery.

Table 3: Time and Cost taken off and in Transit Formalities (NH-8, approx 1500km, States- MH, GJ, RJ, HR and Delhi)

1. Off Transit Road Transport (Freight) Formalities				
Control Person/Unit	Activity	Time (in Hours)		Cost
		Min	Max	
Manufacturer/Trader, Clearing and Forwarding Agent	Goods: Making sure that custom duty (for export/import cargo) besides all other commercial taxes such as excise/VAT, entry tax (goods), octroi are paid and printed receipts of the same are obtained	24	60	Market-based (as agreed with the consigner). However, as informed by some operators on this route, the average cost of transporting 20 feet container from Delhi to Mumbai is Rs 60,000 including toll and all other road taxes except penalties under Section 10. Whereas Section 11 would include the coverage of insurance premium for that duration
	Vehicle: Initiate conversation with the transporter, signs contract under Section 10 or Section 11 ^{xvii} of Carriage by Road Act, 2007			
Transporter/Logistic Companies including Aggregators	Package including the pick-up and delivery, toll tax, parking vehicle permit etc. (does not include the transit	12	24	Freight cost is market-based the toll tax and permit is as per the respective schedules

	time)			
	Package including pick, delivery, loading, unloading, warehousing, storage (including refrigerated containers in case required), toll, parking and permits (does include the transit time on the NH-8)	48	60	Market-based price and as per the respective tax schedule (aggregator do have advantage to conclude formalities and NH-8 distance transit between 48-60 hours)
Total		84	144	as mentioned above

2. In Transit Road Transport (Freight) Formalities			
Control Person/ Unit	Activity	Time (in Hours)	Cost
NHAI, under Ministry of Road Transport & Highways	Collection of highway user charges through private concessionaires (total number of NHAI tolls of NH-8 is around 25) having an average clearance time, factoring in the peak time and low time in an year is of 15 minutes (25*15 min)	6.25	Indian rupees 150-450 at each toll plaza based on the size of the truck and trailer
Non NHAI tolls (Primarily under State Public Works Department responsible for construction, maintenance of state highways and also under Municipal Corporations)	Total number of non NHAI tolls on NH-8 is approx. 4 with an average clearance time of 10 minutes (4*10 min)	0.66	100-280 based on the size of truck and trailer
State RTO Check Posts in MH, GJ, RJ and HR under respective state's Motor Vehicles Departments	Situation 1: Scrutiny of national permit, vehicle registration certificate, insurance, driving licence, work order, and freight documents with no OWC, ODC export/import containerised cargo with customs seal under transshipment category (4*10 minutes average clearance)	0.66	As per the RTO respective RTO rules
	Situation 2: Scrutiny of national permit for non-containerised but non-ODC, OWC, open body truck flat track trailer export/import cargo (4*20 minutes of average clearance)	1.33	
	Situation 3: Others, including no national permit, open body or flat track trailer etc. for inter-state supply with temporary state transit permit of NH-8 states (4*30 minutes of average clearance)	2	
Control Person/ Unit	Activity	Time (in Hours)	Cost
State wise VAT/Commercial Tax Check Posts, under Respective State Sales, Excise and Taxation Authority ^{xviii}	Situation 1: For inter-state supply of goods, MH, RJ has enabled submission of documents and deposit of requisite tax through online platforms and thus gradually eliminated physical check posts. A printed copy of the submission is however required as evidence across the NH-8 as there are designated flying squads to deter the non-compliance and collect penalties	0	As per the originating/delivery state tax schedule
	Situation 2: GJ and HR have both online	2	

	platforms and physical check posts for commercial tax (Goods). A consigner/consignee or their agents can deposit the tax offline as well. Tax is calculated as per the invoice and across category of goods (2*60 minutes average clearance)		
	Situation 3: For Export/Import cargo movement, a pre shipment declaration is required and mostly submitted online. A time bound N-form (transit form) is secured for such movement (4*10 minutes average for clearance)	0.66	N-Form Fee is collected by respective commercial department check posts and/or municipal corporations
State-wise Forest Departments	Deter smuggling in protected plants and wild life, two such check posts in Gujarat and Rajasthan were found with and average clearance time of 10 minutes (2*10 minutes)	0.33	As per the declaration and penalty rules laid down by the Ministry of Environment, Forests and Climate Change
Control Person/ Unit	Activity	Time (in Hours)	Cost
Police/Traffic Police under respective State's Police Departments	Scrutiny by flying squads at MH and GJ and check posts (in addition to flying squads) at RJ and HR to prevent over speeding, overloading, irregularities, such as violation of lane driving, smuggling of restricted products, such as alcohol and tobacco, and acting upon intelligence based inputs (4*20 minutes average clearance time)	1.33	No inspection charge but challenge as per the respective states' rules
South Delhi Municipal Corporation under Government of National Capital Territory of Delhi	Environment Compensation Charge (ECC) collected at toll plazas and also known as Green tax for empty vehicles (1*5 minutes average clearance only for ECC)	0.25	700-1300 as per the vehicle size
	For loaded Vehicles		1400-2600 as per the vehicle size
Total		15.47	as mentioned above

Roadmap to Ensure Road Safety and Resolve Other Issues

On NH-8 in particular (and India, in general), there is extreme dearth of secure parking terminals that causes several problems including health related emerged due to lack of recreation and retiring facility. For example, when a truck driver halts to eat and sleep at a roadside *dhabhas* (eateries); his mind remains occupied and worried of the truck's security. For this reason, truck drivers in India are mostly deprived of proper sleep. And, its health related consequences requires them to drive in the influence of drugs/alcohol to adapt; further posing serious challenges to the road-safety.

It becomes more unsafe when transporters send single driver on long distances to cover up their profit margins. It is advisable that transporters should arrange two drivers for long distances, such as from Delhi to Mumbai. An assistant could also be a second driver. However, due to the cost of hiring a second driver, only assistant (without driving skills) is being arranged and in some cases, even assistant is not available.

Inadequate facilities for truck drivers across the highway as in form of secure parking terminals, in house *dhabhas* and retiring rooms are both a challenge and opportunity to improve quality of life of drivers. To that, if private concessionaires can be authorised to penalise commercial vehicles

then why cannot they be asked to come up with such exclusive facilities (besides providing ambulances, toilets etc.) should be question to reflect upon.

In the interest of road safety, increasing effectiveness and efficiency of freight transport, NHAI may also lead in creating such terminals

from sovereign funds, incentivise major transport, logistics and warehousing companies to also utilise/scape up their corporate social responsibility (CSR) funds to create and maintain such facilities. One such unique CSR initiative has been implemented near Padasoli at Ajmer- Jaipur section of NH-8, by Agarwal Packers and Movers Limited, India.



Driver Service Centre, Near Padasoli (Dudu) at Ajmer-Jaipur Section of NH-8

There is a huge scope in improving the lives of drivers, by way of developing adequate facilities along highways, providing healthcare facilities and other necessary information which they also need to know to comply with rules and regulations. The national government of the day should put sincere efforts to ensure that truck drivers get fast and easy credit, among other social benefits, besides care and respect by the people, in general.

Furthermore, as human factors are responsible for majority of road accidents, a professional qualification framework to ensure that transport professionals are equipped with the knowledge and skills to conduct transport operation in compliance with industry professional standards and legal requirements can be developed. Establishing a

level playing field by ensuring minimum performance standards have proven to significantly contribute to the improvement of transport and trade whilst mitigating externalities. In this context, International Road Transport Union has developed internationally recognised professional qualification standards and supports training bodies and governments to implement road transport professional training capacity.

Another issue is that diesel rates in India vary from state to state. That forces drivers/transporters to either completely fill the diesel tank in states where rates are low or keep it partly filled in the high diesel rate-regime states. They do so by reducing freight load within the allowed GVW. Truckers demand that diesel should be included

under GST as it will enable them to optimise carriage potential. For example, in an ideal scenario, truckers/transporter would be able to send full load while maintaining only the required amount of fuel to cover a specific distance.

Roadmap to Ensure Seamless Movement

In fact, implementation of GST shall help in optimising India's freight movement by road besides streamlining 'logistics sector as a whole'. However, it is unclear how GST can help reduce more than 'one third of the total journey time' taken for statutory non-tax transit clearance from Delhi to Mumbai, as outlined in Table 2, for instance. Furthermore, benefits of GST could not be fully realised unless it is complemented by creating efficient supply chain infrastructure, particularly, on the National Highways of India.

It is now an imperative as enhancing competitiveness of road transport, in particular, of freight is critical for the success of 'Make in India' and other mega national development projects. Such competitiveness of freight movement on the existing (and also increasing) road networks in India can be achieved by creating a distinctive combination of soft and hard infrastructure at home and integrating with the similar infrastructure in the markets of strategic importance. One of the most successful United Nations conventions such as TIR convention 1975^{xix} can provide India with that opportunity. It can not only complement successful implementation of GST but also help India integrate into global supply chain network effectively.

For that, trade bound (export/import) freight movements and inter-state supplies can be treated under two different frameworks of TIR and GST respectively as per the following (indicative) description.

Movement under TIR and GST

With provision that at least one border is crossed, global road transit system, under the framework of

the TIR Convention enables seamless cargo movement in sealed compartments and containers from the 'customs office of departure' to the 'customs office of destination' "*For such movement, TIR carnet- which is an internationally recognised harmonised customs transit document- is used. It accompanies the truck driver and the cargo across customs points from origin to destination. The TIR carnet also provides customs with an international guarantee to cover the duties and taxes for goods transported under TIR procedure.*"^{xx}

Also, in case of inland movement of export/import cargo, **iCarnet** – which is based on TIR procedures – can be used to facilitate seamless movement, for example: from Tughlakabad ICD or any other ICD in North India to JNPT port, Mumbai and vice versa. In the long run, it will help Indian Customs to develop a uniform clearance mechanism^{xxi} as well as facilitate the consolidation of Indian logistics and transport sector; result being – 'generation of concrete data and information for effective regulation, transparency and development.' This will also help complement the government efforts of reducing the volume of clearance procedures, enabling to shift them to the customs of destinations, which will be beneficial both for customs and port authorities and business as well.

Other than this, add ons such as, TIR-EPD (TIR Electronic Pre-Declaration), an IT tool under TIR procedures, enables advance declaration of the consignment and the carrier. For transport under iCarnet, TIR-EPD will be sent to customs, where the transport starts. That can help facilitate declaration of existing requirement of N-form (for trade bound cargo through TIR-EPD. A common interface with Customs and the proposed IT tools under Goods and Service Tax Network (GSTN) can be further created for effective monitoring and coordination.

In the global context, TIR convention implies global, multimodal, secure end-to end goods delivery system through effective transport and transit management- The convention, however, can be only applied when a certain leg of the overall

freight transportation is covered by road. For example, once functional, International North-South Trade Corridor (INSTC) will enable two way freight transportations from Russia and Central Asian countries to India through a combination of rail, road and sea borne freight containers.

INSTC provides a defining scenario for implementing multimodal transport and transit, under the framework of TIR Convention. Since all of INSTC countries except India are signatory to the convention, it would be better for India to also consider the TIR framework for symmetrical alignment with the already functional customs transit protocols in INSTC and elsewhere under TIR. Or else, negotiating and subsequently harmonising plethora of transport, technical and operational rule, norms and guidelines will prove to be a nightmare for the governments involved. The 2016 agreement on Chabahar port for port development and operations between India and Iran^{xxii} (and similar agreement with Afghanistan) can tremendously help India instantly capitalise on TIR Convention as Iran and Afghanistan are also TIR contracting parties.

Recently, in the mid-2016, China has acceded to the TIR Convention so had Pakistan in 2015. Many European, Central Asian Middle East and African countries, in total 70, have acceded and most of them are successfully implementing protocols of the convention. Needless to say, that in scope and scale TIR provides India a huge prospect for global supply chain integration.

In addition, the varying GST slabs ranging from four per cent for gold to 26 per cent or more for middle-class goods, with other goods being taxed at six per cent, 12 per cent or 18 per cent, and basic goods remaining exempt,^{xxiii} will require en-route scrutiny of both the EXIM and NON-EXIM freight movements somewhat complex. For EXIM cargo, use of i-Carnet can assure the government authorities that the corresponding taxes are being paid either at source or being guaranteed under the TIR mechanism.

For Inter-state supply of Goods, GST can effectively spur national supply chain efficiency by providing a mechanism in tandem with other agencies where requirement for a number of documents is either reduced or synchronised by way of creating an electronic way bill (e-way bill).^{xxiv} Prior to the roll out of GST, all the states should be taken into confidence by the Central Government on a revenue compensation formula^{xxv} and they should accept doing away with the requirement of entry tax (goods) under GST compensation mechanism. If goes well, it will help abolish associated commercial tax department and octroi check posts throughout the country.

Address the Toll Issue

On NH-8, it has been found that within a distance of every 40-45 kilometers,^{xxvi} a toll plaza is set up to collect highway usage fees and penalise for OWC and ODC. Almost each toll on the highway is equipped with Electronic Toll Collection and RFID tag lanes however they fail in ensuring seamlessness as the average clearance time for around 25 NHAI toll plazas on NH-8 is about 6.25 hours (as in Table 2). The same is a serious concern if GoI genuinely aspires to develop high capacity and seamless freight transportation throughout India to sustain increasing economic activity.

Apart from this, a usual traffic scenario at the South Delhi Municipal Corporation Toll Plaza at Gurgaon which despite having equipped with several tag lanes, finds it challenging to ensure seamless vehicle flow.

A barrier free road transport infrastructure can help ensure India's aspirations given that problems are not fully resolved by current electronic systems of collecting toll fees. The same can be easily achieved for both TIR- and GST-enabled freight movements by making exclusive barrier free lanes (without any manual interface) at each and every toll plaza on the NH-8, to start with. These exclusive lanes can be ideally integrated with electronic toll gates, sensors and weighing machines to detect corresponding toll fees.



GVK Toll Plaza at the Ajmer-Jaipur Section of NH -8

That toll fees can further be billed to the subscriber or deducted from the pre-paid balance, through an installed app, in a smart phone to be carried with every moving truck. Such facilitation mechanism can effortlessly be implemented for TIR and GST authorised transport operators whose trucks have secure load compartments and use TIR IT risk management tools as well as such instruments as GPS. Further, OWC and ODC movements are, in a way, barred under TIR, posing strict requirements for the load compartments and, therefore, vehicle standards from the point of view of the load compartment. The same principal also be useful for GST registered inter-state cargo movement as part of its *modus operandi*.

For penalisation, not only should private concessionaires of NHAI strictly adhere to the NHAI rules but also penalise under a camera with further feeding the details into a centralised system to be kept accessible under the purview of Right to Information (RTI), Act.^{xxvii}

Data and Information Gathering

In the realm of road freight transport related statistics, highway specific freight volume data are particularly required, not only to underscore the effectiveness of regulatory checks and balances, providing help in evidence based policy making, assessing the need and impact of any location centric economic activity but also finding out key areas of investment requirement in the Indian transport and logistics sector. Given, the number of trucks passing through NH-8 in a year can be easily tracked by merely collecting the data and information from toll plazas. The value addition would be using that information to devise a mechanism on how to figure out the volume of freight carriage in general and across different product categories in particular through the highway, in a given point of time. TIR and GST can help complement the creation and updation of such a database.

Annexures

1. Number of Toll Plazas on the National Highway-8 (Mumbai to Delhi)

No	Concessionaire	Name of the Toll Plaza	Governing Authority
1	M.E.P. Infrastructure Pvt. Ltd	Airoli	Maharashtra State Road Development Corporation (Limited)
2	Ideal Road Builders Pvt. Ltd	Kharegaon, Mumbai-Agra Road (NH-3) (Thane Bhiwandi Bypass)	NHAI
3	M.E.P Infrastructure Pvt. Ltd	Mulund	Maharashtra State Road Development Corporation (Limited)
4	-----	Bhiwandi-Gujarat Highway	Public Works Department, Government of Maharashtra
5	Ideal Road Builders Pvt. Ltd	Khaniwade	NHAI
6	Ideal Road Builders Pvt. Ltd	Charoti	NHAI
7	Ideal Road Builders Pvt. Ltd	Bhagwada	NHAI
8	Ideal Road Builders Pvt. Ltd	Boriach	NHAI
9	IDAA Infra. Pvt. Ltd.	Choryasi	NHAI
10	L&T Vadodara Bharuch Tollway Limited	Vadodara Bharuch	Works not completed (huge traffic Jam near under construction bridge)
11	Ideal Road Builders Pvt. Ltd	Vasad	NHAI
12	Ideal Road Builders Pvt. Ltd	Radhvanaj	NHAI
13	Prakash Asphaltings & Toll Highways (I) Ltd	Kathpur	NHAI
14	Ridhi Sidhi Associates	Vantada	NHAI
15	Sahkar Global	Khandi-Obari	NHAI
16	MEP Infrastructure Developers LTD.	Padona	NHAI
17	Shreenath Ji Udaipur Tollways Pvt Ltd	Negadiya	NHAI
18	Shreenath Ji Udaipur Tollways Pvt Ltd	Mandawada	NHAI
19	ITNL Road Infra. Development Co. Ltd	Gomti	NHAI
20	ITNL Road Infra. Development Co. Ltd	Beawar	NHAI
21	Soma Isolux NH-8 Tollway Pvt. Ltd	Piplaz	NHAI
22	Soma Isolux NH-8 Tollway Pvt. Ltd	Gegal	NHAI
23	GVK-Jaipur Expressway Pvt Ltd	Kishangarh	NHAI
24	GVK-Jaipur Expressway	Thikariya	NHAI

	Pvt Ltd		
25	PinkCity Expressway Private Limited	Daultpura	NHAI
26	PinkCity Expressway Private Limited	Manoharpura	NHAI
27	PinkCity Expressway Private Limited	Shahjahanpur	NHAI
28	MCEPL	Delhi-Gurgaon	NHAI
29*	GF Toll Road Pvt. Ltd	GF Toll Plaza	-
	Or M/S Dep Tolls LLP	Delhi-Gurgaon	South Delhi Municipal Corporation

* Trucks usually take MG road from Gurgaon to reach TKD, New Delhi. However, another route through Mahipalpur is also available during nights to reach TKD, New Delhi. Accordingly, toll collection agencies & their respective authorities as per the route will vary.

2. List of Key Central and Inter-state Agencies on the NH-8

Sr.	Agency	Tax category	Infrastructure
1	Central Board of Excise and Customs, JNPT	Customs Duty, CVD and Excise	Yes (JNPT Port)
2	Maharashtra Regional Transport Organisation	Commercial Vehicle	Yes
3	BMC	Octroi	Yes
4	Gujarat Commercial Tax Department	Goods	Yes
5	Gujarat State Regional Transport Organisation	Commercial Vehicle	Yes
6	Forest Department Gujarat	Wildlife and Forest clearance	Yes (Near Bharuch)
7	Rajasthan State Regional Transport Organisation	Commercial Vehicle	Yes
8	Forest Department Rajasthan	Wildlife and Forest clearance	Yes (Near Udaipur)
9	Weight Measures (other than RTOs/DTOs)	At NHAI toll plazas (NHAI)	Yes
10	Haryana Police (on behalf of the RTOs)	Commercial Vehicle	No (Police <i>Naka</i> at the border)
11	Excise & Taxation Department Haryana	Commercial Vehicle (Entry)	Yes
12	Police/Traffic Police	Safety <i>Challen</i>	No, mostly random with few <i>Nakas</i>
	Enroute Checks in Rajasthan (through Mobile RTOS but not in Gujarat and Maharashtra)		
	Intelligence Based Agency		

ⁱ This Discussion Paper is the result of a survey work on National Highway-8 carried out from June 27-July 09, 2016 by CUTS International. The data were collected on the basis of interaction with the relevant stakeholders and also by observing the same. We gratefully acknowledge the support provided by the International Road Transport Union (IRU).

ⁱⁱ Ministry of Road, Transport & Highways Annual Report- 2015-16, available at: [http://mha.nic.in/sites/upload_files/mha/files/AR\(E\)1516.pdf](http://mha.nic.in/sites/upload_files/mha/files/AR(E)1516.pdf) (Accessed on August 02, 2016)

ⁱⁱⁱ The data for 2013 is provisional

^{iv} Freight Transport Market in India 2015-2020 is available at: www.novonous.com/publications/freight-transport-market-india-2015-2020 (Accessed on August 06, 2016)

- v *Ibid*
- vi Mostly Non-containerised Commercial Vehicles are vulnerable to such stoppages
- vii Available at: <http://delhimumbaiindustrialcorridor.com/>
- viii Available at: www.dmicdc.com/
- ix Others include tractors, trailers, three wheelers (passenger vehicles)/LMV and other miscellaneous vehicles which are not separately classified. Detailing of the same can be seen in Annex-15 of the MoRTH annual report 2015-16, available at: <http://morth.nic.in/showfile.asp?lid=2070>
- x Narrow escapes on the highway which are highly prone to road accidents
- xi A Quick Guide on the Use with the SPS, available at: www.unescap.org/sites/default/files/A%20Quick%20Guide%20on%20the%20Use%20with%20the%20Satellite%20Positioning%20System_0.pdf (accessed on August 11, 2016)
- xii MoRTH. (2016). Annual Report. Delhi: Government of India
- xiii The definition and purpose of N-form plus documents required for both export and import N-Form can be seen here: www.indianoctroiservice.com/NFORM.pdf
- xiv Home state authorisation fee is collected by states
- xv Specification of Maximum Gross Vehicle Weight and Maximum Safe Axle Weight, February 2016. Available at http://nhtis.org/pdf/Tolerance_5_of_GVV_06.02.16.PDF (accessed on August 16, 2016)
- xvi <http://timesofindia.indiatimes.com/india/Trucks-can-carry-5-excess-load/articleshow/49776003.cms>
- xvii Carriage by Road Act, 2007: (i) Section 10: Liability of Common Carrier, (ii) Section 11: Rates of charge to be fixed by common carrier for carriage of consignment at a higher risk rate, available at: <http://transport.bih.nic.in/Acts/The-Carriage-by-Road-Act-2007.pdf> (accessed on September 12, 2016)
- xviii Commercial Tax Authority at the state level ensures the collection of both outgoing (sales tax) and incoming (Entry Tax) on inter-state supplies of goods. It is only levied by the state on traders who are doing such transactions for consumption, use and/or sale in that given state
- xix The TIR Convention is basically a customs convention on the international road transport of goods under cover of TIR carnet, a single administrative document
- xx IRU. (n.d.). The TIR Carnet. Retrieved 11 13, 2016, from International Road Transport Union: www.iru.org/what-we-do/services/tir/using-tir
- xxi By uniform clearance mechanism, author means to consolidate all the clearance categories (Direct Port Delivery, CFS Clearance, Transshipment etc. into one common clearance practise for mandatory TIR authorised EXIM movement, in the long run. Such a single and fair clearance mechanism will benefit Small and Medium Enterprises as they are not able to take advantage of exclusive clearance categories
- xxii Bilateral Agreement no 6 between India and Iran available at: www.mea.gov.in/bilateral-documents.htm?dtl/26841/List+of+AgreementsMOUs+signed+during+the+visit+of+Prime+Minister+to+Iran+May+23+2016
- xxiii Lost in Transition, The Economist, Nov 5 2016 available at <http://www.economist.com/news/finance-and-economics/21709562-indias-tangled-system-taxes-will-be-simplified-rather-overhauled-lost>
- xxiv GST is also about trucks moving freely by Pritam Banerjee available at www.thehindubusinessline.com/opinion/gst-is-also-about-trucks-moving-freely/article8902444.ece accessed on September 09, 2016
- xxv Reviving entry taxes: Implications for industry and GST, by Rajeev Dimri available at <http://indianexpress.com/article/business/economy/reviving-entry-taxes-implications-for-industry-and-gst-goods-services-tax-4412657/>
- xxvi See Annexure
- xxvii For a check post-free India, by Pritam Banerjee available at: www.thehindubusinessline.com/opinion/for-a-checkpostfree-india/article9042960.ece