



The Impacts of Diesel Price Increases on India's Trucking Industry

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Introduction

In the fiscal year 2011-12, under-recoveries¹ incurred by Indian oil-marketing companies for diesel rose to an all-time high of INR81,192 crore (US\$15 billion) (Government of India, 2012a). Diesel constitutes 38 per cent of all petroleum products consumed in India, some 65 per cent of which are used in transportation activities (Anand, 2012).

While a reduction in diesel under-recoveries will have significant fiscal and economic benefits for the economy as a whole, rising diesel prices will negatively impact industry and diesel-intensive sectors. Earlier research by Integrated Research and Action for Development (IRADe, 2012) established that farmers and truck operators are among the most vulnerable to increases in diesel prices. A subsequent study by IRADe (2013) addressed two important questions:

1. What factors make the trucking industry vulnerable to diesel price increases?
2. What measures could be taken to reduce the vulnerability of the trucking industry to diesel price increases?

That study included consultations with the operators of small, medium and large truck operations, as well as members of the All-India Motor Transport Congress (AIMTC), a leading Indian transport association. Industry experts from the Asian Institute of Transport Development and Central Institute of Road Transport were also consulted to explain the broader challenges facing the trucking industry. Truck operators were consulted on their general business patterns, their fuel consumption habits, the perceived impact of diesel price increases on their business and their views on various means to help them cope with higher fuel prices. The study focused on three aspects in particular: factors responsible for high diesel consumption and wastage in the Indian trucking industry; present and possible future impacts of diesel price increases on the industry; and measures that would reduce the impact of higher prices on the viability of their businesses.

This brief summarizes the main findings of that study, and elaborates on policy measures to improve the trucking industry's resilience in the face of higher fuel prices.

¹ Under-recovery is essentially the difference between a desired price (based on international prices and other cost elements) and the actual (depot) price charged to dealers.

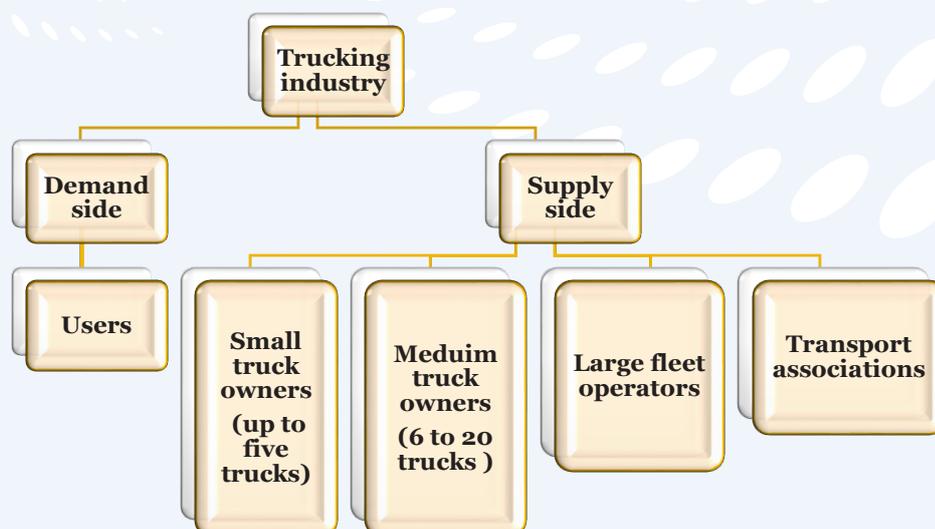


FIGURE 1. IDENTIFICATION OF STAKEHOLDERS IN TRUCKING INDUSTRY

The Factors Responsible for High Diesel Consumption and Wastage

Trucks making return trips without cargo are one cause of fuel wastage for small truckers operating within Delhi, nearby areas and cities. However, this is less of an issue for truckers operating on long routes; these drivers simply cannot afford to travel without paid cargo. They therefore wait until they get a load for the return trip. This increases the time required for a round trip and causes loss of income, but it prevents fuel wastage.

India's poor road quality affects mileage and results in higher diesel consumption. The national highways and other roads are improving, but conditions are still poor in many locations. Deloitte (2012) estimates that less than 10 per cent of India's total road network is of good quality. Many large stretches of the national highways also have only two lanes, reducing their capacity to handle large traffic loads. A study conducted by the Transport Corporation of India Limited (TCIL) (2010) confirms that poor road maintenance leads to slow speeds, equipment breakdowns and accidents. The study also found that national highways constitute only 2 per cent of the total road network but carry 40 per cent of the traffic. Access to highways is also not controlled, with humans, animals and many different types of vehicles sharing the road, resulting in slow speeds, uncertain journey times and accidents.

The time spent waiting at tollgates is another cause of fuel wastage for operators working on long routes. One trucker operating on the Delhi to Mumbai route reported that up to 50 litres of diesel could go to waste in one trip while waiting at tollgates. TCIL (2010) provides summary statistics based on data collected for 30 trips on the Delhi-Bangalore route (Table 1).



TABLE 1. SUMMARY STATISTICS OF TRIPS ON THE DELHI- BANGALORE ROUTE

PARAMETER	UNIT	MINIMUM	MAXIMUM	AVERAGE
Distance	Km	2,060	2,322	2,155.83
Journey time	Hours	80	166	102.18
Average speed	Km/hr	12.98	29.03	21.73
Mileage	Km/litre	3	4.11	3.6
Loading documentation time	Hours	1	5.5	3.06
No. of stops	--	18	38	25.30
Stoppage delay	Hours	2.75	8.78	5.16
Stoppage delay per km	Hours/km	0.0013	0.0042	0.0024

Source: TCIL (2010)

Waiting at tollgates accounts for almost 50 per cent of delays on an average trip, and toll fees and sales tax account for approximately 15 per cent of trip expenses. Each year, fuel worth between INR100 and INR150 billion (US\$1.48 to US\$2.77 billion) is wasted at highways and check posts (TCIL, 2010).

Overloading also reduces efficiency in the long run and leads to higher diesel consumption. Overloading is possible only in open-body trucks normally used by small truckers. These operators often claim that low freight rates force them to overload their vehicles in order to maintain profit margins. They also claim that the profit gained through overloading more than compensates for the additional maintenance required for the truck. However, this view may be short sighted, as overloading wears out vehicles in the long run. Nonetheless, pressure to overload trucks can be attributed to the inability to change freight rates, low fuel efficiency, on-road delays that push up costs and lower profit margins in general.

The Effect of Recent Price Increases on Truckers

Truck operators strongly resented the decision taken by the Cabinet Committee on Political Affairs on January 16, 2013, to allow oil-marketing companies to increase the price of diesel by INR0.45 per month until under-recoveries are eliminated. According to truck operators, a steep hike in the price of diesel, though detrimental, is preferable to gradual increases, in that it would give them a stronger case to negotiate for higher freight rates. The AIMTC demanded a sharp hike in diesel rates because they are unable to pass on the costs to customers with the smaller hikes of 50 paise (without taxes) (Hindu Business Line, 2013).

Based on interviews with truck operators, the diesel price increase of INR5 per litre in September 2012 was generally not matched by higher freight rates. According to one medium-sized trucker operating on the Delhi–Mumbai route, the on-road price increase was in fact INR6.5 per litre (after accounting for taxes) and the cost of the trip increased by INR6,000 for a 21-tonne truck. However, freight rates were not revised. According to another truck operator operating on the same Delhi–Mumbai route, who had fixed contracts with Kaira District Co-operative Milk Producers’ Union Limited, contracts were revised to increase freight rates by 5 per cent; however, his profit margins were still reduced. The large- and medium-sized truckers operating on the Delhi–Himachal Pradesh route who were interviewed said their freight rates did not increase. Similarly, freight rates did not increase for small truckers operating in the Delhi–National Capital Region. According to them, freight rates are normally revised only once every two or three years



and have not changed much since 2009. All truck operators noted that freight rates are linked more to demand for trucking in the region than to cost considerations.

The Asian Institute for Transport Development said large and small truck operators are “price takers,” in our interview with the institute. Due to tough competition and fragmentation, truck operators can neither dictate freight rates nor unite to demand a freight rate increase. Freight rates are mostly decided by brokers, who balance the supply and demand for trucking. Due to high supply, demand for trucking becomes the deciding factor for freight rates. Hence, supply-side shocks and fuel cost increases are often not reflected in the freight rates.

As a result of the diesel price increase in September 2012, which did not lead to higher freight rates for the most part, truck operators reported reduced profits and, in some cases, losses. Some reported that old trucks have become unviable due to the increased cost of fuel. Due to a slowing economy and low demand for trucking in general, truck operators also struggled to reduce the number of days trucks remained idle or reduce return trips with empty loads.

The main reasons cited for not being able to pass on the costs of higher fuel prices were:

1. Stiff competition, resulting in price wars and under-pricing practices.
2. Weak bargaining capacity and information asymmetries, which give brokers the upper hand in negotiations. One truck operator pointed out that small- and medium-sized truckers do not have the necessary funds or knowledge to negotiate long-term contracts with clients, and thus depend on brokers that charge high commissions.
3. Very few truck operators have long-term contracts with firms that allow for rates to be revised based on changes to fuel costs. Most contracts are oral and informal. Where contracts are revised regularly, they involve a competitive bidding process each time. Hence, truck operators have no guarantees that they will get the next contract with the same firm, and they therefore have to resort to underpricing in order to win bids.

As the reports have shown, until August 2013, there were no changes in freight rates, and now pressures are building within the industry.

Measures That Would Make Truck Operators More Resilient to Higher Diesel Prices

A number of shorter- and longer-term measures would help strengthen the industry, making it more resilient to fluctuations in fuel prices.

Reduce Waiting Time at Tollgates

The primary solution raised during consultations is to reduce waiting time at tollgates for trucks operating on long routes. Operators complained that this increases fuel consumption, leading to higher total expenses and longer periods per trip.

TCIL and the Indian Institute of Management, Kolkata (IIM-C) (2012) found that toll delays are a major impediment to efficient trucking operations. Although the costs of delays are not significant for individual trips (INR122.79/hour), the study estimates that the total annual cost of delay to the Indian economy is in the order of INR270 billion per year (US\$5.5 billion). In addition, the study estimates that the total cost of additional fuel consumption due to the delays and reduced speeds is of the order of INR600 billion per year (US\$12 billion).



During consultations, truck operators and AIMTC committee members suggested that, for trucks with a national permit, collection of toll tax on a monthly basis would reduce the waiting at tollgates. But whether this approach is administratively feasible needs to be considered in more detail. A study by the Working Group on Roads for the National Transport Development Policy Committee for the Ministry of Road Transport and Highways (Government of India, 2012b) identified the following strategies to improve the efficiency of tollbooths:

- Provide real-time traffic information in vehicles.
- Introduce electronic toll collection on all major highways and expressways.
- Initiate public transportation information systems in major cities.
- Introduce adaptive traffic signals, congestion charges and parking guidance.
- Install weigh-in-motion technology for goods-carriage vehicles on roads.
- Consider reducing toll rates after recovery of capital cost for publicly funded projects or after the expiry of concession periods for private investment projects.

Set Up Computerized Exchange Networks to Link Clients and Trucker Operators

"Moving truck is better than standing truck."

—A large transporter and AIMTC committee member from Sanjay Gandhi Transport Nagar, New Delhi

Currently, brokers play a large role in obtaining contracts or business for truck operators, and they therefore play a large role in determining freight rates. This is due in large part to information asymmetries in the trucking industry. Small truck operators lack information on shipment of consignments and thus depend on brokers as intermediaries. However, information technology can bridge this information gap in supply and demand and reduce the role of brokers in obtaining business and deciding freight rates. Sriraman et al. (2006) note one such intervention by the Transport Exchange of India. This is a private initiative that acts as an electronic intermediary between consignors of goods and road transporters who register themselves with the Transport Exchange. The Transport Exchange maintains real-time data on truckers and customers online and co-ordinates them at a nominal charge. Given the high level of illiteracy among truckers, the Transport Exchange requires truckers to only make a phone call to register. The Sub-Group on Policy Issues under the Ministry of Road Transport and Highways also recognized the need for modern intermediaries and recommended a government initiative to establish hubs to bridge information asymmetry in the trucking industry (Government of India, 2011).

Improve Fuel Efficiency

The low mileage of most trucks (3–4 km/litre) increases the total cost per trip. According to TCIL-IIM-C (2012), the average trip expenses were INR1.09/tonne per km for a mileage of 4.15 km per litre, with an average contribution margin² of 36.95 per cent. The maximum mileage that was achieved on 30 roundtrips on the Delhi-Bangalore route was 4.30 km per litre. A sensitivity analysis was carried out to check the impact of increasing mileage to 4.3, 5.0 and 5.5 km per litre on the average trip expenses and contribution margin. The results are shown in Table 2 and Figure 2.

² Contribution margin, in a cost-volume-profit analysis, is a form of management accounting. A contribution margin is the marginal profit per unit of sale. Here, it implies that low mileage in trucks reduces the profit margin, whereas higher mileage in trucks increases the profit margin, as shown in Table 2.



TABLE 2. EFFECT OF MILEAGE ON AVERAGE TRIP EXPENSES

MILEAGE (KM/L)	AVERAGE TRIP EXPENSES (IDR/TONNE-KM)	AVERAGE CONTRIBUTION MARGIN (%)
4.15	1.09	36.95
4.30	1.07	39.90
5	0.98	52.92
5.5	0.92	61.31

Source: TCIL- IIM-C (2012)

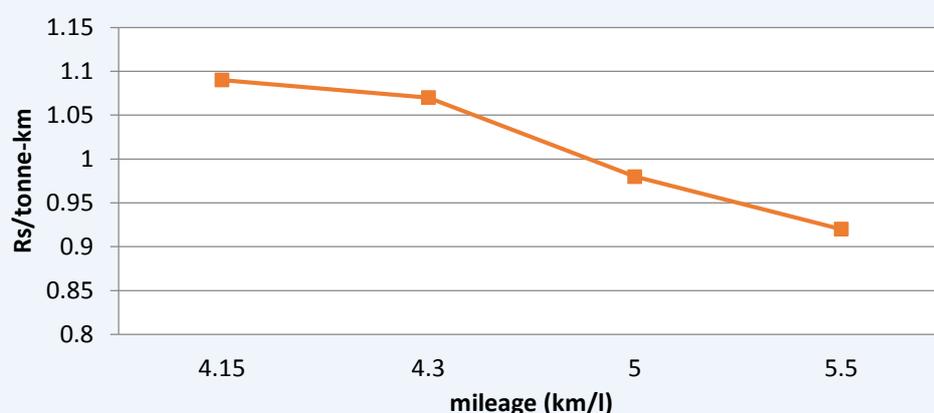


FIGURE 2: EFFECT OF MILEAGE ON AVERAGE TRIP EXPENSES

Many truck operators interviewed did not keep their vehicles properly maintained in order to increase mileage and reduce trip expenses. The TCIL-IIM-C (2012) notes that, if mileage of vehicles were at the desired levels, savings to the economy would be in the order of INR240 billion (US\$4.8 billion) per year.

However, improving the mileage of trucks is complex. Mileage is low for various reasons, including poor-quality roads, delays at tollgates and lack of training for drivers regarding proper usage and maintenance of trucks. Lack of technology and manufacturing standards are also problems. For example, truck manufacturing companies only make the chassis of the vehicle. The body is built by unorganized road-side vendors, making it difficult to impose any quality controls and standardization.

“Indian producers of trucks are not improving the mileage of their trucks. And imported trucks like Volvo, Mercedes which are better in mileage are unaffordable as there is very high excise duty levied on them.”

—A medium truck operator from the Mongolpuri industrial area, New Delhi

In addition to the options outlined, there is a need to introduce several structural changes that would strengthen the industry in the longer term.



Encourage Provisions in the Long Term That Allow for Freight Rate Adjustments When Fuel Prices Change

One cargo company involved in the retail haulage business claimed to include a revision clause in their contracts. However, most of the small, medium or large operators of trucks involved in bulk haulage do not have similar clauses in their contracts that allow for revision of freight rates due to increases in fuel costs. Corporate companies normally have clauses in their contracts with large truck operators that provide for rate adjustments linked to fuel price increases. To spread this practice among smaller operators, the government could make it mandatory to incorporate fuel-cost considerations in contracts that extend to more than six months.

Introduce Training for Truck Operators and Revise Financing Conditions

Currently, hardly any training is required to enter the trucking business. Also, financing for the purchase of new trucks is easily available through non-banking financial institutions like Shriram Transport Finance Limited (the current leaders in truck financing) and Tata Capital. Nationalized banks also lend to small operators of trucks on a priority basis. Globally, the norm is that each truck is financed on its own expected revenue stream and not on the basis of the number of trucks owned by the firm. However, in India, small truck operators (i.e., those owning one to five trucks) are given loans for trucks on a priority basis. The result is that trucks get financed whether or not they can generate enough revenue. This priority lending to small operators of trucks has thus led to the decoupling of the risk from returns for financial institutions on the one hand and easy entry into and exit from the business for truck operators on the other. There is an urgent need to assign prerequisites like a minimum asset base to access financing and minimum education and training in order to enter the trucking business. There should also be guidelines for financiers to assess the revenue generation and loan repayment capacity of truck operators. These guidelines would help reduce the rate of interest for existing players and act as an effective entry barrier for new entrants in the business.

Fix Minimum Freight Rates

A popular solution that emerged during consultations with truck operators, as well as researchers at the Asian Institute for Transport Development, CIRT and truck operators' unions, is the need to fix minimum freight rates. Due to strong competition in the industry, underpricing is very common. The government can alleviate the problem by regulating the minimum freight rates, fixed on per-tonne and per-km bases.

However, there are some challenges in implementing minimum freight rates in the trucking industry. Freight rates are mostly a function of demand due to the excessive supply of trucks. Fixing minimum rates can further reduce demand during periods of recession. Also, as there is large diversity in the nature of goods carried, fixing one rate is difficult and less effective, but fixing separate rates for each type of good is cumbersome. Similarly, the quality of roads differs between states and between hilly areas and plains. Therefore, setting a minimum per-km rate could have a negative impact on trucks with national permits. Also, fixed rates that may be higher than market prices would further increase supply and thereby increase idle time.

Despite these negative impacts, truck operators consider that fixing minimum freight rates, or at least issuing guidelines for fixing freight rates, would likely be an effective measure to reduce their vulnerability to increasing diesel prices and help in maintaining profit margins.³

³ Setting an across-the-board rate card is challenging. Instead, there can be guidelines recommending that the per-km rate or per-tonne charge should not be below certain respective rates.



In addition, brokers, who play a large role in fixing freight rates, need to be better regulated. Currently, brokers are required to register under the Carriage by Road Act 2007; in practice, however, most brokers do not register. If brokers are registered, an explicit agreement between brokers and truck operators could be developed, which would help to standardize the freight rates and reduce the power of brokers.

Set a Uniform Diesel Price Across States

The second most popular support measure discussed with the industry was the possibility of keeping the price of diesel uniform across all states. Truck drivers operating on long routes are directed to fill tanks in the state along their route where diesel is cheapest. For truckers from Delhi, diesel is cheaper in the adjoining state of Haryana; therefore, most truckers fill with diesel there at the beginning of the trip. This requires a higher requirement of working capital at the beginning of the trip. If the diesel price is uniform across states, truck drivers can fill with diesel anywhere along their route. For example, a truck operating on the Delhi-Mumbai route can fill up once in Delhi for the outward journey and again refill at Mumbai, after receiving freight charges in Mumbai, for the return journey. In such cases, the requirement of working capital for one trip is significantly reduced and truck operators can operate more than one truck with the same working capital.

However, this is a difficult option within the federal structure of India's government and may lead to new market distortions. While oil-marketing companies have a uniform base price for diesel in all states, state taxes on diesel differ and are an important revenue stream for state governments. States such as Gujarat and Maharashtra levy higher taxes on diesel and will be reluctant to forego the higher revenue they earn from diesel sales, whereas states like Haryana face pressure from farmers' lobbies to keep diesel prices low and will be reluctant to increase taxes on diesel. Central government can only advise—not compel—states to raise or lower their taxes.

Recommendations

There is an urgent need to phase out the subsidy on diesel from both a fiscal and environmental point of view. The Government of India has decided to allow oil-marketing companies to increase the diesel price by INR0.45 per month until it is equal to the market rate (*Times of India*, 2013). The government has already given directives to sell diesel at market prices to bulk consumers such as the Indian Railways and State Transport Corporations. In the retail sector, farmers and truckers stand out as the sectors most vulnerable to diesel price increases.

The study concludes that the vulnerability of the trucking industry to diesel prices arises due to the inherent structural and regulatory issues of the industry, which urgently need to be rectified.

Due to the lack of training stipulations, as well as easy registration and easy financing, there are virtually no entry or exit barriers in the trucking industry. Hence, most truck operators enter the business with no prior knowledge of trucking and have a very small asset base. The consultations revealed that, as a result, 80 per cent of truck operators own fewer than five trucks. Such small operators cannot reap the benefits of economies of scale and cannot afford to obtain the necessary business information; they are thereby dependent on brokers.

Due to oversupply of trucks and fierce competition, freight rates are mostly determined by demand for trucking, and, thus, increased fuel costs have little influence on them. However, with fuel costs at around 56 per cent of total operating costs (TCIL-IIMC, 2012), truck operators are vulnerable to increased diesel prices.



Most trucks are financed by borrowing, which requires them to be in use in order to pay monthly loan instalments. This situation in itself should not be a problem, but coupling it with the low bargaining capacity of small truckers, a lack of prior business knowledge and a lack of access to information about business opportunities leads to heavy dependence on brokers, problems with trucks returning empty and idle trucking.

There are also many regulatory issues that present challenges for the trucking industry. Both central and state governments look at trucking as a source of revenue and have not paid adequate attention to its problems. There is an urgent need to find a solution to unviable freight rates and set a minimum for the industry. Tolls should be collected once, toll plazas need to be modernized and easy movement of freight across states should be made possible to reduce fuel wastage and low mileage arising from toll stoppages. If the toll stoppages are minimized, more trips are possible in a month, which can significantly alter the business. A single trucking industry regulator is needed to look at both the regulatory issues and training requirements of both truck operators and truck drivers.

The study thus makes several short- and long-term recommendations. Recommendations that can be implemented in the short term to give immediate relief to the truck operators against rising diesel prices include:

1. **Reducing waiting time at tollgates.**
2. **Incorporating flexibility in long-term contracts to adjust to changes in fuel costs.**
3. **Fixing minimum freight rates.**

Recommendations that are directed towards long-term structural changes required in the trucking industry include:

4. **Setting up computerized exchange networks for matching loads to trucks.**
5. **Improving the fuel efficiency of the trucks.**
6. **Introducing training for truck operators and examining truck financing.**



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