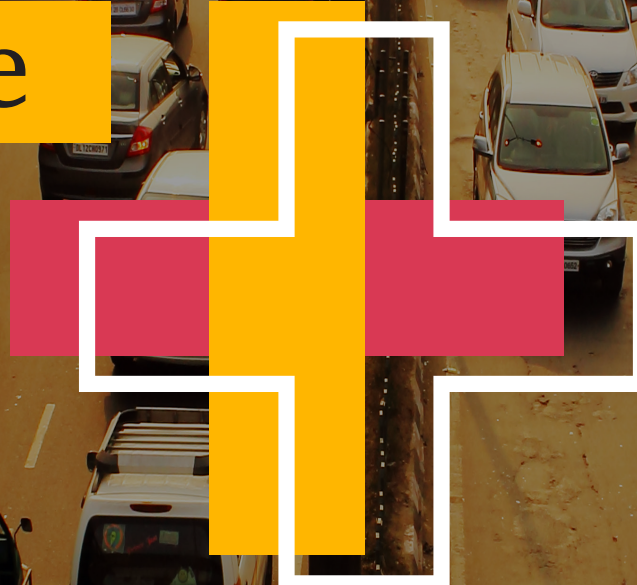


Our Take

November 2022



3Cs for safer roads: Citizens, communities and corporates

India holds the dubious distinction of being the country with the highest number of road fatalities. Beyond the obvious issues around infrastructure, enforcement, vehicle condition and awareness, citizens who bypass traffic laws and regulations are also often at fault. Six course correction initiatives could help safeguard lives.

A crash in early September 2022 made headlines for the high-profile names involved in the disaster. Fatal accidents such as these are not unusual. At times, they make for a 150-word single column news item, at others they are given a miss.

Reports from the Ministry of Road Transport and Highways of India indicate that on an average, 1,200 road accidents happen in India daily and around 400 people lose their lives on account of these, leaving the victim's family to face all kinds of hardships.¹

Regardless of the dangers these road accident statistics suggest, reckless driving is a common practice. While the Safe System approach can help anticipate and accommodate human errors to reduce fatalities, it cannot account for reckless driving given the traffic mix and sheer number of vehicles in India. Requesting the driver to drive fast to catch a flight, or allowing an underage child to take the car for a spin are not rare incidents. Only a few weeks back, driving at a high speed through the broad streets in the New Town area of Kolkata around midnight, three teenagers met with a serious accident, unable to steer in time out of the path of a truck coming from the opposite direction. The car involved in the accident was completely mangled but the boys had a miraculous escape with minor injuries.

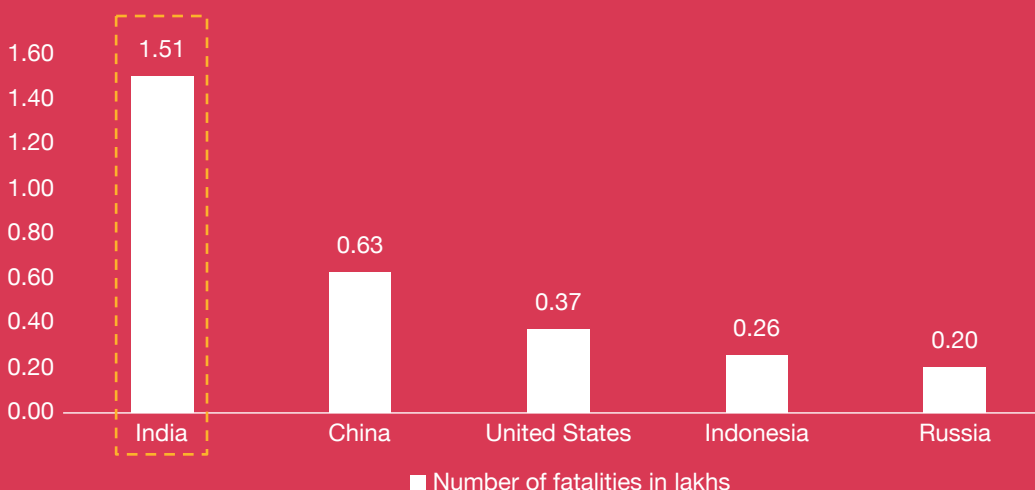


¹ Road Accidents in India - 2019, Transport Research Wing (TRW), MoRTH

Repercussions of a road crash

According to the World Bank study, 'Traffic crash injuries and disabilities: The burden on Indian society',² India ranks first globally in terms of the number of road fatalities and accounts for almost 11% of the global road accident-related deaths. This results in significant emotional trauma both for individuals and their families, along with economic losses to the country. The World Bank study also indicates that economic losses due to road accidents and fatalities in India accounted for around 3.14% of the nation's GDP, which was equivalent to more than INR 4 lakh crore in 2019.³

India ranks 1st in the number of road accident deaths (2019)



Source: TRW report 2019, World Bank

Note: All graphs refer to data from 2019, given that in the subsequent two years, there were not many cars on the road on account of the COVID-19 pandemic.

The tragic incident on 4 September spotlighted seat-belt negligence, structural problems on India's highways and overspeeding. While these reasons are not off the mark, there are other socioeconomic reasons that are often overlooked – those that call for the incident to be categorised as a crash and not an accident. Such crashes involve three interlinked factors – human, road environment and vehicle - that have socio-economic repercussions. In this context, it is also pertinent to note that 84% of road accident victims belong to the working age group of 18–60 years.⁴ This not only leads to significant human suffering, but also drains the GDP of the country by claiming lakhs of economically productive young lives.

Human fatalities and injuries apart, these crashes also result in traffic obstruction, environmental pollution, damage to vehicles and infrastructure, and use of additional resources such as ambulances, police and hospitals. As per a study conducted by Bosch last year, the total socioeconomic cost of road accidents in India ranges from around INR 1.17 lakh crore to INR 2.91 lakh crore.⁵ Such severe social, environmental, medical and economic fallouts point to the need to mitigate road accidents by formulating supplementary strategies for companies to also take partial responsibility to ensure their employees drive safely. Ironically, however, some enterprises offering deliveries within 10 minutes also trigger traffic violations in their attempt to meet such commitments. In an effort to deliver orders in 600 seconds, the lives of the employees are at risk.

² *Traffic Crash Injuries and Disabilities: The Burden on Indian Society*

³ *Ibid.*

⁴ *Road accidents in India*

⁵ *Socio-economic cost of road accidents*



Evidently, we seem to be missing the wood for the trees. Driving responsibly needs to happen by default especially when travelling with co-passengers, and that entails following certain ground rules. It is also important to ensure that these are imbibed at an impressionable age, and that is where citizens, communities and corporate houses need to come together and play their part to induce road users to modify their behaviour. This can often be achieved by incentivising change and educating drivers on compliance and road safety guidelines, more so than levying fines.

Critical drivers of road safety

The three critical pillars that are invariably under the scanner in the event of a road accident are enforcement of traffic regulations, safe automobile design and infrastructure management.

• Enforcement of traffic rules

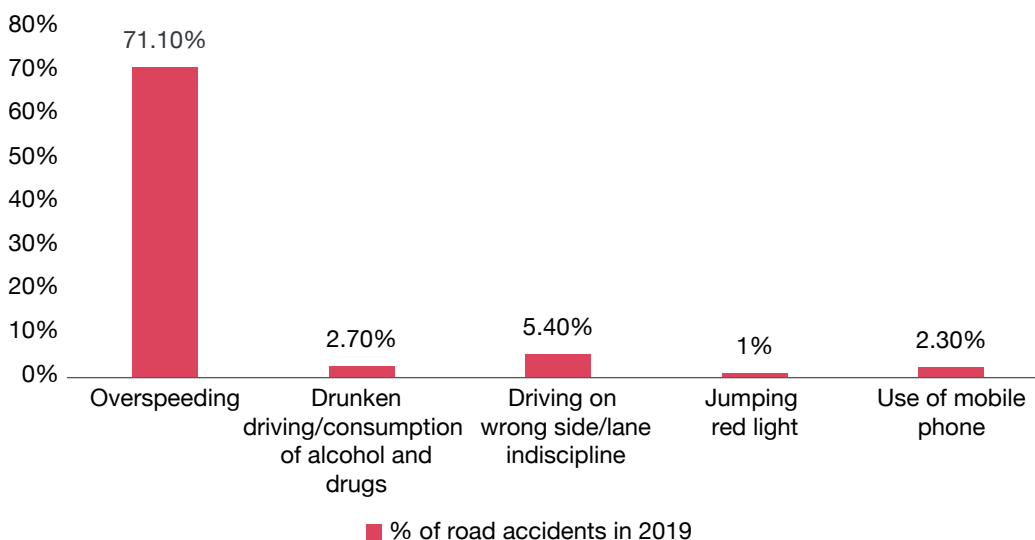
Traffic personnel monitoring road traffic have a daunting task of ensuring the smooth flow of over millions of vehicles on a daily basis across the country. Dealing with road rage is an additional burden. Therefore, the physical well-being of the traffic police personnel, along with factors such as their work hours, pay, access to masks, drinking water and other facilities, is all the more crucial.

While enforcement is one of the most critical pillars to ensure safer roads, there are several inherent challenges. In 2019, under the Motor Vehicles Act, the fines for traffic violations were increased substantially. While the public criticised this move as an unjustified penalty for lower income groups, enforcement officials, on their part, pointed to a lack of personnel and difficulty in calibration of personal digital assistants (PDAs) as impediments to its implementation.

Given the rising numbers of road accidents, the firm establishment of traffic rules, strict adherence to lane driving, speed limits, crossing-over rules, vehicle types/items and people limits, traffic lights and signage are the need of the hour. It is also important to appoint trained and empowered traffic police to adjudicate violations and, in addition, introduce punitive damages for violations by linking insurance premiums, jail time and loss of employment.

The figure below shows the share of the different types of rule violations in road accidents. While lack of skills in investigating crashes, coupled with other soft factors, may not provide the accurate numbers overspeeding or rash driving could in all likelihood result in numbers close to those reported.

Percentage of road accidents due to traffic rule violations

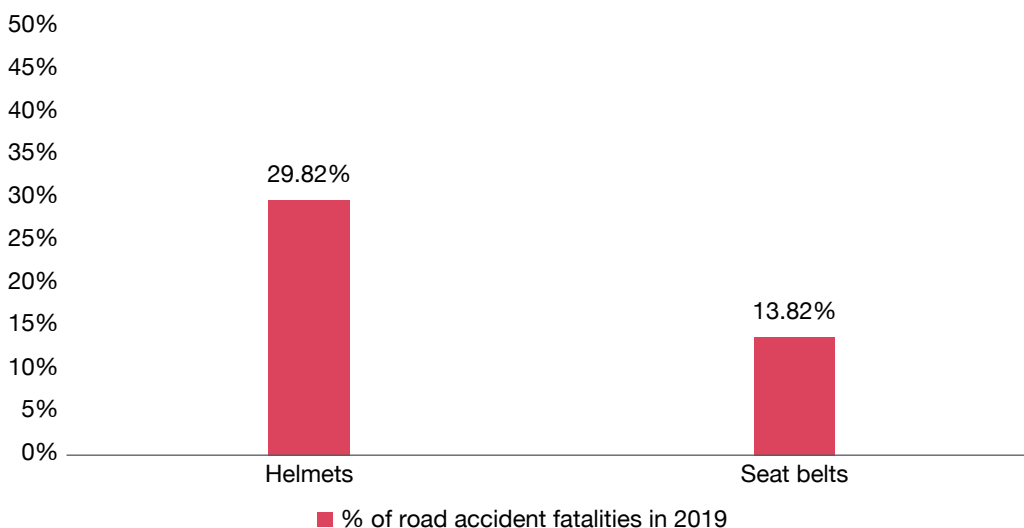


Source: TRW report 2019

• Safe automobile design

The second pillar of safer roads is safer vehicles. Should a crash occur, what can save one’s life is the seat belt, airbag or helmet. Here too there are a few constraints from the perspective of a price-sensitive market. Manufacturers at times may compromise on safety features to lower the price. But price sensitivity may cease to be a differential if every automobile is made safer upto a certain standard – for example, fitting in airbags in the back seat. It is also important to note that most buyers fail to look at the star rating under the New Car Assessment Programme (NCAP) – a car safety programme initiated by the Government to evaluate new automobile designs for performance against various safety threats. Ironically, the same buyer does not quite ignore the energy rating while buying an air conditioner or a water heater.

Percentage of road accident fatalities due to non-use of safety devices



Source: TRW report 2019

• Infrastructure management

Union Minister for Road, Transport and Highways, Nitin Gadkari, has emphasised that efforts are on to improve road engineering and automobile manufacturing.⁶ That is a welcome move given that much needs to be done to improve the roads, and not merely build them. Traditionally, India's expenditure on maintenance ranges between 4–8% of the total budgeted expenditure in the sector. In advanced economies, this figure is 40–50%.⁷ Modifying highways to prevent wrong turns and strengthening internal roads with lanes, signage and lights are a must. The Centre and states could also work in tandem to deal with inter-state violators. Managing construction and the closing down of certain roads through app-based notifications and re-directions can also help minimise unnecessary traffic congestion. Audits need to be more stringent and scientific, and so do detailed project reports and infrastructure design, given that the infrastructure sector is the cornerstone of the Indian economy.

Maintenance of roads is also critical as large potholes can be fatal, especially for two-wheeler drivers. Timely filling up of potholes and addressing the root cause of their emergence – bad workmanship, use of non-standard material or water accumulation that wears away the road surface – are also essential.

There are nations such as the UK, Norway, Japan, Denmark and Sweden that take into consideration human factors too for safer road infrastructure and design. These human factors centre around psychological and physiological patterns that may lead to operational errors in handling vehicles. Factoring these in has helped these nations create a sustainable and safe road traffic system that prevents road fatalities and serious injuries by systematically reducing the underlying risks. This has been recognised at a global level through the inclusion of road safety in the Sustainable Development Goals, two of which aim to reduce global deaths and injuries, and provide safe and sustainable transport systems.

Initiatives in the offing

Some recent initiatives that are in the offing include:

- automated driver testing centres
- a billion-dollar safety programme that will introduce a competitive federalism concept for states to make enhanced commitments and show results
- automation of vehicle inspection and testing
- introduction of dash-cams and body-cams by state governments.

With increasing investment in dash-cams and body-cams, it is hoped that erring officials and citizens will find it hard to collude. But the success of such programmes depends largely on how citizens, corporates and communities at large choose to function, for studies indicate consumer behaviour - including drunk driving, speeding, mobile phone use, not wearing seat belts or helmets - is as important as infrastructure management, safe vehicle design and enforcement of traffic rules. Driving on the wrong side to avoid a U-turn that is 500 metres away, breaking medians that segregate traffic flows for convenience, or even jaywalking and conversing on a mobile phone while crossing streets are common occurrences, often leading to fatalities.

It is time then to ask ourselves: How can citizens, communities and corporates work in collaboration to safeguard lives?

- First, by a thorough understanding of a road user's priorities, especially at the local levels.
- Second, by cooperating and supporting the government's efforts.
- Third, by serving as advocates or champions for road safety and thus ushering in a sense of accountability.

On the technical side, the government admittedly is taking steps to digitalise and introduce technology, but it is a slow process. End-to-end automation is one way to help ensure there are no bugs in the system – be it while paying a fine for speeding, violating a traffic signal, getting a new driving licence or renewing one's licence.

⁶ Nitin Gadkari on roads and automobiles

⁷ States and Central Budget - PwC analysis

⁸ United Nations Economic Commission for Europe (UNECE), 2020



Our take

Smoothing out a bumpy road

Road safety programmes need to be an essential part of a company's corporate social responsibility (CSR) programme. It is only then that employees as citizens will take more responsibility for safer driving. Concerted efforts and some corporate incentives could help create model and disciplined road users who are wary of violating rules and speed limits, and are geared towards teaching others that roads aren't subject to the laws of the jungle.

Schools and traffic departments on their part run road safety campaigns from time to time. In April this year, Chennai traffic police ran an awareness campaign to reduce road accidents, make school and college zones safer, create awareness of traffic rules among students and parents, and teach the importance of helping road accident victims. A similar campaign was launched in Allahabad subsequently with the understanding that school-going students are the best tutors when it comes to teaching elders the importance of following traffic rules.

While such initiatives are worthwhile, there is more ground to cover. The following are six initiatives that could be undertaken for course correction and building a safer ecosystem for ourselves, our families and friends.

- 1. Corporate initiative:** Often, corporate houses engage a fleet of vehicles. This could be for freight movement, or simply for their employees to travel to and from office. Vendors ideally need to maintain a fleet which has an NCAP rating of 3 or more stars. A driver rating system could also be introduced. Business services teams, at their end, could keep an eye on data related to the number of crashes the fleet may have been involved in each year. Efforts also need to be taken to:
 - create specific policies to initiate safe driving behaviour
 - keep track of the steps being taken to make roads safer
 - introduce means to track driver fatigue and reduce the number of fatal crashes in which a respective fleet/or vendor's fleet is involved.
- 2. Employee initiative:** Traffic violations are criminal offences, as the driver puts everyone on board the vehicle and other vehicles and pedestrians at risk. Employers may consider creating a programme wherein a zero traffic violation history during the financial year is taken into account in the annual appraisal and variable pay of employees. Simply calling out these employees and also those who may have violated traffic rules could also motivate people to drive safely. If employers can commit to having socially responsible human capital, that would be a greater service to society at large.
- 3. CSR initiative:** In a country where less than 5% pay taxes, social programmes often vie for funds. Companies therefore could consider reserving 10% of their CSR funds for road safety programmes. In collaboration with local administrative authorities, a series of programmes could be designed to help improve the road situation, prioritising children, pedestrians, and school buses among the modes of transport. Campaigns could be run engaging employees in initiatives such as a road safety week or programmes to train fleet drivers in eco-driving techniques that do not only have safety benefits but also help save fuel.
- 4. Community initiative:** Within individual communities, established tools such as road safety audits and the International Road Assessment Programme (iRAP) can help map the risk level of roads. Legislators and corporators could be requested to allocate funds to conduct studies on safe/and unsafe zones. Once the study is complete, an implementation programme could be designed. Safer infrastructure warrants better infrastructure, and better infrastructure by design could increase property prices in such localities.

5. **School initiative:** School zone safety programmes need to be mandated by the local administration to establish road safety around educational institutes. Gamification of good and bad behaviour on roads too could make its way into the regular curriculum in every class with increasing levels of difficulty. Schools could also consider allocating additional credit points to students whose parents are able to demonstrate zero traffic violations during the academic year. Data may be sourced by parents from Vahan and Sarathi websites and could be a voluntary submission at the end of the academic year. Parents, on their part, could reach out to the schools to understand the road safety behavioural courses being taught to students. Safety features in school buses and bus driver assessments are also as important as fitting in Advanced Driver Assistance Systems (ADAS) in the buses along with seat belts for every seat. Speed management devices too could be fitted in the buses to ensure speed limit maintenance as reduced speeds increase the probability of survival in the event of a crash.
6. **Gen Z initiative:** The drivers of 2040 are most likely in schools today. Enabling a behavioural change towards a socially responsible way of life is more effective at an impressionable age. It is therefore important to initiate millennials and Gen Z, and set them up as role models, ensuring that they walk the talk, be it wearing a helmet, a seat belt or refraining from underage driving.

A nation cannot commit to zero fatalities unless its citizens, businesses and communities commit to such a goal unconditionally. Committing to these six measures may be easier said than done. But as long as the ignition is on to put into motion road safety programmes beneficial for the whole of society, that could pave the way for a safer future for one and all.



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