
EVALUATING THE IMPACT OF THE MOTOR VEHICLES (AMENDMENT) ACT, 2019 ON FATAL ROAD ACCIDENT RATES IN INDIA: A PRE-POST EMPIRICAL ANALYSIS

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ABSTRACT

India bears a disproportionate burden of global road traffic fatalities, accounting for approximately eleven percent of the world's road accident deaths despite hosting only a fraction of the world's total vehicle fleet.² In a legislative attempt to arrest this alarming trajectory, Parliament enacted the Motor Vehicles (Amendment) Act, 2019 (hereinafter "the Amendment Act"), which came into force on the 1st of September, 2019, introducing a paradigmatic overhaul of traffic governance, penalty structures, victim compensation mechanisms, and institutional accountability frameworks under the parent statute, the Motor Vehicles Act, 1988. This article undertakes a rigorous pre-post empirical analysis of the Amendment Act's measurable impact upon fatal road accident rates in India, drawing upon mortality data sourced from the Ministry of Road Transport and Highways (MoRTH), the National Crime Records Bureau (NCRB), peer-reviewed clinical studies, and judicial pronouncements of constitutional courts. The study evaluates the legislative architecture of the Amendment Act, disaggregates macro-level national fatality trends from micro-level hospital-based clinical data, examines implementation disparities across state jurisdictions, and scrutinises the evolving jurisprudence on road safety as a constitutionally enforceable right under Article 21 of the Constitution of India. While early post-enactment data signals a statistically significant reduction in both accident frequency and mortality severity, the article finds that sustained impact is contingent upon uniform state-level implementation, robust enforcement infrastructure, and expeditious operationalisation of the newly created Motor Vehicle Accident Fund and the golden hour treatment scheme.

Keywords: Motor Vehicles (Amendment) Act 2019, road traffic fatalities, pre-post empirical analysis, road safety law, golden hour, Article 21, good samaritan, Motor Vehicle Accident Fund.

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²PwC India, *A Step Towards Safer Mobility: Motor Vehicles (Amendment) Act, 2019* (PricewaterhouseCoopers, 2019), available at <https://www.pwc.in/assets/pdfs/research-insights/2019/a-step-towards-safer-mobility.pdf>.

I. INTRODUCTION

The problem of road traffic mortality in India transcends the domain of public health and squarely implicates the constitutional guarantee of the right to life enshrined under Article 21 of the Constitution of India. Road traffic accidents constitute a leading cause of premature death and permanent disability in the country, with their economic cost estimated at approximately 3.14 percent of India's gross domestic product annually.³ The sheer magnitude of the carnage — with fatalities numbering in the hundreds of thousands each year — renders the subject a matter of urgent legislative, administrative, and judicial concern.

The Motor Vehicles Act, 1988, which had served as the primary statutory framework governing licensing, registration, traffic regulation, insurance liability, and penalty enforcement, had remained largely unamended in its core penalty and governance architecture for over three decades. The exponential growth of vehicular population — from approximately 5.4 million vehicles registered in 1981 to well over 295 million by 2019 — had rendered the existing penal provisions manifestly inadequate as a deterrent.⁴ Against this backdrop, the Ministry of Road Transport and Highways appointed the Committee on Road Safety in 2007 to examine the magnitude of road traffic injuries and fatalities, which recommended setting up road safety authorities at both national and state levels.

The Amendment Act of 2019, introduced by the Minister of Road Transport and Highways in the Lok Sabha on the 15th of July 2019 and receiving Presidential assent shortly thereafter, constitutes the most comprehensive legislative reform to India's road transport law in the post-independence era. It was not merely a revision of fine schedules but a structural reconstitution of the entire road safety governance matrix — encompassing victim relief, driver accountability, vehicle safety recall mechanisms, taxi aggregator regulation, and the creation of a new National Transportation Policy.

This article posits that a rigorous pre-post empirical evaluation of the Amendment Act is both methodologically necessary and jurisprudentially significant. It is necessary because legislative efficacy must be measured against empirical outcomes and not merely aspirational intent. It is

³ World Bank, *Traffic Crash Injuries and Disabilities: The Burden on Indian Society* (World Bank Report, 2021), available at <https://documents1.worldbank.org/curated/en/761181612392067411/pdf/Traffic-Crash-Injuries-and-Disabilities-The-Burden-on-Indian-Society.pdf>.

⁴ Ministry of Road Transport and Highways, Government of India, *Road Accidents in India — 2019* (Transport Research Wing, MoRTH, 2020); see also Wikipedia, "Motor Vehicles Act" (data on registered vehicle stock).

jurisprudentially significant because the Supreme Court of India has, in a continuing series of orders in *S. Rajasekaran v. Union of India* (W.P.(C) No. 295 of 2012), placed the enforcement of road safety measures within the ambit of Article 21 jurisprudence, thereby constitutionalising what was previously a purely regulatory domain.

The article is structured as follows: Part II outlines the pre-amendment legal framework and its documented inadequacies. Part III analyses the substantive legislative changes introduced by the Amendment Act. Part IV presents the pre-post empirical analysis of fatality data. Part V engages with judicial developments and relevant case law. Part VI addresses implementation gaps and state-level disparities. Part VII concludes with recommendations and reflections on the Amendment Act's long-term trajectory.

II. THE PRE-AMENDMENT LEGAL FRAMEWORK AND ITS STRUCTURAL DEFICIENCIES

2.1 The Motor Vehicles Act, 1988: An Overview

The Motor Vehicles Act, 1988, enacted on the 14th of October 1988 and brought into force from the 1st of July 1989, replaced the Motor Vehicles Act, 1939. It consolidated laws relating to licensing of drivers and conductors, registration of motor vehicles, control through permits, state transport undertakings, traffic regulation, insurance, liability, and penalties for traffic offences. The Central Motor Vehicles Rules, 1989 were framed thereunder to operationalise the legislative provisions.⁵

The Act, while comprehensive in its regulatory architecture, suffered from three fundamental structural deficiencies as road accident fatalities mounted through the 1990s and 2000s. First, the penal provisions were woefully inadequate given India's socio-economic trajectory. The fine for driving without a licence, for instance, stood at a mere ₹500, an amount that possessed virtually no deterrent value for most categories of traffic offenders. Second, the institutional framework for road safety governance was fragmented, with no dedicated national body tasked with comprehensive accident prevention, data collection, and enforcement coordination. Third, the compensation mechanism for accident victims — particularly in hit-and-run cases — was

⁵ Motor Vehicles Act, 1988, (59 of 1988), Statement of Objects and Reasons; Central Motor Vehicles Rules, 1989.

grossly insufficient, with the solatium available under the pre-amendment Act amounting to ₹25,000 for death and ₹12,500 for grievous injury.⁶

2.2 The Statistical Context Preceding the Amendment

India, possessing only approximately one percent of the world's automobiles, accounts for eleven percent of the world's road accident deaths. In 2018, the year immediately preceding the implementation of the Amendment Act, India recorded approximately 151,417 road accident fatalities as per MoRTH data — a figure that represented a slight decline from the peak of 153,972 recorded in 2017 but remained extraordinarily high by international standards.⁷ The trend of state-wise road accident deaths between 2017 and 2018 reveals that the maximum increase in the number of deaths occurred in Uttar Pradesh, while road fatalities decreased significantly in Tamil Nadu and Andhra Pradesh, with deaths also increasing in states like Maharashtra, Karnataka, Rajasthan, Gujarat, Bihar, Odisha and Chhattisgarh.

The increase in the number of vehicles on roads, along with the absence of a coordinated policy to control the problem, had been attributed to the rise in road accidents. Two-wheeler riders constituted a disproportionate share of fatalities, a demographic concentration that reflected both the growth in two-wheeler ownership and the chronically low rates of helmet usage. The non-use of seat belts in four-wheelers similarly contributed to avoidable mortality. The absence of a "good samaritan" legal protection framework also meant that bystanders were reluctant to assist injured accident victims for fear of legal entanglement, resulting in preventable deaths during the critical "golden hour" of post-accident medical intervention.

III. LEGISLATIVE ARCHITECTURE OF THE MOTOR VEHICLES (AMENDMENT) ACT, 2019

3.1 Penalty Enhancement as a Deterrent Mechanism

The most immediately consequential and publicly visible feature of the Amendment Act was the dramatic escalation of penalties for traffic violations. The fine for driving without a licence was enhanced from ₹500 to ₹5,000. The penalty for driving under the influence of alcohol or

⁶ Motor Vehicles Act, 1988, Section 161 (prior to amendment); Solatium Scheme, 1989.

⁷ Ministry of Road Transport and Highways, *Road Accidents in India — 2018* (Transport Research Wing, MoRTH, 2019); National Crime Records Bureau, *Accidental Deaths and Suicides in India — 2019* (NCRB, Ministry of Home Affairs, 2020).

drugs was increased from ₹2,000 to ₹10,000 for the first offence, with provision for imprisonment of up to six months; for repeat offenders, the fine escalated to ₹15,000 with imprisonment extendable to two years. Overspeeding fines were correspondingly increased, with separate graduated schedules for light motor vehicles and medium or heavy vehicles.⁸ The penalty for dangerous driving was enhanced substantially, and crucially, Section 199A was inserted to impose liability upon the guardian or owner of a vehicle where a juvenile is found driving, mandating cancellation of the vehicle's registration and trial of the guardian under the Juvenile Justice (Care and Protection of Children) Act, 2015.

The Amendment envisaged a seven-year imprisonment instead of the then-existing two years for drink-driving deaths, mandatory third-party insurance for all vehicles, and stiffer penalties for traffic violations to reduce accident rates. These were not merely symbolic escalations; they were calibrated to restore the deterrent function of the penal framework that had been eroded by inflation and inadequate enforcement.

3.2 The Motor Vehicle Accident Fund

Perhaps the most structurally significant institutional innovation introduced by the Amendment Act was the creation of the Motor Vehicle Accident Fund under Section 164B. The central government was required to constitute this Fund to provide compulsory insurance cover to all road users in India, utilised for: treatment of persons injured in road accidents as per the golden hour scheme; compensation to representatives of a person who died in a hit-and-run accident; compensation to a person grievously hurt in a hit-and-run accident; and compensation to any other persons as prescribed by the central government.

This represented a fundamental policy shift — from a fault-based, litigation-dependent compensation model to a no-fault statutory fund that would ensure immediate relief to victims irrespective of the identity or financial capacity of the offending party.

3.3 The Golden Hour Scheme and Good Samaritan Provisions

Section 162 of the Amendment Act mandated the Central Government to frame a scheme for cashless treatment of road accident victims during the "golden hour," defined as the period of

⁸ Motor Vehicles (Amendment) Act, 2019, (32 of 2019); PRS Legislative Research, *The Motor Vehicles (Amendment) Bill, 2019: Issues for Consideration*, available at <https://prsindia.org>.

up to one hour following a traumatic injury during which the likelihood of preventing death through prompt medical intervention is highest. Simultaneously, Section 134A introduced statutory protection for good samaritans. A good samaritan was defined as a person who renders emergency medical or non-medical assistance to a victim at the scene of an accident, where such assistance was rendered in good faith, voluntarily, and without expectation of any reward, and such a person shall not be liable for any civil or criminal action for any injury to or death of an accident victim caused due to their negligence in providing assistance.

This provision addressed a profound socio-legal impediment that had long frustrated accident relief in India. Empirical surveys conducted prior to the amendment had consistently shown that fear of police harassment and legal liability was the primary reason bystanders declined to assist road accident victims. The codification of good samaritan protection, while not wholly eliminating this fear, provided a statutory basis for reassurance.

3.4 Vehicle Recall, Aggregator Regulation, and Institutional Reform

The Amendment Act allowed the central government to order recall of motor vehicles if a defect in the vehicle may cause damage to the environment, or the driver, or other road users, with the manufacturer required to reimburse buyers for the full cost of the vehicle, or replace the defective vehicle with another vehicle with similar or better specifications. This provision introduced, for the first time in Indian law, a formal mandatory vehicle safety recall mechanism analogous to those operative in developed jurisdictions.

The Amendment further introduced provisions for regulating taxi aggregators such as ride-hailing platforms, classifying them as aggregators under a defined regulatory framework, and empowering state governments to frame licensing rules for them. The provision for a National Transportation Policy and the creation of a National Road Safety Board — as a permanent statutory body to advise on road safety measures — represented important institutional reforms, though their practical operationalisation has remained considerably delayed.

IV. PRE-POST EMPIRICAL ANALYSIS OF FATAL ROAD ACCIDENT RATES

4.1 Methodology and Data Sources

The empirical analysis presented in this Part draws upon three categories of data: (i) national-level fatality statistics published by MoRTH in its annual publication "Road Accidents in India"

and by NCRB in "Accidental Deaths and Suicides in India"; (ii) hospital-based clinical studies published in peer-reviewed journals comparing pre-MVA and post-MVA patient cohorts; and (iii) injury severity score analyses. The pre-MVA period is defined as the period from 1st March 2019 to 31st August 2019, and the post-MVA period as 1st September 2019 onwards, with longitudinal data tracked through 2021. It is acknowledged that the COVID-19 pandemic substantially disrupted road traffic patterns in 2020–21, introducing a confounding variable that must be held in analytical view throughout this examination.

4.2 National-Level Fatality Trends

At the national aggregate level, India recorded 151,113 road accident fatalities in 2019, 131,714 in 2020, and 153,972 in 2021 per MoRTH data.⁹ The sharp decline in 2020 is substantially attributable to the nationwide lockdown imposed in response to the COVID-19 pandemic, which dramatically reduced vehicular traffic and thus constitutes an exogenous policy shock rather than a reflection of the Amendment Act's deterrent effect alone. The NCRB 2021 report records 155,622 fatalities, the highest level since 2014, out of which 69,240 deaths were due to two-wheelers.

This apparent resurgence in 2021 fatality figures as pandemic restrictions eased has led some commentators to question the sustained deterrent efficacy of the Amendment Act. However, such a reading requires greater nuance. The post-pandemic return to normal traffic volumes without proportionate enforcement capacity restoration, coupled with the non-implementation of the Amendment Act in certain states, provides significant explanatory force for this rebound. The number of fatalities relative to India's population has been steadily rising, going from around eight deaths annually for every 100,000 people in 2000, to 12 deaths for every 100,000 people by 2022. This long-term trend underscores that the Amendment Act, while capable of producing short-term deterrent effects, has not yet succeeded in reversing India's structural road safety deficit.

4.3 Hospital-Based Clinical Evidence: The Bhubaneswar Study

The most rigorous contemporaneous clinical evidence of the Amendment Act's immediate impact derives from a retrospective observational study conducted at a tertiary care trauma

⁹ Ministry of Road Transport and Highways, *Road Accidents in India — 2021* (Transport Research Wing, MoRTH, 2022).

centre in Bhubaneswar, Odisha, published in the *Journal of Family Medicine and Primary Care*. A total of 912 RTA patients visited the Trauma and Emergency department in the Pre-MVA group, of which 371 met the inclusion criterion and were taken for analysis; similarly, of a total of 537 patients in the Post-MVA group, 415 were analysed. The numerical reduction from 912 to 537 attendances itself signals a statistically meaningful fall in emergency department presentations attributable to road accidents in the months immediately following the Act's commencement. The trend of monthly statistics shows a 41% drop in RTA victims post-MVA implementation.

More significantly from a behavioural compliance standpoint, more RTA victims were wearing helmets as compared to previously — 42% versus 18% — and there was a steep decline in alcohol-related driving, from 25% in the pre-MVA group to 10% in the post-MVA group. A significant reduction was also noted in under-18-year-old two-wheeler riders in the post-MVA group. These findings directly corroborate the deterrent hypothesis underlying the penalty enhancement provisions of the Amendment Act.

4.4 Autopsy-Based Forensic Evidence: The Fatality Pattern Study

A complementary autopsy-based cross-sectional study conducted at the Department of Forensic Medicine and Toxicology of a tertiary-care hospital, spanning the period from March 2019 to February 2020, provides forensic-level confirmation of the Amendment Act's fatality-reduction effect. A total of 2,391 RTA-associated injuries resulted in 47 deaths in the pre-MVA group, and 1,739 RTA-associated injuries resulted in 28 deaths in the post-MVA group. The study noted a 40.4% decline in mortality in the post-MVA group compared to the pre-MVA group.

This 40.4% reduction in fatality is a figure of considerable legal and policy significance. When situated alongside the parallel reduction in emergency department attendances, it suggests that the Amendment Act's effect operated on two levels simultaneously: it reduced the raw number of accidents occurring (through deterrence of reckless behaviour), and it reduced the lethality of the accidents that did occur (through improved safety compliance, particularly helmet

usage). These findings corroborate an earlier study by Sasmal et al., who reported a 41% drop of RTA-associated injuries during the initial two-month post-MVA implementation period.¹⁰

4.5 Confounding Variables and Analytical Limitations

Any empirical pre-post analysis of the Amendment Act must candidly acknowledge its methodological limitations. The most significant confounding variable is the COVID-19 pandemic, which produced an exogenous reduction in vehicular traffic in 2020 that cannot be credited to the Act's deterrent effect. Additional confounders include: the state government-granted "wave-off" periods for certain fines immediately following September 2019 (particularly notable in states like West Bengal and Maharashtra, which declined to implement the enhanced penalties at all); seasonal variations in accident rates; and the general improvement in road engineering and vehicle safety technology over the study period. Underreporting remains a significant issue in official road accident statistics — fatalities that occur in hospitals after 30 days often go unrecorded on account of a lack of linkage between police and hospital records. This structural underreporting means that official figures likely understate the true fatality burden, complicating longitudinal trend analysis.

V. JUDICIAL DEVELOPMENTS AND CASE LAW

5.1 *S. Rajaseekaran v. Union of India* — The Continuing Mandamus

The foundational judicial framework within which the Amendment Act must be contextualised is the landmark public interest litigation in *S. Rajaseekaran v. Union of India*¹¹, Writ Petition (Civil) No. 295 of 2012. In this petition under Article 32 of the Constitution, Dr. S. Rajaseekaran, an orthopaedic surgeon and public-spirited citizen serving as President of the Indian Orthopaedic Association, prayed for enforcement of road safety norms and appropriate treatment of accident victims, stating that the acute loss of life and limbs caused by accidents is the result of a lack of strict enforcement of safety rules on roads and strict punishment for those who do not obey rules.

¹⁰ Sasmal M, Prusty S, Sahu S, et al., "The effect of 'THE MOTOR VEHICLES (AMENDMENT) ACT, 2019' on the clinico-epidemiological profile of road traffic accident patients presenting to a tertiary care trauma centre in Bhubaneswar," *Journal of Family Medicine and Primary Care* 9(8): 3962–3969 (2020), DOI: 10.4103/jfmpe.jfmpe_591_20.

¹¹ *S. Rajaseekaran v. Union of India & Ors.*, W.P.(C) No. 295 of 2012, Supreme Court of India; (2014) 6 SCC 36; order dated 30.11.2017 (Madan B. Lokur, J.); order dated 12.01.2024, 2024 INSC 37 (Abhay S. Oka, J.); order dated 08.01.2025 (Abhay S. Oka and Augustine George Masih, JJ.).

This proceeding, continuing before the Supreme Court for over a decade, has generated a substantial corpus of directions that effectively constitute a judicial road safety code operating in parallel with the statutory framework. The Court, in its judgment of 30th November 2017, commended the efforts of the learned Amicus Curiae and the Justice K.S. Radhakrishnan Committee on Road Safety, expressing confidence that the directions given, with the support and cooperation of MoRTH, would save thousands of lives in road accidents and crores of rupees in compensation payable by insurance companies — provided the directions were faithfully and sincerely complied with.

In a critical order of January 12, 2024, the Supreme Court, through Justices Abhay S. Oka and Pankaj Mithal, observed that where police conclude that a hit-and-run accident has occurred, the police must inform the victim or the legal representatives of the victim about the availability of the compensation scheme under Section 161 of the Motor Vehicles Act. This direction addressed a glaring enforcement lacuna where the statutory compensation mechanism remained unutilised because victims were unaware of its existence. The Court noted that from 2016 to 2022, there were 55,942 hit-and-run motor accidents in 2016, which increased to 65,186 in 2017, 69,621 in 2018, and 69,621 in 2019.

5.2 The Golden Hour Litigation: Article 21 as the Foundation

The most constitutionally significant dimension of recent *S. Rajasekaran* litigation pertains to the non-implementation of the golden hour treatment scheme. The Court emphasised that denying timely medical treatment during the golden hour violates the right to life under Article 21 of the Indian Constitution, and the Motor Vehicle Accident Fund, constituted under Section 164-B, was established to finance this initiative but remains underutilised in the absence of a proper scheme.

In its order of January 8, 2025, the Supreme Court found that despite Sections 162 and 164-B being brought into force on 1st April 2022 and the Central Motor Vehicles (Motor Vehicle Accident Fund) Rules, 2022 being notified, no operative cashless treatment scheme had yet been framed by the Central Government. The order operationalises a statutory promise of cashless emergency care, potentially reducing mortality from road accidents by ensuring treatment within the golden hour, and underscores that executive delay in implementing welfare legislation will attract strict judicial timelines. The Court directed that the scheme be framed by March 14, 2025, and placed on record by March 21, 2025 — a striking illustration

of the judiciary assuming a quasi-supervisory role over executive implementation of road safety legislation.

5.3 *Parmanand Katara v. Union of India* (1989) 4 SCC 286

The constitutional jurisprudence underlying the golden hour mandate traces its lineage to the seminal decision in *Parmanand Katara v. Union of India*,¹² where the Supreme Court held that every doctor, whether government servant or private practitioner, has a professional obligation to extend his or her services with due expertise to protect life, and that no legal impediment may be placed in the path of immediate medical treatment of accident victims. The Court in that case declared that Article 21 imposes upon the State an obligation to ensure that medical aid is not denied to injured persons on account of procedural formalities. The 2025 S. Rajaseekaran order recalled this precedent, where the Court had mandated that medical aid must not be delayed for procedural reasons.

The Amendment Act's good samaritan and golden hour provisions can thus be read as the legislative codification of the constitutional mandate articulated in *Parmanand Katara* — translating a judicially declared constitutional obligation into an enforceable statutory scheme.

5.4 *Mukesh & Anr. v. State (NCT of Delhi)* and Road Safety as a Fundamental Right

While not a road safety case in the conventional sense, the Supreme Court's expansive reading of Article 21 in *Mukesh & Anr. v. State (NCT of Delhi)* (2017) 6 SCC 1 reaffirmed the principle that the right to life encompasses the right to live with dignity and safety. In the context of road safety jurisprudence, this principle has been invoked to argue that the State's failure to enforce adequate traffic safety norms constitutes a violation of the fundamental right to life of road users, particularly of vulnerable road users such as pedestrians, cyclists, and two-wheeler riders.

The Supreme Court, in a 2024 order in S. Rajaseekaran, noted with concern that official data revealed more than 35,000 pedestrians were killed in road accidents in 2023, and that in the same year, more than 54,000 riders and passengers of two-wheelers had died because they had not worn helmets, with 20.4 percent of those killed in road accidents being pedestrians — a figure that had been rising every year from 10.4 percent in 2016. This judicial observation

¹² *Parmanand Katara v. Union of India & Ors.*, (1989) 4 SCC 286, Supreme Court of India.

underscores that the Amendment Act's deterrent measures, while producing measurable early improvements in helmet compliance, have not yet achieved the structural transformation of road user behaviour necessary to produce durable reductions in pedestrian and two-wheeler fatalities.

VI. IMPLEMENTATION DISPARITIES AND STRUCTURAL CHALLENGES

6.1 State-Level Implementation Deficits

The constitutional framework governing road transport in India places it within the Concurrent List (Entry 35) of the Seventh Schedule to the Constitution, meaning that both the Union and State governments may legislate on the subject. The Motor Vehicles Act, 1988, as a Central enactment, applies uniformly across India, but its practical implementation — including the enforcement of traffic laws, collection of fines, and operation of licensing systems — rests primarily with the state governments through their police and transport departments.

The Amendment Act's rollout was immediately complicated by significant state-level resistance. West Bengal and Maharashtra were among the states yet to fully adopt the amended act, having formed committees to study the act in detail and simultaneously increasing their focus on public awareness about road safety rules, while several states including Karnataka and Assam adopted the amended act after lowering the minimum traffic fines. This fragmented implementation created a regulatory patchwork wherein the deterrent effect of enhanced penalties was geographically uneven — a phenomenon that has profound implications for the validity of national-level pre-post comparisons.

West Bengal, notably, explicitly declined to implement the enhanced fines under the Amendment Act, with its transport ministry informing the state assembly that the Act would not be enforced in the state given the government's opposition to the quantum of penalties. This position raises important constitutional questions regarding the extent of state authority to selectively implement Central legislation on a Concurrent List subject, a question that has not yet been conclusively resolved by any High Court or by the Supreme Court.

6.2 Non-Operationalisation of Key Provisions

Beyond state-level implementation deficits, several of the Amendment Act's most structurally transformative provisions remain inoperative or ineffectively operationalised at the national

level. The Motor Vehicle Accident Fund, constituted under Section 164B, which was intended to provide a comprehensive no-fault compensation backstop for all road accident victims, had not been fully operationalised as of early 2025. The National Road Safety Board, provided for in the Amendment Act as a permanent statutory advisory body, has similarly remained largely on paper. As noted in proceedings before the Supreme Court in April 2025, the Board has remained only on paper as the Chairperson and Members are not being appointed.

The golden hour cashless treatment scheme under Section 162, as discussed above, was judicially forced into operationalisation only through the intervention of the Supreme Court in January 2025 — more than five years after the Amendment Act's commencement. This executive tardiness in implementing welfare-oriented statutory mandates significantly attenuates the Act's potential contribution to mortality reduction.

6.3 Underreporting and Data Quality

The Ministry of Road Transport and Highways and NCRB data are based on police records, and the official estimate of non-fatal road traffic injuries in 2021 probably underestimates injuries requiring hospitalisation by a factor of five and all injuries by a factor of twenty. The Indian government's Ministry of Road Transport and Highways collects road accident data from state police departments using standardised formats, while the NCRB compiles accident data from First Information Reports filed by police across India, focusing on law enforcement and justice outcomes. The divergence between these two official datasets, and between official datasets and independent estimates derived from the Sample Registration System, represents a significant challenge for pre-post empirical analysis. The SRS, covering a sample of 8.8 million people, produced an estimate of approximately 271,300 road accident deaths in 2022 — nearly double the number of road accident deaths reported by the Indian police for the same year.

VII. CRITICAL ASSESSMENT: STRENGTHS, WEAKNESSES, AND COMPARATIVE REFLECTIONS

7.1 Strengths of the Amendment Act's Design

The Amendment Act exhibits several features of sound legislative design that distinguish it from its predecessor's regime of purely regulatory prescription. The principle of graduated, inflation-indexed penalties — while not yet formally indexed, the quantum of the 2019 enhancement was calibrated to restore real deterrent value — reflects an understanding of the

economics of compliance behaviour. The institutionalisation of the good samaritan defence addresses a documented behavioural barrier to accident victim assistance. The motor vehicle recall mechanism brings Indian product safety law into alignment with international standards. The Act's most enduring structural contribution may prove to be its conceptualisation of road safety as a multi-stakeholder obligation — imposed not merely upon the individual road user through penalties, but upon manufacturers (through recall liability), the State (through the Motor Vehicle Accident Fund and golden hour scheme), and even digital intermediaries (through aggregator regulation). This systemic approach reflects a sophisticated legislative understanding of road safety as an ecosystem problem rather than simply a driver behaviour problem.

7.2 Weaknesses and Gaps

Notwithstanding its structural ambition, the Amendment Act reveals several significant gaps that have circumscribed its empirical impact. First, the Act lacks any mandatory road engineering safety standards that would require retrofitting of existing high-risk road segments. A study by IIT Delhi points¹³ out that national highways constitute only 2% of the length of roads in India, but they account for 30.3% of total road accidents and 36% of deaths — a distribution that cannot be addressed by penalty enhancement alone and requires concerted road engineering intervention. Second, the Act's provisions for electronic enforcement — including the use of cameras for detecting violations — remain inadequately operationalised in most states, limiting the scalability of the enforcement system beyond the initial fear-response observed in 2019. Third, the absence of a comprehensive driver training reform programme means that the quality of driver education, which remains one of the most significant determinants of road safety outcomes, continues to be unaddressed at a systemic level.

VIII. CONCLUSION AND RECOMMENDATIONS

The Motor Vehicles (Amendment) Act, 2019 represents the most significant legislative intervention in India's road safety governance architecture in the post-independence era. The pre-post empirical evidence surveyed in this article establishes, with reasonable confidence,

¹³ IIT Delhi, *Road Safety in India: Status Report 2023* (Transportation Research and Injury Prevention Centre, IIT Delhi, 2023), available at https://tripc.iitd.ac.in/assets/publication/RSI_2023_web.pdf.

that the Amendment Act produced measurable and statistically significant reductions in both the frequency and severity of road traffic accidents in the immediate post-enactment period. The hospital-based clinical studies from Bhubaneswar and the autopsy-based forensic study both record reductions in the range of 40–41 percent in accident attendances and fatalities in the months immediately following the Act's commencement on 1st September 2019. Behavioural compliance indicators — particularly helmet usage rates (rising from 18% to 42%) and alcohol-related driving incidents (declining from 25% to 10%) — demonstrate that the fear-of-penalty mechanism operated as designed in the early post-enactment period.

However, this article finds that the Amendment Act's long-term fatality reduction potential is significantly constrained by four structural deficits: (i) the failure of certain state governments to uniformly implement the enhanced penalty regime, creating regulatory arbitrage and diluting national deterrence; (ii) the protracted non-operationalisation of the Motor Vehicle Accident Fund and the golden hour cashless treatment scheme, which required Supreme Court intervention to compel executive action; (iii) the chronic underreporting of road accident data that impedes evidence-based policy calibration; and (iv) the absence of complementary road engineering and driver training reforms that are indispensable to sustaining behavioural change beyond the initial deterrence window.

In light of the foregoing analysis, this article advances the following recommendations: First, Parliament ought to enact a legislative mandate requiring state governments to implement the Amendment Act in its entirety within a fixed timeline, with fiscal consequences for non-compliance. Second, the National Road Safety Board must be operationalised without further delay, with its membership drawn from transport safety experts, public health specialists, civil society, and representatives of accident victim groups. Third, the Central Government must expeditiously operationalise the Motor Vehicle Accident Fund and the golden hour scheme in terms of the timelines mandated by the Supreme Court. Fourth, a mandatory national Road Safety Data Protocol must be established to harmonise MoRTH and NCRB reporting, incorporate hospital mortality data, and produce an accurate, real-time national fatality register. Fifth, the penalty enhancement provisions of the Amendment Act must be formally indexed to inflation, with automatic periodic revision to preserve their deterrent value over time.

The constitutionalisation of road safety through the continuing *S. Rajasekaran* litigation has been a vital complement to legislative reform, ensuring that the Amendment Act does not

remain a paper tiger. The judiciary's willingness to enforce Article 21 obligations against executive delays in implementing the Motor Vehicle Accident Fund and golden hour scheme demonstrates that road safety governance is now firmly within the territory of constitutional accountability.

India has committed under the Stockholm Declaration to reduce road fatalities and injuries by 50 percent by 2030. Achieving this target within the remaining timeframe is a formidable challenge. The Motor Vehicles (Amendment) Act, 2019, properly implemented, is a necessary but not sufficient instrument for achieving that goal. Empirical stewardship of its provisions — constant measurement, honest assessment of its limitations, and willingness to strengthen implementation through executive action and, where necessary, further legislative reform — will determine whether the 2019 Amendment represents a genuine turning point in India's long and tragic encounter with road traffic mortality.