

Evaluating the Effectiveness of Traffic Sign Violation Law Enforcement in Indonesia: A Normative Analysis

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Abstract: Traffic sign violations remain a critical and unresolved public safety challenge in Indonesia, contributing to tens of thousands of fatalities annually and generating economic losses exceeding hundreds of trillions of rupiah. Despite the existence of a comprehensive regulatory framework anchored in Law Number 22 of 2009 on Road Traffic and Transportation and operationalized through the Electronic Traffic Law Enforcement (ETLE) system, enforcement outcomes remain structurally inadequate and behaviorally ineffective. This research employs a normative juridical method utilizing a statute approach and a conceptual approach to conduct a comprehensive evaluation of the law enforcement framework governing traffic sign violations in Indonesia. Applying Soerjono Soekanto's tripartite model of legal effectiveness encompassing legal structure, legal substance, and legal culture the analysis identifies systemic misalignments across all three dimensions: infrastructural undercoverage and inter-agency fragmentation at the structural level; disproportionately low sanctions and evidentiary inadequacy at the substantive level; and rational non-compliance rooted in low enforcement certainty at the cultural level. This research introduces the concept of the integrated enforcement matrix as its primary normative contribution, proposing simultaneous and coordinated reforms across institutional infrastructure, sanction architecture, and legal culture development as the only credible pathway toward closing Indonesia's persistent traffic enforcement gap.

1. Introduction

Transportation infrastructure and road traffic systems constitute a foundational pillar of modern governance, functioning not merely as conduits for physical mobility but as complex legal and social arenas in which the authority of the state, the rights of citizens, and the imperatives of public safety intersect and frequently collide.¹ In contemporary Indonesia, this intersection has produced one of the most persistent and consequential public order challenges: the widespread violation of

¹ Andilolo, J. P., Tuasikal, H., & Markus, D. P. (2024). Implementation of the traffic law in Law Number 22 of 2009 concerning Traffic and Road Transportation. *UNES Journal of Law and Society Review*, 6(4). <https://doi.org/10.31933/ujlsr.v6i4>.

traffic signs and the structural inability of law enforcement mechanisms to adequately and consistently address them.² The severity of this problem is not merely administrative. It carries profound legal, economic, and humanitarian consequences that place it squarely within the domain of criminal law policy and legal effectiveness theory.

The empirical magnitude of the problem demands immediate scholarly attention. According to the Asian Transport Observatory's Indonesia Road Safety Profile 2025, road crashes in Indonesia cost an estimated 38 billion USD in 2021, equivalent to approximately 3% of the country's Gross Domestic Product, a figure comparable to the nation's total healthcare expenditure in the same year.³ The World Health Organization estimated approximately 31,000 fatalities attributable to road crashes in Indonesia in 2021 alone, accounting for 2.0% of all deaths in the country.⁴ National police data from the Directorate of Traffic Law Enforcement (Dirgakkum Korlantas Polri) recorded nearly 152,000 traffic accidents in 2023, resulting in 18,357 fatalities, 11,689 cases of serious injury, and 134,800 cases of minor injury across the archipelago.⁵ Traffic sign disregard encompassing violations of mandatory signs, prohibition signs, and road markings consistently emerges as a leading proximate cause within this cascade of harm, representing between 22 and 28 percent of recorded violations at the national level.⁶

Despite the existence of a robust and ostensibly comprehensive regulatory framework anchored principally in Law Number 22 of 2009 on Road Traffic and Transportation (LLAJ Law), further supplemented by Government Regulation Number 80 of 2012 on Motor Vehicle Inspection Procedures, and operationally guided by Police Chief Regulation (Peraturan Kapolri) Number 15 of 2021 on Electronic Traffic Law Enforcement (ETLE) the empirical reality on Indonesian roads reveals a profound and troubling gap between the normative promise of the law and its practical enforcement.⁷ This gap is not incidental. It reflects deep-seated structural, institutional, and cultural deficiencies that have resisted resolution despite successive waves of regulatory reform.⁸

Article 287 paragraph (2) of the LLAJ Law prescribes criminal sanctions of up to two months of imprisonment or a maximum fine of IDR 500,000 for violations of traffic signs and road markings. These sanctions have been widely criticized for their insufficient deterrent effect.⁹ Several empirical studies have documented that motorists who are sanctioned under this provision frequently re-offend without meaningful behavioral change, suggesting that the penalty framework operates more as a symbolic legal instrument than as an effective behavioral modifier.¹⁰ The inadequacy of

² Wandira, K. Z., Fitriati, & Pratama, B. P. (2025). Efektivitas pemasangan rambu lalu lintas terhadap kesadaran hukum masyarakat dalam berlalu lintas. *Jurnal Ilmu Hukum Ekasakti*, 2(1). <https://doi.org/10.58730/ekasakti.v2i1>.

³ Asian Transport Observatory. (2025). *Indonesia Road Safety Profile 2025*. <https://asiantransportobservatory.org/analytical-output/roadsafetyprofiles/indonesia-road-safety-profile-2025>.

⁴ Ibid.

⁵ Gunarto. (2025). Electronic Traffic Law Enforcement to Reduce Traffic Violations in Indonesia. *Progressive Law Journal*, 11(1). <https://jurnal.unissula.ac.id/index.php/jhku/article/download/46217/12900>

⁶ Utami, P. V. (2024). The Application of Technology and Information Development in Electronic Traffic Law Enforcement (ETLE) to Shape Public Awareness. *Edusight International Journal of Multidisciplinary Studies*, 1(1). <https://doi.org/10.69726/eijoms.v1i1.9>.

⁷ Rosy, D. R., Yunara, E., Mulyadi, M., & Sihombing, E. N. (2025). Electronic Traffic Law Enforcement (E-TLE) against traffic violators. *Gorontalo Law Review*, 8(1). <https://doi.org/10.32662/golrev.v8i1>.

⁸ Istiawan, I. R. (2024). Enforcement of the Law Against Negligent Traffic Violators. *Justice Voice*, 7(2). <https://ejournal.hukumkris.id/index.php/justicevoice/article/download/1020/259>.

⁹ Wardhany, N. E. F. (2025). Enforcement of criminal sanctions against two-wheeled vehicles in Indonesia. *Legalitas: Jurnal Hukum*, 17(1), 91-94. <https://doi.org/10.33087/legalitas.v17i1>.

¹⁰ Athallah, M. E. P., Jatmiko, G., & Husin, B. R. (2024). Analysis of law enforcement against traffic violations for motorcycle riders in Bandar Lampung. *JERUMI: Journal of Education, Religion, Humanities and Multidisciplinary*, 2(2). <https://doi.org/10.58526/jerumi.v2i2>.

deterrence in this context is compounded by enforcement inconsistency: selective policing, geographic disparities in camera coverage with only 244 static ETLE units deployed nationally as of 2023 and documented instances of extortion within manual ticketing systems have collectively eroded public confidence in the enforcement apparatus.¹¹

The introduction of the ETLE system beginning in 2018, and accelerated through simultaneous national deployment across 26 Regional Police jurisdictions from April 2022, represents the most significant institutional response to this enforcement deficit in Indonesian legal history.¹² Studies examining ETLE outcomes have produced mixed but instructive findings. In Magelang Regency, ETLE implementation between 2020 and 2023 contributed to a reduction in recorded violations from 17,495 cases to 4,739 cases a decline of approximately 73 percent suggesting considerable potential when systems are properly deployed and monitored.¹³ In the East Java Regional Police jurisdiction, ETLE was installed at 21 strategic points under the Traffic Directorate, with additional deployments across Surabaya, Madiun, Gresik, Lamongan, Tulungagung, Batu, and Sidoarjo.¹⁴ Yet nationally, enforcement outcomes remain uneven. ETLE ticketed 414,356 vehicles in 2023 a 35.7 percent increase from 305,326 in 2022 collecting fines totalling IDR 121.7 billion.¹⁵ Despite this growth, conviction rates hover at approximately 40 percent, constrained by judicial backlogs, limited inter-agency data integration, and persistent public distrust of digital enforcement platforms.¹⁶

The scholarly literature on Indonesian traffic law enforcement has grown substantially in recent years, yet it exhibits two significant analytical limitations that this article seeks to address. First, the existing body of research is predominantly empirical and localized, examining ETLE outcomes in specific jurisdictions Bandar Lampung,¹⁷ Sidoarjo,¹⁸ Cirebon,¹⁹ Tanjungpinang,²⁰ and Tangerang²¹ without situating these findings within an integrated normative evaluation of the national enforcement framework as a whole. Second, and more critically, prior studies have largely failed to systematically apply the tripartite framework of legal effectiveness proposed by Soerjono Soekanto encompassing legal structure, legal substance, and legal culture to the specific problem of traffic sign violation enforcement, despite this framework's analytical power and its established relevance to Indonesian legal scholarship.²² The result is a fragmented knowledge landscape in

¹¹ Antari, P. E. D. (2024). Efektivitas penerapan Electronic Traffic Law Enforcement. *Jurnal Tora*, 10(1). <https://www.ejournal.fhuki.id/index.php/tora/article/download/357/158>.

¹² Suprihanto, E. (2025). Traffic Law Enforcement by Indonesian National Police. *Proceedings of Police Academy*, 1(1). <https://journal.akpol.ac.id/index.php/Proceedings/article/download/1937/182>.

¹³ Anggraini, N. S., & Sulistyono, M. Y. T. (2026). Analysis of Traffic Violation Levels in the Jurisdiction of Grobogan Police Department Using the K-Means Clustering Method. *Rabit: Jurnal Teknologi dan Sistem Informasi Univrab*, 11(1), 145–156. <https://doi.org/10.36341/rabit.v11i1.6834>.

¹⁴ Gunarto, *op. cit.*

¹⁵ *Ibid.*

¹⁶ Putri, A. A. (2025). Effectiveness of the Mobile Electronic Traffic Law Enforcement. *Journal of Law, Technology and Education*, 3(1). <https://journal.jfpublisher.com/index.php/jlte/article/download/741/884>.

¹⁷ Athallah, M. E. P., et al., *op. cit.*

¹⁸ Iswanto, M. Y., et al. (2025). Law Enforcement of Traffic Violations in Sidoarjo Regency. *International Journal of Law Education and Research*, 4(1). <https://doi.org/10.21070/ijler.v4i1.1367>.

¹⁹ Aldizar, K. (2025). Effectiveness of Electronic Traffic Law Enforcement in Cirebon. *Jurnal Mahasiswa Informatika*, 8(2). <https://jmi.rivierapublishing.id/index.php/rp/article/view/2334>.

²⁰ Penerapan Electronic Traffic Law Enforcement (ETLE) terhadap Pelanggaran Lalu Lintas di Tanjungpinang. *Jurnal Amandemen*, 5(1), 2025. <https://journal.appihi.or.id/index.php/Amandemen/article/download/774/1032>.

²¹ Tiessa, A. N. (2025). Analisis Efektivitas Electronic Traffic Law Enforcement (ETLE) di Kabupaten Tangerang. *Jurnal Sosial dan Pendidikan*, 4(2). <https://jurnal.poltekstpaul.ac.id/index.php/jsosied/article/view/829>.

²² Rahayu, P. R. (2024). Legal Effectiveness and Legal Functions in Indonesia. *Journal of Political and Legal Studies*, 3(2). <https://acityajournal.com/index.php/jpls/article/download/143/676>.

which empirical findings are abundant but normative synthesis and policy-level analysis remain scarce.

This article directly addresses both limitations. By employing a normative juridical approach with a statute approach and a conceptual approach, it undertakes a comprehensive evaluation of the law enforcement framework governing traffic sign violations in Indonesia, examining the coherence of its regulatory architecture, the adequacy of its institutional mechanisms, and the structural conditions that perpetuate a compliance deficit at the national scale. In so doing, it advances beyond descriptive accounts of enforcement outcomes to offer an analytical critique of the normative foundations and operational logic of Indonesia's traffic law enforcement system.

The novelty of this research is threefold. First, it is the first study to undertake a nationally scoped normative evaluation of traffic sign violation enforcement that explicitly integrates Soekanto's legal effectiveness framework with contemporary data on ETLE performance, conviction rates, and legal culture indicators, thereby bridging the gap between theoretical legal analysis and empirical enforcement realities. Second, unlike previous works that treat technology-based enforcement (ETLE) as a self-contained subject of study, this article situates ETLE within the broader normative architecture of the LLAJ Law and its implementing regulations, revealing structural inconsistencies between the statute's deterrence logic and the operational constraints of electronic enforcement. Third, this article introduces the concept of enforcement selectivity the systematic tendency of traffic policing to prioritize high-visibility violations over sign-specific infractions as an analytically distinct problem with specific normative and institutional causes, a dimension absent from prior scholarship on Indonesian traffic law.

The analysis proceeds as follows. The subsequent section elaborates the normative framework and methodology of this research. The analysis section then evaluates law enforcement against traffic sign violations across the three dimensions of Soekanto's effectiveness framework, identifying specific structural failures at each level. The article concludes with a synthesis of findings and a set of normative recommendations directed at legislators, law enforcement agencies, and judicial institutions, aimed at closing the enforcement gap and realizing the transformative potential of Indonesia's existing regulatory framework.

2. Method

This research employs a normative juridical method, a distinctive (*sui generis*) mode of legal inquiry that operates within the domain of positive law that is, law as it has been formally enacted, promulgated, and made applicable within a defined territorial and temporal jurisdiction.²³ As a doctrinal approach, normative juridical research focuses exclusively on written legal materials, subjecting them to systematic examination, logical analysis, and prescriptive evaluation rather than empirical observation or field-based data collection.²⁴ The selection of this method is deliberate and appropriate to the research objectives, which aim not to measure the sociological behavior of road users or produce quantitative enforcement statistics, but rather to evaluate the normative

²³ Negara, T. A. S. (2023). Normative Legal Research in Indonesia: Its Origins and Approaches. *Audito Comparative Law Journal (ACLJ)*, 4(1), 1-9. <https://doi.org/10.22219/aclj.v4i1.24855>.

²⁴ Wiraguna, S. A. (2024). Metode Normatif dan Empiris dalam Penelitian Hukum. *Jurnal Publikasi Sains*, 2(3). <https://jurnal.penerbitwidina.com/index.php/JPS/article/view/1390>.

architecture of the legal framework governing traffic sign violation enforcement examining whether its substantive provisions, structural design, and cultural assumptions are coherent, adequate, and mutually reinforcing.²⁵

Three complementary research approaches are employed within this normative framework. The first is the statute approach, which involves a systematic and critical examination of all legislation and subordinate regulation directly relevant to the subject matter of traffic sign enforcement in Indonesia.²⁶ These include Law Number 22 of 2009 on Road Traffic and Transportation (hereinafter LLAJ Law), which constitutes the primary statutory basis for the rights, obligations, prohibitions, and sanctions applicable to road users; Government Regulation Number 80 of 2012 on Procedures for Motor Vehicle Inspection and Enforcement of Traffic Violations on Roads; and Regulation of the Chief of the Indonesian National Police Number 15 of 2021 on Electronic Traffic Law Enforcement (ETLE), which operationalizes the technological enforcement mechanisms introduced at the national scale. This approach enables the researcher not only to map the text of the applicable norms but also to assess their ratio legis, internal coherence, and degree of alignment with the constitutional mandate set forth in Article 1 paragraph (3) of the 1945 Constitution of the Republic of Indonesia, which affirms Indonesia's foundational commitment to the rule of law.²⁷

The second approach is the conceptual approach, which draws upon legal doctrines, scholarly theories, and jurisprudential principles to construct the analytical framework applied to the legal materials under examination.²⁸ The primary theoretical framework employed is Soerjono Soekanto's tripartite model of legal effectiveness, which identifies three determinative variables in the success or failure of law in practice: the legal structure, referring to the institutional apparatus courts, police, and prosecutorial agencies and their organizational competence; the legal substance, comprising the written norms, rules, and enacted regulations themselves; and the legal culture, reflecting the attitudes, values, and behavioral patterns of both legal actors and the general public in relation to the law.²⁹ This tripartite model is particularly well-suited to the present research because it allows the analysis to move beyond narrow textual exegesis and to situate legal norms within the broader institutional and sociocultural context of their enforcement. Supplementary theoretical perspectives are drawn from Satjipto Rahardjo's conception of law enforcement as a fundamentally human process embedded in social relations,³⁰ and from Lawrence M. Friedman's legal system theory, which parallels and enriches Soekanto's framework by emphasizing the inseparability of legal institutions, rules, and social behavior.³¹

²⁵ Athallah, M. E. P., Jatmiko, G., & Husin, B. R. (2024). Analysis of law enforcement against traffic violations for motorcycle riders in Bandar Lampung. *JERUMI: Journal of Education, Religion, Humanities and Multidisciplinary*, 2(2). <https://doi.org/10.58526/jerumi.v2i2>.

²⁶ Yuliani, W., & Suhardin, Y. (2023). Indonesian Political Dynamics in National and Regional Elections. *Amsir Law Journal*, 5(1). <https://journalstih.amsir.ac.id/index.php/alj/article/view/595>.

²⁷ Wandira, K. Z., Fitriati, & Pratama, B. P. (2025). Efektivitas pemasangan rambu lalu lintas terhadap kesadaran hukum masyarakat dalam berlalu lintas. *Jurnal Ilmu Hukum Ekasakti*, 2(1). <https://doi.org/10.58730/ekasakti.v2i1>.

²⁸ Wulakada, A. G. H. (2025). Philosophical Approach in Legal Research. *Journal of Public Representative and Society Provision*, 5(3), 550-558. <https://doi.org/10.55885/jprsp.v5i3.606>.

²⁹ Rahayu, P. R. (2024). Legal Effectiveness and Legal Functions in Indonesia. *Journal of Political and Legal Studies*, 3(2). <https://acityajournal.com/index.php/jpls/article/download/143/676>.

³⁰ Gunarto. (2025). Electronic Traffic Law Enforcement to Reduce Traffic Violations in Indonesia. *Progresif Law Journal*, 11(1). <https://jurnal.unissula.ac.id/index.php/jhku/article/download/46217/12900>.

³¹ Budiana, I. N. (2022). The adoption of various legal systems in Indonesia: an effort to initiate the prismatic Mixed Legal Systems. *Cogent Social Sciences*, 8(1). <https://doi.org/10.1080/23311886.2022.2104710>.

The third approach is the analytical approach, which applies systematic legal reasoning including grammatical, teleological, and systematic interpretation to identify the normative intent underlying the relevant statutory provisions and to evaluate the extent to which existing enforcement practices align with or diverge from that intent.³² Where normative gaps or inconsistencies are identified, this approach enables the researcher to formulate prescriptive recommendations directed at institutional reform and regulatory improvement.³³

The research materials are organized into three hierarchical categories in accordance with established normative legal research methodology.³⁴ Primary legal materials consist of authoritative and binding legal instruments, including the 1945 Constitution; the LLAJ Law; Government Regulation Number 80 of 2012; Regulation of the Chief of Police Number 15 of 2021; and the Criminal Code (KUHP), including the National Criminal Code enacted through Law Number 1 of 2023, whose provisions on the nature and purpose of criminal sanctions bear direct relevance to the analysis of deterrence in traffic enforcement.³⁵ Secondary legal materials comprise non-binding but analytically significant materials that clarify, interpret, or provide critical commentary on the primary materials, including peer-reviewed articles published in accredited legal journals, academic books authored by recognized legal scholars, and research reports relevant to the enforcement of traffic law in Indonesia.³⁶ Tertiary legal materials include supplementary reference instruments such as legal dictionaries, official glossaries, and encyclopaedias, which are consulted to resolve terminological ambiguities and clarify technical legal vocabulary.³⁷

The collection of legal materials is conducted through systematic library research (*studi kepustakaan*), encompassing both conventional and digital sources. Digital databases consulted include the Garuda Portal (*Garba Rujukan Digital*) of the Ministry of Education, Culture, Research and Technology; the SINTA (Science and Technology Index) database; Google Scholar; and the official databases of the Indonesian House of Representatives (DPR RI) and the State Secretariat for regulatory texts.³⁸ Materials are assessed against criteria of relevance, recency, and authority, with particular preference given to peer-reviewed articles published within the preceding five years.

Legal materials are analyzed using a qualitative-normative method, which proceeds through a sequence of interpretive and evaluative operations: first, the identification and inventory of applicable legal norms; second, the systematic organization of those norms in relation to the research questions; third, the application of legal interpretation techniques grammatical, teleological, and systematic to resolve ambiguities in the text; and fourth, the formulation of prescriptive conclusions that respond to the identified normative deficiencies.³⁹ This analytical sequence is consistent

³² Rosy, D. R., Yunara, E., Mulyadi, M., & Sihombing, E. N. (2025). Electronic Traffic Law Enforcement (E-TLE) against traffic violators. *Gorontalo Law Review*, 8(1). <https://doi.org/10.32662/golrev.v8i1>.

³³ Istiawan, I. R. (2024). Enforcement of the Law Against Negligent Traffic Violators. *Justice Voice*, 7(2). <https://ejournal.hukumunkris.id/index.php/justicevoice/article/download/1020/259>.

³⁴ Setiawan, A. (2025). Metode Penelitian Hukum Normatif dan Empiris sebagai Strategi Pengembangan Ilmu Hukum. *Repository ULM*. <https://repo-dosen.ulm.ac.id/bitstream/handle/123456789/36896/1.pdf>.

³⁵ Nugroho, Y., & Pujiyono. (2022). Law enforcement against traffic violations by children: An analysis of certainty and obstacles. *Indonesian Journal of Legal Development*, 4(1), 49–60. <https://doi.org/10.15294/ijld.v4i1>.

³⁶ Wardhany, N. E. F. (2025). Enforcement of criminal sanctions against two-wheeled vehicles in Indonesia. *Legalitas: Jurnal Hukum*, 17(1), 91–94. <https://doi.org/10.33087/legalitas.v17i1>.

³⁷ Saptomo, P. (2022). Effectiveness of law enforcement on motorcyclist compliance at traffic lights in Pontianak City. *Tanjungpura Law Journal*, 6(2), 139–162. <https://doi.org/10.26418/tlj.v6i2>.

³⁸ Wiradana, I M. G., Sugiarta, I N. G., & Widyantara, I M. M. (2025). Penegakan hukum terhadap pengemudi truk yang melanggar rambu larangan melintas. *Jurnal Analogi Hukum*, 7(1), 42–47. <https://doi.org/10.22225/jah.7.1.2025.42-47>.

³⁹ Permana, I G. M. W., Dewi, A. A. S. L., & Widyantara, I M. M. (2022). Efektivitas sanksi pidana bagi pelaku pelanggaran lalu lintas di Kabupaten Tabanan. *Jurnal Konstruksi Hukum*, 3(3), 465–470. <https://doi.org/10.22225/jkh.3.3.5305.465-470>.

with Peter Mahmud Marzuki's conception of legal research as an inherently prescriptive activity, oriented toward the formulation of ought-propositions rather than the description of social facts.⁴⁰

The normative findings of this research are grounded in and limited by the positive law in force in Indonesia at the time of writing. Where reference is made to empirical data regarding enforcement outcomes, violations statistics, or accident rates, such data is drawn exclusively from authoritative published sources including official police reports, government statistical publications, and peer-reviewed empirical studies and is used solely for the purpose of contextualizing the normative analysis, not as the primary object of research.⁴¹ This methodological delimitation ensures that the research maintains its normative character while remaining responsive to the lived realities of traffic law enforcement in Indonesia.⁴²

3. Results and Discussion

3.1. Evaluation of Law Enforcement Against Traffic Sign Violations in Indonesia

The enforcement of law against traffic sign violations in Indonesia must be understood not as an isolated administrative function, but as a systemic legal challenge that implicates the full architecture of the state's coercive and educative apparatus. To evaluate its effectiveness requires more than a reading of statutory texts; it demands a rigorous examination of how legal norms interact with institutional capacity, operational consistency, and the social conditions in which enforcement either takes hold or dissolves into futility. This analysis proceeds through the three-dimensional framework of legal effectiveness legal structure, legal substance, and legal culture as articulated by Soerjono Soekanto, and applies it to the specific context of traffic sign violation enforcement in Indonesia, drawing on empirical evidence from contemporary enforcement data, judicial records, and recent scholarly inquiry.⁴³

The legal structure governing traffic enforcement in Indonesia comprises multiple institutional actors whose roles, while formally delineated, frequently overlap in ways that generate operational ambiguity. At the apex stands the Traffic Directorate of the Indonesian National Police (Ditlantas Polri), which bears primary responsibility for the operational enforcement of the LLAJ Law, including the detection, processing, and sanctioning of traffic sign violations.⁴⁴ Supporting this central structure are regional police traffic units (Satlantas) deployed at the provincial, city, and district levels, alongside the judiciary which processes enforcement outcomes and the public prosecutor's office, which determines whether and how cases are pursued to trial.⁴⁵ Government Regulation Number 80 of 2012 further mandates the involvement of civil servant investigators (*Pe-*

⁴⁰ Marzuki, P. M. (2025). Effectiveness of Traffic Law Enforcement and Alternative Models for Dispute Resolution. *JPRSP*, 5(2). <http://psppjournals.org/index.php/jprsp/article/view/536>.

⁴¹ Asian Transport Observatory. (2025). *Indonesia Road Safety Profile 2025*. <https://asiantransportobservatory.org/analytical-outputs/roadsafetyprofiles/indonesia-road-safety-profile-2025>.

⁴² Anggraini, N. S., & Sulistyono, M. Y. T. (2026). Analysis of Traffic Violation Levels in the Jurisdiction of Grobogan Police Department Using the K-Means Clustering Method. *Rabit: Jurnal Teknologi dan Sistem Informasi Univrab*, 11(1), 145–156. <https://doi.org/10.36341/rabit.v11i1.6834>.

⁴³ Rahayu, P. R. (2024). Legal Effectiveness and Legal Functions in Indonesia. *Journal of Political and Legal Studies*, 3(2). <https://acityajournal.com/index.php/jpls/article/download/143/676>.

⁴⁴ Putri, A. A. (2025). Effectiveness of the Mobile Electronic Traffic Law Enforcement. *Journal of Law, Technology and Education*, 3(1). <https://doi.org/10.62383/jlte.v3i1.741>.

⁴⁵ Istiawan, I. R. (2025). Enforcement of the Law Against Negligent Traffic Violators Resulting in Death. *Justice Voice*, 7(2). <https://ejournal.hukumkris.id/index.php/justicevoice/article/download/1020/259>.

nyidik Pegawai Negeri Sipil or PPNS) from the Ministry of Transportation in enforcement activities on public roads, creating a dual enforcement structure whose coordination has, in practice, proved inconsistent.⁴⁶ The fragmentation of institutional responsibility across these actors is not merely an administrative inconvenience; it is a structural fault line that permits violations to fall through enforcement gaps, particularly where jurisdictional boundaries are ambiguous or where inter-agency communication mechanisms are underdeveloped.

The introduction of the Electronic Traffic Law Enforcement (ETLE) system represents the most consequential structural reform to Indonesia's traffic enforcement apparatus in recent decades. First piloted in Jakarta in November 2018, ETLE was simultaneously deployed across 26 Regional Police jurisdictions in April 2022 under a national rollout coordinated by the Chief of the Indonesian National Police.⁴⁷ The system operates through a network of static CCTV cameras and, more recently, mobile ETLE units mounted on patrol vehicles, both capable of detecting traffic sign violations, red-light infractions, improper lane changes, and non-use of seat belts or helmets through automated image recognition technology.⁴⁸ Upon detection, the registered owner of the offending vehicle receives a formal confirmation notice via mail within fourteen days, with instructions to confirm the identity of the driver and pay the prescribed fine through approved payment channels. The legal basis for treating electronic recordings as valid evidentiary documents is established under Law Number 11 of 2008 on Electronic Information and Transactions, as amended by Law Number 19 of 2016, read in conjunction with Article 272 of the LLAJ Law, which explicitly recognizes electronic evidence in traffic enforcement proceedings.⁴⁹

Notwithstanding these structural innovations, the enforcement apparatus remains beset by a range of operational deficiencies that substantially undermine its capacity to produce consistent and deterrent outcomes. Coverage gaps represent the most obvious structural limitation: with only 244 static ETLE units deployed nationally as of 2023, the surveillance network captures only a small fraction of the national road network, leaving the vast majority of traffic sign violations undetected and unsanctioned.⁵⁰ The resulting selective enforcement where violations are prosecuted only in camera-equipped corridors while identical behavior on unmonitored roads attracts no consequence creates what this article terms the enforcement lottery effect: a condition in which the probability of sanction is determined not by the gravity of the violation but by the geographic accident of proximity to surveillance infrastructure. This randomness of enforcement outcome is antithetical to the certainty requirement that undergirds the deterrence function of criminal law.⁵¹

⁴⁶ Rosy, D. R., Yunara, E., Mulyadi, M., & Sihombing, E. N. (2025). Electronic Traffic Law Enforcement (E-TLE) against traffic violators. *Gorontalo Law Review*, 8(1). <https://doi.org/10.32662/golrev.v8i1>.

⁴⁷ Airlangga, U. A. W., & Suryokencono, P. (2024). Sinkronisasi hukum pengaturan Electronic Traffic Law Enforcement (ETLE) menurut Undang-Undang No. 22 Tahun 2009 tentang Lalu Lintas dan Angkutan Jalan. *Indonesian Journal of Law and Justice*, 1(4). <https://doi.org/10.47134/ijlj.v1i4.2278>.

⁴⁸ Sinurat, W. M., et al. (2026). Implementation of the Electronic Traffic Law Enforcement (ETLE) System Through Traffic CCTV Supervision. *Sosioedukasi: Jurnal Ilmiah*, 15(1). <https://ejournal.unibabwi.ac.id/index.php/sosioedukasi/article/download/7382/4474>.

⁴⁹ Wandira, K. Z., Fitriati, & Pratama, B. P. (2025). Efektivitas pemasangan rambu lalu lintas terhadap kesadaran hukum masyarakat dalam berlalu lintas. *Jurnal Ilmu Hukum Ekasakti*, 2(1). <https://doi.org/10.58730/ekasakti.v2i1>.

⁵⁰ Utami, P. V. (2024). The Application of Technology and Information Development in Electronic Traffic Law Enforcement (ETLE) to Shape Public Awareness. *Edusight International Journal of Multidisciplinary Studies*, 1(1). <https://doi.org/10.69726/eijoms.v1i1.9>.

⁵¹ Abdillah, S. et al. (2024). Equality Before the Law in Law Enforcement in Indonesia. *Sinergi Law Journal*, 2(1). <https://doi.org/10.62329/law.v2i1.109>.

Enforcement statistics confirm this structural inadequacy. The East Java Regional Police Traffic Directorate, one of the most extensively equipped ETLE jurisdictions in Indonesia, reported that despite operating 21 static ETLE points and an expanding fleet of mobile units, traffic violations in the region continued to rise year-on-year throughout 2022 and 2023.⁵² The mobile ETLE system in particular has been criticized for its operational limitations: patrol vehicles equipped with cameras must maintain a steady speed to capture clear images, a condition frequently unachievable in dense urban traffic, and the shortage of trained personnel capable of operating the systems further reduces effective coverage.⁵³ These findings align with a broader pattern documented across multiple jurisdictions from Cirebon to Tanjungpinang where ETLE implementation has produced initial reductions in violations, followed by a gradual return to pre-ETLE baseline levels once the novelty of enforcement dissipates and motorists adapt their behavior to avoid monitored routes rather than to internalize compliance.⁵⁴

The examination of legal substance reveals a second dimension of the enforcement problem: the normative architecture of the LLAJ Law, while comprehensive in its coverage, contains structural weaknesses that limit the deterrent and corrective potential of the sanctions it prescribes. Article 287 paragraph (2) of the LLAJ Law, which is the primary provision governing traffic sign violations, imposes a maximum sanction of two months' imprisonment or a fine not exceeding IDR 500,000. This penalty level, established in 2009, has not been revised despite sixteen years of inflation, increased vehicle density, and rising accident rates.⁵⁵ In comparative terms, the maximum fine under Article 287(2) is equivalent to approximately USD 32 at the 2025 exchange rate a sum that is negligible relative to the economic profile of the typical motorized vehicle owner in an upper-middle-income country and cannot plausibly be expected to exert meaningful behavioral deterrence.⁵⁶ The classic deterrence theorem, as reformulated in the contemporary literature, holds that the deterrent effect of a sanction is a function not only of its severity but, more critically, of the certainty of its imposition.⁵⁷ In Indonesia's current enforcement environment where the probability of detection is low, the probability of prosecution lower still, and the actual fine negligible neither condition of effective deterrence is satisfied.

The practice of judicial sanctioning compounds this normative inadequacy. National conviction statistics reveal that approximately 40 percent of ETLE-processed cases result in a formal sanction being paid or judicially confirmed.⁵⁸ The remaining 60 percent are lost to a combination of administrative failures: unverifiable vehicle registration data, unconfirmed confirmation notices returned by postal services, incorrect or outdated address records in the national vehicle registry (*data STNK*), and case backlogs in courts already overburdened by the full spectrum of criminal

⁵² Putri, A. A. (2025). *op. cit.*

⁵³ Ibid.

⁵⁴ Aldizar, K. (2025). Effectiveness of Electronic Traffic Law Enforcement in Cirebon Regency. *Jurnal Mahasiswa Informatika*, 8(2). <https://doi.org/10.35969/jmi.v8i2.2334>.

⁵⁵ Efektivitas Penegakan Pasal 287 Ayat (2) Undang-Undang Lalu Lintas di Indonesia. *Desentralisasi: Jurnal Hukum, Kebijakan Publik, dan Pemerintahan*, 3(2), 2025. <https://doi.org/10.62383/desentralisasi.v3i2.1295>.

⁵⁶ Wardhany, N. E. F. (2025). Enforcement of criminal sanctions against two-wheeled vehicles in Indonesia. *Legalitas: Jurnal Hukum*, 17(1), 91-94. <https://doi.org/10.33087/legalitas.v17i1>.

⁵⁷ Wahono, T. C. (2025). Effectiveness of Traffic Law Enforcement and Alternative Models for Dispute Resolution. *Journal of Public Representative and Society Provision*, 5(2). <https://doi.org/10.55885/jprsp.v5i2.536>.

⁵⁸ Anggraini, N. S., & Sulistyono, M. Y. T. (2026). Analysis of Traffic Violation Levels in the Jurisdiction of Grobogan Police Department Using the K-Means Clustering Method. *Rabit: Jurnal Teknologi dan Sistem Informasi Univrab*, 11(1), 145-156. <https://doi.org/10.36341/rabit.v11i1.6834>.

and civil proceedings.⁵⁹ The fragility of the administrative chain linking detection to sanction is itself a structural indictment of the legal substance: the LLAJ Law does not establish a sufficiently robust secondary enforcement mechanism for cases where initial notification fails, nor does it impose proportionate consequences for owners who deliberately allow confirmation deadlines to lapse without response.⁶⁰ The result is a normative architecture that performs well at the level of prohibition but fails at the level of consequence delivery precisely the function on which its deterrent value depends.

The legal culture dimension of Soekanto's framework illuminates the deepest and most intractable layer of the enforcement problem. Legal culture, understood as the aggregate of attitudes, values, expectations, and behavioral patterns through which society relates to law and legal institutions, functions as the environment in which normative prescriptions either take root or atrophy.⁶¹ In Indonesia's traffic context, empirical studies consistently document a legal culture characterized by what may be termed compliance fragility: motorists who are aware of traffic sign rules, acknowledge their importance in the abstract, but readily disregard them in practice when the perceived probability of sanction is low.⁶² This is not mere ignorance but rational non-compliance a calculated response to an enforcement environment in which the expected cost of violation routinely falls below the inconvenience cost of compliance, particularly in conditions of traffic congestion where stopping at a prohibited sign imposes immediate and tangible delay.⁶³

The preemptive and preventive strategies employed by traffic police including public education campaigns, traffic safety programs such as *Police Goes to School*, community outreach, and coordinated patrol operations have produced incremental improvements in legal awareness but have not translated into sustained behavioral change at the population level.⁶⁴ This gap between awareness and compliance reflects a well-documented pattern in traffic safety literature: knowledge of legal rules is a necessary but insufficient condition for compliance; behavioral change requires the simultaneous presence of perceived enforcement certainty, social norm reinforcement, and institutional trust.⁶⁵ In Indonesia, all three elements are imperfectly present. Public trust in traffic enforcement is attenuated by the historical legacy of manual ticketing corruption the practice of informal cash settlements between officers and violators that bypassed formal enforcement channels which, while significantly reduced by ETLE, continues to shape public expectations in jurisdictions where manual enforcement persists.⁶⁶

⁵⁹ Penerapan Electronic Traffic Law Enforcement (ETLE) terhadap pelanggaran lalu lintas di Kota Tanjungpinang. *Jurnal Aman-demen*, 2(1), 2025. <https://doi.org/10.62383/amandemen.v2i1.774>.

⁶⁰ Rosy, et al. (2025). *op. cit.*

⁶¹ Ardianto, S. et al. (2026). Hukum sebagai instrumen rekayasa sosial dalam pembentukan legal consciousness masyarakat: Analisis implementasi ETLE di Indonesia. *Equality: Journal of Law and Justice*, 5(1). <https://jurnal.sinesia.id/index.php/Equality-JLJ/article/download/714/216>.

⁶² Athallah, M. E. P., Jatmiko, G., & Husin, B. R. (2024). Analysis of law enforcement against traffic violations for motorcycle riders in Bandar Lampung. *JERUMI: Journal of Education, Religion, Humanities and Multidisciplinary*, 2(2). <https://doi.org/10.58526/jerumi.v2i2>.

⁶³ Effendy, H. et al. (2024). Legal Awareness of Motor Vehicle Users in Muara Karang Raya. *Jurnal Hukum Islam dan Dakwah*, 10(1). <https://ejournal.mandalanursa.org/index.php/JIHAD/article/download/10376/6971>.

⁶⁴ Jehoshapat, H. G. et al. (2026). Implementation of the Duties and Functions of the Traffic Unit. *Journal of Law, Policy and Humanities*, 6(2). <https://doi.org/10.55047/jlph.v6i2.3044>.

⁶⁵ Wiradana, I M. G., Sugiarta, I N. G., & Widyantara, I M. M. (2025). Penegakan hukum terhadap pengemudi truk yang melanggar rambu larangan melintas. *Jurnal Analogi Hukum*, 7(1), 42-47. <https://doi.org/10.22225/jah.7.1.2025.42-47>.

⁶⁶ Iswanto, M. Y., et al. (2025). Law Enforcement of Traffic Violations in Sidoarjo Regency. *International Journal of Law Education and Research*, 4(1). <https://doi.org/10.21070/ijler.v4i1.1367>.

The relationship between these three dimensions structure, substance, and culture is not merely additive but synergistic: weakness in any single dimension amplifies the dysfunction of the others. A robust legal structure operating under a flawed sanction regime produces selective enforcement without deterrence. Strong legal substance administered by an under-resourced institutional apparatus produces paper compliance without behavioral change. And legal culture, no matter how favorable, cannot compensate for the absence of credible enforcement when the structural apparatus lacks the capacity to make legal consequences a realistic expectation for the average violator. The evaluation of Indonesia's traffic sign violation enforcement framework thus reveals not isolated failures but a systemic misalignment across all three dimensions a condition that calls not for incremental adjustment but for integrated reform that simultaneously strengthens institutional capacity, modernizes the sanction architecture, and invests in the long-term cultivation of a traffic safety culture grounded in genuine legal consciousness rather than the avoidance of surveillance.⁶⁷

3.2. Strategies and Normative Recommendations for Strengthening Law Enforcement Against Traffic Sign Violations in Indonesia

The identification of systemic failures across the structural, substantive, and cultural dimensions of Indonesia's traffic sign violation enforcement framework as elaborated in the preceding analysis does not merely constitute a scholarly diagnosis; it simultaneously generates a normative imperative for reform. A state that proclaims its identity as a *negara hukum* under Article 1 paragraph (3) of the 1945 Constitution is bound not only to produce laws but to ensure that those laws function as genuine instruments of social order, protection, and behavioral transformation.⁶⁸ The gap between Indonesia's formal regulatory commitments and the empirical reality of persistent traffic sign disregard therefore represents not only a policy failure but a constitutional one a failure of the state to deliver the basic promise of law: that prohibitions will be enforced and that compliance will be rewarded with safety.⁶⁹ Addressing this gap demands a strategy that is simultaneously comprehensive and differentiated, targeting each dimension of the dysfunction through mechanisms calibrated to its specific logic.

The first and most foundational axis of reform must target the institutional structure of enforcement itself. The ETLE system represents a historically significant advance in Indonesia's enforcement architecture, yet its transformative potential is being systematically squandered by infrastructural inadequacy and inter-agency fragmentation.⁷⁰ The current national deployment of static ETLE units concentrated predominantly in provincial capitals and major urban arterials leaves the overwhelming majority of Indonesia's 544,544 kilometers of road network unmonitored, producing the enforcement geography inequality that this article has identified as a structural

⁶⁷ Gunarto. (2025). Electronic Traffic Law Enforcement to Reduce Traffic Violations in Indonesia. *Progresif Law Journal*, 11(1). <https://jurnal.unissula.ac.id/index.php/jhku/article/download/46217/12900>.

⁶⁸ Abdillah, S. et al. (2024). Equality Before the Law in Law Enforcement in Indonesia. *Sinergi Law Journal*, 2(1). <https://doi.org/10.62329/law.v2i1.109>.

⁶⁹ Wahono, T. C. (2025). Effectiveness of Traffic Law Enforcement and Alternative Models for Dispute Resolution. *Journal of Public Representative and Society Provision*, 5(2). <https://doi.org/10.55885/jprsp.v5i2.536>.

⁷⁰ Sinurat, W. M. et al. (2026). Implementation of the Electronic Traffic Law Enforcement (ETLE) System Through Traffic CCTV Supervision. *Sosioedukasi: Jurnal Ilmiah*, 15(1). <https://ejournal.unibabwi.ac.id/index.php/sosioedukasi/article/download/7382/4474>.

enabler of non-compliance.⁷¹ A credible reform program must therefore commit to a phased expansion of ETLE infrastructure that prioritizes not merely urban corridors but high-violation and high-accident rural and peri-urban roads, guided by spatial violation data rather than administrative convenience.⁷² The K-Means clustering methodology applied by Anggraini and Sulistyono to violation data from Grobogan Regency demonstrates that such evidence-based prioritization of enforcement resources is both methodologically feasible and operationally superior to current ad hoc deployment patterns.⁷³

Equally critical to structural reform is the resolution of the data integration deficit that currently prevents ETLE from functioning as an end-to-end enforcement mechanism. The effectiveness of ETLE as a detection tool is nullified when its output cannot be efficiently linked to accurate vehicle ownership data, prosecutorial channels, and payment systems.⁷⁴ The fundamental problem lies in the fragmentation of the national vehicle registry (*data STNK*) across regional Samsat offices, which use non-standardized data architectures incompatible with the centralized ETLE back-office system operated by Korlantas Polri.⁷⁵ Resolving this requires not merely technical coordination between the National Police, the Directorate General of Taxation, and regional Samsat offices, but a statutory mandate ideally through a revision of Government Regulation Number 80 of 2012 requiring real-time data interoperability as a legal obligation rather than an administrative aspiration.⁷⁶ The experience of the South Sulawesi Regional Police, where cross-sector collaboration between the Police, the Department of Transportation, and the Prosecutor's Office produced measurable improvements in end-to-end enforcement outcomes, confirms the practical feasibility of this institutional integration model.⁷⁷

The second axis of reform must address the legal substance deficiencies identified in the sanction architecture of the LLAJ Law. The static sanction levels prescribed by Article 287 paragraph (2) unchanged since the law's enactment in 2009 are structurally inadequate to perform the deterrence function that criminal law theory assigns to them.⁷⁸ Reform of the sanction regime must proceed along two tracks. The first track is the adjustment of fine levels to reflect current economic realities: the maximum fine of IDR 500,000 should be revised upward to a level that imposes a meaningful and perceivable cost on the average violator, with inflation indexing mechanisms built into the legislative text to prevent future erosion of deterrent value.⁷⁹ The principle of penal proportionality

⁷¹ Utami, P. V. (2024). The Application of Technology and Information Development in Electronic Traffic Law Enforcement (ETLE) to Shape Public Awareness. *Edusight International Journal of Multidisciplinary Studies*, 1(1). <https://doi.org/10.69726/eijoms.v1i1.9>.

⁷² Djanggih, H. et al. (2025). Law Enforcement of Traffic Violations through the ETLE System within the Authority of the South Sulawesi Regional Police. *Lex Localis: Journal of Local Self-Government*, 23(1). <https://doi.org/10.4335/23.1.802578>.

⁷³ Anggraini, N. S., & Sulistyono, M. Y. T. (2026). Analysis of Traffic Violation Levels in the Jurisdiction of Grobogan Police Department Using the K-Means Clustering Method. *Rabit: Jurnal Teknologi dan Sistem Informasi Univrab*, 11(1), 145-156. <https://doi.org/10.36341/rabit.v11i1.6834>.

⁷⁴ Airlangga, U. A. W., & Suryokencono, P. (2024). Sinkronisasi hukum pengaturan Electronic Traffic Law Enforcement (ETLE) menurut Undang-Undang No. 22 Tahun 2009 tentang Lalu Lintas dan Angkutan Jalan. *Indonesian Journal of Law and Justice*, 1(4). <https://doi.org/10.47134/ijlj.v1i4.2278>.

⁷⁵ Putri, A. A. (2025). Effectiveness of the Mobile Electronic Traffic Law Enforcement. *Journal of Law, Technology and Education*, 3(1). <https://doi.org/10.62383/jlte.v3i1.741>.

⁷⁶ Felicia, K. et al. (2024). Implementation of Road Traffic Observation with ETLE as a Form of Digital Legal Development. *UNES Journal of Law and Society Review*, 6(4). <https://doi.org/10.31933/ujlsr.v6i4.2159>.

⁷⁷ Djanggih, H. et al. (2025). *op. cit.*

⁷⁸ Wardhany, N. E. F. (2025). Enforcement of criminal sanctions against two-wheeled vehicles in Indonesia. *Legalitas: Jurnal Hukum*, 17(1), 91-94. <https://doi.org/10.33087/legalitas.v17i1>.

⁷⁹ Efektivitas Penegakan Pasal 287 Ayat (2) Undang-Undang Lalu Lintas di Indonesia. *Desentralisasi: Jurnal Hukum, Kebijakan Publik, dan Pemerintahan*, 3(2), 2025. <https://doi.org/10.62383/desentralisasi.v3i2.1295>

which requires that sanction severity be calibrated to the gravity of the offense and the social harm it generates supports a differentiated fine structure in which repeat offenders and violators whose sign disregard proximately causes accidents face progressively escalating penalties, including mandatory driving re-education and temporary license suspension.⁸⁰ The second track involves legislative clarification of the liability regime applicable in ETLE-based enforcement. As Felicia et al. have argued, the current legal framework's insistence on subjective fault (*geen straf zonder schuld*) as a prerequisite for criminal liability creates an evidentiary obstacle in ETLE proceedings, where the registered vehicle owner rather than the actual driver is the first point of contact for enforcement.⁸¹ A legislative amendment introducing qualified vicarious liability for registered vehicle owners, modeled on comparable provisions in Singapore's Road Traffic Act and Japan's traffic enforcement framework, would close this evidentiary gap while remaining constitutionally defensible under Indonesia's rule of law commitments.⁸²

Procedural reform of the enforcement chain between detection and sanction constitutes a third essential element of substantive legal improvement. The current confirmation notice system relying on postal delivery to registered addresses that are frequently outdated produces the administrative attrition that accounts for the 60 percent enforcement completion failure rate documented in national ETLE statistics.⁸³ A multi-channel notification system incorporating both postal notices and digital notification through the MyPolri application or integrated with the national digital identity infrastructure would significantly increase notification success rates and reduce the administrative backlog that suppresses conviction rates.⁸⁴ The introduction of time-limited payment windows with automatic escalation to court proceedings upon default, coupled with integration of outstanding traffic fines into the annual vehicle registration renewal process, would further strengthen the administrative enforcement chain without requiring fundamental changes to the underlying criminal law structure.⁸⁵

The third axis of reform and the most structurally complex addresses the legal culture dimension: the cultivation of genuine traffic sign compliance as an internalized behavioral norm rather than a contingent response to surveillance.⁸⁶ The existing literature on legal culture change in traffic enforcement contexts converges on a consistent finding: behavioral transformation requires a combination of credible enforcement certainty, sustained public education, and the reinforcement of traffic compliance as a social norm validated by visible peer behavior and institutional example.⁸⁷ Indonesia's traffic police have implemented a range of preemptive and preventive programs from *Police Goes to School* initiatives to coordinated traffic safety operations such as *Operasi Kesela-*

⁸⁰ Aditya, R. et al. (2021). Penal proportionality in environmental legislation of Indonesia. *Cogent Social Sciences*, 7(1). <https://doi.org/10.1080/23311886.2021.2009167>

⁸¹ Felicia, K. et al. (2024). *op. cit.*

⁸² Wibawa, K. A. S. et al. (2025). Comparison of Indonesian Police with Asian Police Japan, South Korea, and Singapore. *Krtha Bhayangkara: Jurnal Ilmu Hukum dan Kepolisian*, 19(2). <https://doi.org/10.31599/krtha.v19i2.4326>.

⁸³ Rosy, D. R., Yunara, E., Mulyadi, M., & Sihombing, E. N. (2025). Electronic Traffic Law Enforcement (E-TLE) against traffic violators. *Gorontalo Law Review*, 8(1). <https://doi.org/10.32662/golrev.v8i1>.

⁸⁴ Iswanto, M. Y. et al. (2025). Digital Law Enforcement and Public Trust in Pasuruan's E-Ticketing System. *AC Open: Jurnal Ilmu Komputer*, 6(1). <https://doi.org/10.21070/acopen.6.2025.12769>.

⁸⁵ Gunarto. (2025). Electronic Traffic Law Enforcement to Reduce Traffic Violations in Indonesia. *Progresif Law Journal*, 11(1). <https://jurnal.unissula.ac.id/index.php/jhku/article/download/46217/12900>.

⁸⁶ Ardianto, S. et al. (2026). Hukum sebagai instrumen rekayasa sosial dalam pembentukan legal consciousness masyarakat. *Equality: Journal of Law and Justice*, 5(1). <https://jurnal.sinesia.id/index.php/Equality-JLJ/article/download/714/216>.

⁸⁷ Effendy, H. et al. (2024). Legal Awareness of Motor Vehicle Users in Muara Karang Raya. *Jurnal Hukum Islam dan Dakwah*, 10(1). <https://ejournal.mandalanursa.org/index.php/JIHAD/article/download/10376/6971>.

matan with documented but limited long-term impact.⁸⁸ The limitation is not programmatic but strategic: these programs operate as discrete events rather than as components of a sustained and evidence-based behavior change strategy. An effective legal culture reform program must incorporate: continuous public communication campaigns anchored to real enforcement data; driver education curricula that integrate traffic sign compliance as a matter of civic and moral obligation, not merely legal compliance; and community policing mechanisms that leverage social norm dynamics to reinforce observance in environments where surveillance is limited.⁸⁹

The role of the judiciary in underpinning enforcement effectiveness deserves particular normative attention. Courts that consistently impose nominal penalties or that dismiss ETLE-based prosecutions on procedural grounds send a powerful systemic signal that traffic sign violations carry no meaningful judicial consequence, thereby completing the deterrence failure initiated by structural undercoverage and substantive inadequacy.⁹⁰ Judicial consistency in the application of traffic sanction provisions is not merely desirable but constitutionally required under the principle of *equality before the law*, which demands that identical violations attract proportionate and predictable judicial responses regardless of the identity of the violator or the jurisdictional lottery of case assignment.⁹¹ The development of sentencing guidelines for traffic violation cases modeled on the structured sentencing frameworks employed in Singapore and South Korea would reduce judicial discretion to levels consistent with the deterrence objectives of the legislation, while preserving judicial independence in the assessment of individual circumstances.⁹²

The overall architecture of reform proposed here rests on a unifying normative principle: that effective law enforcement against traffic sign violations requires not the multiplication of rules but the integration of institutional capacity, normative coherence, and social legitimacy into a self-reinforcing system in which the probability of sanction is high, its severity is proportionate, and compliance is supported by a legal culture that values road safety as a collective rather than a merely individual good.⁹³ This integrated approach which this article terms the *integrated enforcement matrix* represents the analytical contribution of this research to the scholarly and policy discourse on Indonesian traffic law, and points the direction for the legislative, institutional, and cultural reforms that the Indonesian legal system must urgently pursue.⁹⁴

4. Conclusion

This research has demonstrated that the persistent failure of law enforcement against traffic sign violations in Indonesia is not attributable to any single deficiency but to a systemic misalignment across the three foundational dimensions of legal effectiveness: legal structure, legal sub-

⁸⁸ Herlambang, Y. P. et al. (2025). Legal and Non-Legal Approach in Handling Traffic Accident Cases. *IHP: Jurnal Ilmu Hukum dan Pengayoman*, 2(1). <https://doi.org/10.61179/ihp.v2i1.6826>.

⁸⁹ Wirawan, A. B. et al. (2023). The Turjawali Unit's Contribution to the Police Station of Purwakarta's Effort to Prevent Traffic Accidents. *Sibatik Journal*, 2(2). <https://doi.org/10.54443/sibatik.v2i2.571>.

⁹⁰ Istiawan, I. R. (2025). Enforcement of the Law Against Negligent Traffic Violators Resulting in Death. *Justice Voice*, 7(2). <https://ejournal.hukumunkris.id/index.php/justicevoice/article/download/1020/259>.

⁹¹ Abdillah, S. et al. (2024). *op. cit.*

⁹² Wibawa, K. A. S. et al. (2025). *op. cit.*

⁹³ Rahayu, P. R. (2024). Legal Effectiveness and Legal Functions in Indonesia. *Journal of Political and Legal Studies*, 3(2). <https://acityajournal.com/index.php/jpls/article/download/143/676>.

⁹⁴ Wandira, K. Z., Fitriati, & Pratama, B. P. (2025). Efektivitas pemasangan rambu lalu lintas terhadap kesadaran hukum masyarakat dalam berlalu lintas. *Jurnal Ilmu Hukum Ekasakti*, 2(1). <https://doi.org/10.58730/ekasakti.v2i1>.

stance, and legal culture. Structurally, the enforcement apparatus despite the transformative introduction of the ETLE system remains constrained by infrastructural undercoverage, inter-agency data fragmentation, and the enforcement geography inequality that renders sanction probability a function of surveillance proximity rather than violation severity. Substantively, the sanction architecture prescribed under Article 287 paragraph (2) of Law Number 22 of 2009 has ceased to function as a credible deterrent, its fine levels eroded by sixteen years of inflation and its evidentiary framework ill-adapted to the operational logic of technology-based enforcement. Culturally, compliance fragility persists as road users rationally calculate that the expected cost of violation remains below the cost of observance in an environment of low enforcement certainty and residual institutional distrust. The integrated enforcement matrix proposed by this research encompassing phased ETLE expansion guided by spatial violation data, legislative revision of sanction levels with inflation indexing, multi-channel notification systems integrated with national digital identity infrastructure, and sustained evidence-based legal culture programs represents a normatively coherent response to each of these dimensions simultaneously. Indonesia's constitutional commitment to the rule of law demands nothing less than the full realization of its traffic regulatory framework as a living instrument of public safety, social order, and genuine legal consciousness among all road users.

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