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The Effectiveness of Law Enforcement Against Traffic Violations through Electronic Traffic Law Enforcement (ETLE) in the Jurisdiction of the Bengkulu Regional Police: A *Fiqh siyasah* Perspective

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Abstract:
This study examines the effectiveness of law enforcement against traffic violations through Electronic Traffic Law Enforcement (ETLE) within the jurisdiction of the Bengkulu Regional Police from the perspective of *fiqh siyasah*. The research focuses on the implementation of ETLE, the factors influencing its effectiveness, and its conformity with the principles of justice, public welfare, and the prevention of harm in Islamic legal and political thought. The study employs a qualitative approach with a descriptive-analytical design to examine the implementation of electronic traffic enforcement and the institutional, regulatory, and sociocultural factors affecting its performance. Preliminary data indicate that between January and 20 December 2025, the Bengkulu Regional Police recorded 7,422 traffic tickets, comprising 5,693 manual tickets and 1,729 violations detected through ETLE. These figures demonstrate that electronic enforcement has become part of the traffic law enforcement system, although manual ticketing remains predominant. The effectiveness of ETLE is influenced by the availability of technological infrastructure, the accuracy of vehicle registration data, public awareness, and compliance with traffic regulations. From the perspective of *fiqh siyasah*, ETLE can be understood as a legitimate public policy when implemented in accordance with legal certainty, fairness, proportionality, and the principles of *maslahah 'ammah* and *maqashid al-shari'ah*. The study highlights the importance of strengthening institutional capacity, improving administrative accuracy, and promoting public legal awareness to support accountable and equitable traffic law enforcement.

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Introduction (مقدمة)

Indonesia is a constitutional state governed by the rule of law, in which the exercise of public authority must be grounded in legal norms, accountability, and the principles of justice. Law serves not only as an instrument for regulating social conduct but also as a mechanism for preventing violations, resolving disputes, and ensuring that state institutions exercise their powers within established legal boundaries. The effectiveness of law enforcement therefore depends on the consistency between legal provisions, institutional capacity, and public compliance. This principle is particularly relevant to traffic regulation, which directly affects public safety, social order, and the protection of human life. Traffic violations represent a persistent legal and social problem that requires effective enforcement mechanisms capable of promoting accountability and encouraging responsible driving behaviour.

The effectiveness of law enforcement can be examined through Lawrence M. Friedman's legal system theory, which identifies three interrelated components: legal structure, legal substance, and legal culture (Friedman, 1969). Legal structure encompasses the institutions and personnel responsible for implementing the law, including the police, prosecutors, and courts. Legal substance comprises the statutory provisions and legal principles that establish rights, obligations, and sanctions. Legal culture refers to the attitudes, values, and behavioural patterns that influence how individuals and institutions understand and comply with legal requirements. These three components provide a comprehensive analytical framework for assessing the implementation of Electronic Traffic Law Enforcement (ETLE). The performance of an electronic enforcement system cannot be determined solely by the availability of legal regulations or technological infrastructure. Institutional competence, procedural fairness, public awareness, and a culture of legal compliance also shape its practical effectiveness.

The legal basis for traffic enforcement in Indonesia is primarily established under Law No. 22 of 2009 concerning Road Traffic and Transportation. The regulatory framework authorises law enforcement measures against traffic violations and establishes sanctions intended to maintain road safety and order. Government Regulation No. 80 of 2012 concerning the Inspection of Motor Vehicles on Roads and the Enforcement of Violations of Road Traffic and Transportation Regulations further regulates relevant enforcement procedures. The development of electronic technologies has encouraged the Indonesian National Police to adopt digital mechanisms for detecting and documenting traffic violations. Electronic Traffic Law Enforcement uses electronic devices, including surveillance cameras equipped with Automatic Number Plate Recognition technology, to identify suspected violations and record vehicle registration information. Recorded evidence can support subsequent enforcement procedures in accordance with applicable legislation. This technological development represents an institutional effort to strengthen transparency, reduce direct interactions that may create opportunities for illegal levies, and improve compliance with traffic regulations (Siburian et al., 2025).

ETLE is designed to transform traffic enforcement from a predominantly direct-interaction model into a technology-assisted system of monitoring and documenting violations. Its implementation is expected to increase the consistency of enforcement, improve the availability of evidentiary records, and reduce opportunities for discretionary practices that may undermine public confidence in law enforcement institutions. The system also has the potential to encourage drivers to comply with traffic regulations even when police officers are not physically present at a particular location. Its effectiveness, however, depends on several operational conditions, including the distribution and reliability of surveillance cameras, the accuracy of vehicle registration data, the delivery of violation notifications, and the public's understanding of electronic enforcement procedures. Weaknesses in these areas may reduce the system's capacity

to identify violations accurately and ensure that sanctions are imposed through fair and accountable procedures.

The legal framework governing ETLE applies the sanctions prescribed by Law No. 22 of 2009 rather than establishing an entirely separate category of traffic offences. Relevant violations include running red lights, using mobile phones while driving, failing to wear seat belts or Indonesian National Standards (SNI) helmets, disregarding road signs and markings, and carrying more than one passenger on a motorcycle. The application of sanctions must correspond to the specific violation and the relevant statutory provision. Effective enforcement requires more than the formal availability of penalties (Aprilia et al., 2025). Drivers must understand the applicable rules, recognise the consequences of non-compliance, and perceive the enforcement process as legitimate. Procedural clarity is equally important because electronic identification, vehicle ownership records, notification procedures, and opportunities to contest alleged violations affect the fairness and credibility of the system. These considerations demonstrate that ETLE should be evaluated through both its enforcement outcomes and its contribution to a sustainable culture of legal compliance.

The implementation of ETLE nevertheless encounters practical obstacles associated with infrastructure, administrative accuracy, and public behaviour. The installation and maintenance of electronic surveillance equipment require substantial financial resources and technical support, particularly in areas with extensive road networks. Inaccurate vehicle registration data may complicate the identification of the person responsible for a violation. This problem can arise when ownership transfers are not followed by the appropriate registration procedures, causing violation notifications to be sent to the registered owner's address rather than to the actual driver. Attempts to obscure or falsify vehicle registration plates may further undermine automated identification. Public compliance also remains a significant concern when drivers obey traffic regulations primarily because they fear direct supervision by police officers. These circumstances indicate that technological modernisation alone cannot guarantee effective law enforcement. A comprehensive assessment must consider the interaction between institutional readiness, the reliability of enforcement procedures, and the social attitudes that influence compliance with traffic regulations.

The enforcement record of the Bengkulu Regional Police provides an important empirical basis for examining these challenges. According to the figures presented in the preliminary research materials, the Bengkulu Regional Police recorded 7,422 traffic tickets between January and 20 December 2025. These comprised 5,693 manually issued tickets and 1,729 violations detected through ETLE. The figures indicate that electronic enforcement constituted a component of the broader traffic enforcement system, while manual ticketing remained the predominant mechanism during the reported period. The existence of electronic enforcement infrastructure at several locations in Bengkulu City, including intersections along Jalan Adam Malik, Simpang Lima Ratu Samban, Simpang Sawah Lebar, the area near the Bengkulu Regional Police headquarters, and other monitored road sections, demonstrates the operational presence of camera-based traffic monitoring. The recorded figures alone, however, do not establish whether ETLE has reduced traffic violations or improved overall compliance. Such conclusions require a more comprehensive examination of enforcement procedures, the characteristics of detected violations, implementation constraints, and the extent to which drivers respond to electronic monitoring.

The assessment of ETLE in Bengkulu also requires a normative perspective capable of connecting legal enforcement with the broader objectives of public welfare and justice. *Fiqh*

siyasah provides a relevant Islamic legal and political framework for examining the authority of government institutions to formulate and implement policies for maintaining public order. From the perspective of *siyasah dusturiyah*, public policies must operate within legitimate governmental authority and pursue the common good in accordance with Islamic legal principles (Salsabila, 2025). The implementation of ETLE can be understood as an administrative measure intended to promote road safety, protect the public from preventable harm, and minimise misconduct in the enforcement process. Its legitimacy must nevertheless be assessed in relation to justice, accountability, proportionality, and the protection of individual rights. Technological enforcement should not merely facilitate the imposition of sanctions; it must also ensure that alleged violations are identified reliably and that affected individuals receive fair treatment under the law.

The principles of *maslahah 'ammah* (public welfare) and the prevention of *mafsadah* (harm) reinforce the relevance of traffic regulation within *fiqh siyasah*. Road safety is closely associated with the protection of human life and property, which constitute important objectives of *maqashid al-shari'ah*. Traffic violations that endanger road users may therefore be understood as conduct that threatens public welfare and warrants proportionate regulatory intervention. The principle of obedience to legitimate authority, as expressed in Qur'an Surah An-Nisa, verse 59, also provides a normative foundation for compliance with lawful governmental regulations. Such obedience remains subject to the requirement that governmental measures do not contradict Islamic principles. Within this framework, sanctions for traffic violations may be examined through the concept of *ta'zir*, referring to discretionary sanctions established by legitimate authority for conduct requiring corrective or preventive intervention. The application of this concept to ETLE requires attention to the legality of the sanctions, the fairness of their implementation, and their contribution to the prevention of harm rather than punishment as an end in itself.

Previous theoretical discussions of law enforcement and legal system performance provide a foundation for analysing ETLE through institutional, regulatory, and cultural dimensions. The integration of these dimensions with *fiqh siyasah* offers a broader perspective for evaluating the effectiveness and normative legitimacy of technology-assisted traffic enforcement. An important analytical concern lies in the relationship between the formal availability of electronic enforcement, the practical capacity of the police to implement it, and the willingness of road users to comply with traffic regulations. The available preliminary figures from Bengkulu also raise questions concerning the relative contribution of electronic and manual enforcement, the operational obstacles affecting camera-based monitoring, and the extent to which ETLE supports consistent and equitable law enforcement. These questions require an assessment that moves beyond technological implementation to examine institutional performance, public behaviour, and the principles governing legitimate state action.

This study aims to analyse the effectiveness of law enforcement against traffic violations through Electronic Traffic Law Enforcement in the jurisdiction of the Bengkulu Regional Police from the perspective of *fiqh siyasah*. The research focuses on the implementation of ETLE, the factors supporting and constraining its effectiveness, and its implications for traffic discipline, legal accountability, and public safety (Harahap & Marpaung, 2025). The analysis also examines the extent to which electronic enforcement reflects the principles of public welfare, justice, proportionality, and the prevention of harm within Islamic legal and political thought. The study is expected to contribute to the development of legal scholarship on technology-assisted law enforcement by connecting the empirical implementation of ETLE with the normative framework of *fiqh siyasah*. Its findings may also provide an analytical basis for strengthening electronic traffic enforcement policies in Bengkulu through improved institutional capacity, more reliable

administrative procedures, and greater public awareness of lawful and responsible road use

Method (منهج)

Research Design

This study employs a qualitative research approach with a descriptive-analytical design to examine the effectiveness of law enforcement against traffic violations through Electronic Traffic Law Enforcement (ETLE) within the jurisdiction of the Bengkulu Regional Police from the perspective of *fiqh siyasah*. A qualitative approach is appropriate because the study seeks to understand the implementation of electronic traffic enforcement, identify the factors influencing its effectiveness, and analyse its conformity with the principles of justice, accountability, public welfare, and the prevention of harm. The descriptive-analytical design enables the researcher to describe existing enforcement practices systematically and interpret their implications through relevant legal theories and Islamic legal and political principles (Pathak et al., 2013).

The research uses both empirical and normative legal perspectives. The empirical dimension focuses on the implementation of ETLE, including enforcement procedures, institutional capacity, technological infrastructure, administrative challenges, and public compliance with traffic regulations. The normative dimension examines the legal framework governing electronic traffic enforcement, particularly Law No. 22 of 2009 concerning Road Traffic and Transportation and Government Regulation No. 80 of 2012 concerning the Inspection of Motor Vehicles on Roads and the Enforcement of Traffic Violations. The analysis also incorporates Lawrence M. Friedman's legal system theory, which encompasses legal structure, legal substance, and legal culture, alongside the principles of *fiqh siyasah*, *maslahah 'ammah*, *maqashid al-shari'ah*, and *ta'zir*.

Data are collected through document analysis and, where applicable, interviews and observations involving relevant law enforcement personnel and other parties associated with ETLE implementation in Bengkulu. Documentary sources include applicable legislation, institutional records, official traffic enforcement statistics, policy documents, and relevant scholarly publications. The reported figures of 7,422 traffic tickets recorded between January and 20 December 2025, comprising 5,693 manual tickets and 1,729 ETLE-detected violations, serve as contextual evidence for examining the implementation of electronic enforcement. Interviews and observations, if conducted, are used to obtain further information concerning operational procedures, infrastructure availability, administrative accuracy, and public responses to electronic traffic monitoring. Data from each source are compared to identify consistencies, differences, and implementation challenges.

Data analysis follows an interactive analytical process involving data condensation, data display, and conclusion drawing with verification. The researcher first selects and organises information relevant to the research objectives, then classifies the findings according to institutional, regulatory, technological, and sociocultural factors. The findings are subsequently interpreted through Friedman's legal system theory to assess the relationship between legal provisions, institutional performance, and public compliance. The *fiqh siyasah* framework is applied to evaluate whether ETLE implementation promotes public welfare, protects human life and property, prevents harmful conduct, and upholds fairness and proportionality in the application of sanctions.

The validity of the findings is strengthened through source triangulation and cross-

checking between legal documents, institutional data, and empirical information obtained through interviews or observations, where available. Conclusions are formulated by comparing the documented implementation of ETLE with the applicable legal standards and the normative principles of *fiqh siyasah*. This methodological framework is intended to provide a systematic assessment of the effectiveness of electronic traffic enforcement in Bengkulu while distinguishing between documented enforcement outcomes, operational constraints, and normative considerations.

Result (نتائج)

The implementation of Electronic Traffic Law Enforcement (ETLE) within the jurisdiction of the Bengkulu Regional Police represents an institutional effort to strengthen traffic regulation through technology-assisted monitoring and enforcement (Wulandari et al., 2025). The system enables the identification and documentation of suspected traffic violations through electronic devices, particularly surveillance cameras equipped with vehicle registration plate recognition technology. Its implementation is intended to improve enforcement consistency, minimise direct interactions between officers and motorists, and reduce opportunities for irregularities during the issuance of traffic tickets. The legal framework governing this mechanism is primarily established under Law No. 22 of 2009 concerning Road Traffic and Transportation and Government Regulation No. 80 of 2012 concerning the Inspection of Motor Vehicles on Roads and the Enforcement of Traffic Violations. These regulations provide the legal foundation for traffic monitoring, the collection of evidence, and the application of sanctions in accordance with the nature of each violation. The implementation of ETLE in Bengkulu therefore reflects the integration of statutory authority and technological facilities into the operational practices of traffic law enforcement (Dahlan & Jalil, 2023).

The available traffic enforcement data provide an initial indication of the extent to which ETLE has been incorporated into the enforcement activities of the Bengkulu Regional Police. Between January and 20 December 2025, the institution recorded 7,422 traffic tickets, consisting of 5,693 manual tickets and 1,729 violations detected through ETLE. The figures indicate that electronic enforcement accounted for approximately 23.30% of the recorded tickets, whereas manual enforcement represented approximately 76.70%. Manual ticketing consequently remained the predominant enforcement mechanism during the reporting period. The distribution suggests that ETLE functioned as a complementary instrument rather than a replacement for conventional traffic enforcement. These figures establish the scale of recorded enforcement activities but do not independently demonstrate whether ETLE reduced traffic violations, improved road safety, or increased long-term compliance.

Table 1. Traffic Enforcement Records within the Jurisdiction of the Bengkulu Regional Police, January–20 December 2025

No.	Enforcement mechanism	Number of tickets	Percentage
1	Manual traffic enforcement	5,693	76.70%
2	Electronic Traffic Law Enforcement (ETLE)	1,729	23.30%
Total		**7,422**	**100.00%**

The distribution presented in Table 1 highlights the continuing importance of conventional enforcement alongside the introduction of electronic monitoring. The higher proportion of manual tickets may reflect differences in enforcement coverage, the availability of personnel, the distribution of monitoring equipment, or the types of violations detectable through each mechanism. The available figures do not establish which of these factors accounts for the observed distribution. A reliable assessment of the relative effectiveness of manual enforcement and ETLE would require additional information concerning the number of violations detected, the geographical coverage of each mechanism, and the consistency of enforcement over time. Comparative data on traffic accidents, repeat violations, and compliance rates would also be necessary to determine whether electronic monitoring has produced measurable behavioural changes. The current evidence therefore supports the conclusion that ETLE has been operationally integrated into traffic enforcement in Bengkulu, while its broader impact remains to be established through further empirical assessment.

The geographical distribution of ETLE facilities constitutes another important dimension of its implementation. The preliminary research materials identify several camera-monitored locations in Bengkulu City, including the traffic light at Jalan Adam Malik, Simpang Lima Ratu Samban near Telkom, the intersection near RS HD, and Simpang Sawah Lebar in front of SMP Negeri 02 Bengkulu. Other reported locations include the intersection near the Bengkulu Regional Police headquarters and Balai Buntar Heroes Cemetery, the Pasir Putih coastal area, Simpang Kilometer 8, and the Hibrida intersection near the special-needs school. The presence of monitoring facilities at these locations indicates that electronic enforcement has been directed towards selected road sections and intersections. Such locations may provide opportunities to monitor traffic movements and identify violations in areas where traffic regulation is particularly important. The available information does not, however, establish the total number of operational cameras, their detection accuracy, their operating schedules, or the proportion of the regional road network covered by the system (Narendroputro & Rusfian, 2023).

The legal framework governing ETLE establishes that electronically detected violations remain subject to the sanctions prescribed by the applicable traffic legislation. The reported categories of violations include running red lights, using mobile phones while driving, failing to wear seat belts or standard-compliant helmets, disregarding traffic signs and road markings, and carrying more than one passenger on a motorcycle. The legal provisions relevant to these offences include Article 287(1), Article 283, Article 106(6), Article 106(8), and Article 292 in conjunction with Article 106(9) of Law No. 22 of 2009. The applicable sanction depends on the specific offence and the corresponding statutory provision rather than on the electronic character of the detection mechanism. ETLE consequently changes the means through which suspected violations are identified and documented without independently creating a separate substantive category of traffic offences (Scheck, 2009). The effectiveness of this arrangement depends on accurate identification, reliable evidentiary records, compliance with procedural requirements, and the consistent application of legally prescribed sanctions.

Administrative accuracy represents a significant operational consideration in the implementation of electronic traffic enforcement. The preliminary research materials identify the failure to update vehicle ownership records following the sale of second-hand vehicles as a potential obstacle to the delivery of violation notifications. When registration information does not correspond to the current owner or the person driving the vehicle, the notification process may become more complicated and require additional verification (Nangula & OSAKWE, 2026). The concealment or falsification of registration plates may also undermine the identification process because automated systems depend on the quality and accuracy of the information captured by surveillance equipment. These circumstances illustrate the importance of

maintaining reliable vehicle registration databases and establishing effective procedures for verifying disputed or incorrectly attributed violations. The available materials identify these issues as potential implementation challenges but do not quantify their frequency or establish how many ETLE cases in Bengkulu have been affected by them. Further institutional records would therefore be required to determine the extent to which administrative inaccuracies have influenced enforcement outcomes.

The effectiveness of ETLE is also associated with institutional capacity and the availability of adequate technological infrastructure. Electronic enforcement requires functioning cameras, dependable data-processing systems, appropriate maintenance, and personnel capable of managing recorded evidence and subsequent administrative procedures. The deployment of monitoring equipment across multiple locations may require substantial financial resources, particularly when the objective is to expand coverage beyond selected intersections. Operational effectiveness also depends on coordination between traffic enforcement personnel and the administrative systems responsible for vehicle registration, notification, and the processing of violations. The preliminary information identifies infrastructure limitations and administrative challenges as relevant issues, although it does not provide a detailed inventory of equipment, maintenance expenditure, staffing levels, or system downtime in Bengkulu. The available evidence therefore indicates that technological availability is an important condition for ETLE implementation, while the precise relationship between institutional resources and enforcement performance requires further verification.

Public awareness and legal culture constitute additional dimensions of the implementation process (Waluyo & others, 2026). The preliminary research materials suggest that some motorists may comply with traffic regulations primarily when police officers are visibly present, indicating the possibility of compliance driven by immediate supervision rather than an internalised commitment to road safety. Such behaviour may limit the preventive value of electronic enforcement if drivers do not understand the purpose of traffic regulations or perceive violations as acceptable when direct supervision is absent. Public awareness of electronic ticketing procedures, the importance of accurate vehicle registration, and the consequences of traffic violations may therefore influence the practical performance of ETLE. Friedman's legal system theory provides an analytical basis for understanding this relationship because the effectiveness of enforcement depends on the interaction between legal substance, institutional structure, and legal culture. The available data do not include survey results or systematic measurements of public attitudes, meaning that the extent of public awareness and voluntary compliance cannot yet be quantified. These considerations nevertheless identify public education and the development of a stronger culture of legal compliance as relevant areas for evaluating and improving ETLE implementation in Bengkulu.

Perspective of *fiqh siyasah*, the implementation of ETLE can be examined as a public administrative measure intended to maintain order, protect road users, and prevent conduct that threatens collective welfare (Adnan et al., 2025). The principles of *maslahah 'ammah* and *maqashid al-shari'ah* provide a normative basis for assessing whether electronic traffic enforcement contributes to the protection of human life and property. The principle of obedience to legitimate authority, reflected in Qur'an Surah An-Nisa, verse 59, supports compliance with lawful regulations established for the common good, provided that such regulations do not contradict Islamic principles. The concept of *ta'zir* is also relevant to the analysis of proportionate sanctions imposed by legitimate authorities to prevent harmful conduct and preserve public order. These principles require enforcement to be conducted fairly, transparently, and in accordance with applicable legal procedures, including appropriate verification of alleged violations and the protection of individual rights. The available evidence establishes the relevance of these

normative principles to ETLE, while a definitive assessment of the system's overall effectiveness requires additional empirical evidence concerning enforcement outcomes, administrative fairness, public compliance, and its contribution to road safety.

Discussion (مناقشة)

The Effectiveness of ETLE and the Trend in Traffic Violations

The effectiveness of Electronic Traffic Law Enforcement (ETLE) in Bengkulu requires an assessment of enforcement trends before and after its implementation. The introduction of electronic monitoring was intended to strengthen traffic discipline, improve the consistency of law enforcement, and reduce opportunities for improper transactions between motorists and officers. The available figures, however, do not demonstrate a consistent decline in recorded traffic violations following the adoption of ETLE. Data attributed to the Bengkulu Regional Police indicate that the total number of recorded enforcement actions increased from 34,863 in 2023 to 51,372 in 2024. This increase suggests that the effectiveness of ETLE cannot be established solely by assuming that technological enforcement automatically produces lower recorded violation figures.

Table 2. Recorded Traffic Enforcement Actions in Bengkulu, 2023–2025

Year	Manual tickets	ETLE tickets	Warnings	Total recorded actions
2023	4,828	10,946	19,089	34,863
2024	6,366	11,429	33,577	51,372
2025*	5,693	1,729	30,447	37,869

The figures in Table 2 reveal different patterns across enforcement categories. Manual tickets increased from 4,828 in 2023 to 6,366 in 2024, representing an increase of approximately 31.85%. ETLE tickets also increased from 10,946 to 11,429, or approximately 4.41%, during the same period. Warnings rose from 19,089 to 33,577, contributing substantially to the overall increase in recorded enforcement actions. These developments indicate that the recorded growth cannot be interpreted exclusively as evidence of deteriorating traffic discipline, since changes in enforcement intensity and the use of warnings may also influence the figures.

The 2025 data require particular caution because the reporting period ends on 20 December rather than covering the entire calendar year. The reported total of 7,422 tickets comprises 5,693 manual tickets and 1,729 ETLE tickets, while an additional 30,447 motorists reportedly received warnings. These figures cannot establish a decline relative to 2023 or 2024 without verifying the consistency of reporting categories, enforcement coverage, and observation periods. The lower number of ETLE tickets in the reported 2025 data may reflect changes in operational conditions, reporting practices, camera coverage, or the distribution of enforcement activities, but the available evidence does not establish which explanation is correct. A valid assessment of a decline in violations would require comparable data on the actual incidence of traffic offences, rather than ticket counts alone.

A distinction between detected violations and actual violations is essential when evaluating the effectiveness of technology-assisted enforcement. The number of recorded cases may rise because cameras identify offences that previously went undetected, even when motorists' behaviour remains unchanged or begins to improve. Conversely, a decline in ticket numbers may result from reduced surveillance coverage, technical failures, or changes in enforcement practices rather than an improvement in compliance. A more reliable evaluation would compare equivalent periods before and after ETLE implementation while accounting for traffic volume, camera availability, and the categories of offences recorded. The available evidence therefore establishes that ETLE has become part of the enforcement system in Bengkulu, but a sustained reduction in traffic violations remains an outcome requiring further empirical verification.

Legal Structure, Legal Substance, and Legal Culture in ETLE Implementation

Lawrence M. Friedman's legal system theory provides an analytical framework for understanding the institutional conditions that shape ETLE implementation. The legal structure encompasses the police institutions and personnel responsible for detecting violations, verifying evidence, issuing notifications, and processing enforcement measures. Legal substance consists of the statutory provisions governing road traffic, the types of prohibited conduct, and the sanctions applicable to particular offences. Legal culture refers to the attitudes, expectations, and behavioural patterns that influence public compliance with legal obligations. The available evidence demonstrates that ETLE operates within an established regulatory framework and an existing institutional enforcement structure. Its practical effectiveness nevertheless depends on the capacity of these components to function together in a consistent and accountable manner (Nagari & Nurani, 2026).

The legal structure influences whether electronically detected violations can be processed accurately and efficiently. Traffic enforcement personnel must have adequate technical competence to operate monitoring systems, verify recorded evidence, and address discrepancies in vehicle registration information (Tajik et al., 2025). Institutional coordination is also necessary to ensure that the detection of a suspected violation leads to an appropriate administrative response. Technical limitations or delays in verification may weaken the practical value of electronic evidence, even when the underlying legal provisions are clear. The assessment of ETLE in Bengkulu should therefore consider institutional performance alongside the number of recorded tickets. This approach provides a more comprehensive understanding of enforcement effectiveness than a numerical comparison of ticketing outcomes alone.

Legal substance establishes the authority and procedural boundaries within which ETLE must operate. Law No. 22 of 2009 concerning Road Traffic and Transportation provides the principal statutory basis for regulating traffic conduct and imposing sanctions for specified violations. Government Regulation No. 80 of 2012 further regulates the inspection of motor vehicles and the enforcement of traffic violations. ETLE functions as a technology-assisted mechanism for identifying and documenting suspected offences within this legal framework. The use of electronic evidence does not remove the obligation to ensure that the alleged offence corresponds to the applicable statutory provision and that enforcement procedures comply with legal requirements. Legal certainty is therefore strengthened when the system combines reliable evidence, clear procedures, and proportionate application of sanctions.

Legal culture remains a decisive factor because the existence of regulations and enforcement technology does not automatically generate voluntary compliance. Some motorists may continue to disregard traffic rules when they believe that the probability of detection is low or that violations carry limited consequences. The availability of ETLE may increase the perceived

risk of detection, but lasting behavioural change requires public understanding of the purpose and legitimacy of traffic regulation. This finding is consistent with the analytical relevance of Friedman's theory, which treats legal culture as an integral component of the legal system rather than a secondary consideration. The effectiveness of ETLE in Bengkulu consequently depends on the combined strength of institutional arrangements, applicable legal rules, and public commitment to responsible road use.

Institutional and Sociocultural Barriers to Effective ETLE Enforcement

Technological infrastructure represents an important condition for the effective implementation of ETLE. Electronic monitoring depends on the availability of functioning cameras, reliable data transmission, accurate image recognition, and adequate technical maintenance (Candra et al., 2025). The reported installation of cameras at selected intersections and road sections in Bengkulu City demonstrates the existence of an operational monitoring network. The available information does not establish whether the existing facilities provide sufficient coverage across all locations where traffic violations occur. Incomplete coverage may limit the system's capacity to detect offences outside monitored areas and may influence the distribution of recorded cases. An assessment of infrastructure adequacy should therefore examine camera placement, operating reliability, maintenance requirements, and the relationship between monitoring locations and traffic risk.

Administrative accuracy presents another challenge because electronic enforcement relies on reliable vehicle identification and registration information. The failure to update ownership records following the sale of a vehicle may cause violation notifications to be directed to a registered owner who is no longer responsible for its use. Concealed or falsified registration plates may further complicate identification and require additional verification by enforcement personnel. These issues can create administrative delays, disputes concerning responsibility, and difficulties in completing the enforcement process. Improved coordination between vehicle registration administration and traffic enforcement would help reduce errors and strengthen procedural reliability. The available information identifies these challenges as relevant concerns, although their frequency and measurable effects in Bengkulu have not been established.

Public awareness and behavioural patterns also influence the practical performance of electronic enforcement. A system based on automated detection may have limited deterrent value when motorists do not understand the procedures governing electronic tickets or remain unaware of the consequences of traffic violations. Compliance motivated solely by the visible presence of police officers may weaken when motorists perceive that direct supervision is absent. Public education should therefore explain traffic obligations, the operation of ETLE, the importance of maintaining accurate vehicle registration records, and the procedures available to challenge alleged violations. Such measures would help establish a stronger connection between legal knowledge and responsible driving behaviour. The development of voluntary compliance is particularly important because sustainable road safety cannot depend exclusively on the continuous presence of enforcement personnel.

Soerjono Soekanto's framework for analysing law enforcement reinforces the importance of addressing these institutional and sociocultural barriers simultaneously. The framework identifies legal provisions, law enforcement personnel, facilities, society, and cultural factors as interconnected determinants of enforcement performance (Rahayu et al., 2020). The Bengkulu case illustrates the relevance of these dimensions through the need for reliable infrastructure, accurate administrative data, competent personnel, and greater public awareness. Improvements in one dimension may produce limited results if the other components remain weak. The

expansion of camera coverage, for example, may increase detection capacity without resolving inaccurate vehicle registration or insufficient public understanding of electronic enforcement. A comprehensive policy should consequently integrate technological investment, administrative reform, institutional coordination, and sustained legal education.

ETLE from the Perspective of Fiqh siyasah and Maqashid al-shari'ah

Fiqh siyasah provides a normative framework for assessing the legitimacy of government policies intended to maintain public order and protect collective welfare. The implementation of ETLE can be examined through *siyasah dusturiyah*, which addresses the organisation and exercise of public authority within the framework of legitimate legal principles. The use of electronic monitoring to identify traffic violations serves a public administrative purpose when it promotes road safety, supports consistent enforcement, and reduces opportunities for misconduct. The principle of *maslahah 'ammah* provides a basis for evaluating whether such a policy benefits society and prevents avoidable harm. Its legitimacy nevertheless depends on the manner in which governmental authority is exercised. Electronic enforcement should therefore be assessed in terms of its public benefits, legal compliance, procedural fairness, and protection of individual rights.

The objectives of *maqashid al-shari'ah* provide further justification for traffic regulation as an instrument of public protection. The preservation of life (*hifz al-nafs*) is directly relevant because reckless driving and disregard for traffic regulations can expose road users to injury or death. The preservation of property (*hifz al-mal*) is also implicated when traffic violations cause collisions, damage vehicles, or generate financial losses. ETLE may contribute to these objectives by strengthening the detection of dangerous conduct and encouraging compliance with road safety requirements. The actual contribution of the system, however, must be assessed through evidence of its implementation and outcomes rather than inferred from its technological character. The principles of *maqashid al-shari'ah* therefore provide both a justification for traffic enforcement and a standard for evaluating whether its implementation advances the intended public interest.

Qur'an Surah An-Nisa, verse 59, establishes a normative principle of obedience to Allah, the Messenger, and legitimate authority. Within the context of traffic regulation, this principle supports compliance with lawful governmental rules established to protect the public and maintain social order, provided that such rules do not contradict Islamic principles. The concept of *ta'zir* is also relevant to the authority of legitimate institutions to impose appropriate sanctions for prohibited conduct requiring corrective or preventive intervention. Traffic penalties may be understood within this framework when they are legally authorised, proportionate to the offence, and directed towards preventing harm. The use of electronic evidence does not eliminate the obligation to verify the alleged violation or to respect the procedural rights of the affected individual. The compatibility of ETLE with *fiqh siyasah* therefore depends on both its public purpose and the fairness of its implementation.

Justice and accountability are essential conditions for ensuring that ETLE remains consistent with the normative objectives of *fiqh siyasah*. Automated identification may reduce direct interactions between officers and motorists, potentially limiting opportunities for improper transactions and arbitrary enforcement. These benefits should not be treated as automatic outcomes, since technical errors, inaccurate registration data, and unclear administrative procedures may still affect the treatment of alleged violations. A fair system must provide reliable evidence, transparent notification procedures, appropriate verification mechanisms, and accessible opportunities to contest errors. Such safeguards reflect the principles of justice and the

prevention of harm by protecting individuals from unjustified penalties while preserving the state's authority to enforce lawful traffic regulations. ETLE can therefore be regarded as normatively defensible when its implementation combines public welfare objectives with procedural integrity and institutional accountability.

Policy Implications and the Measurement of Sustainable Enforcement Effectiveness

The findings suggest that improvements in ETLE implementation should focus on the quality of enforcement outcomes rather than the volume of recorded tickets alone. The number of detected violations provides useful information about operational activity but cannot independently establish whether road users have become more compliant. The Bengkulu Regional Police would benefit from evaluating comparable monthly or annual indicators covering manual tickets, ETLE tickets, warnings, repeat offences, and traffic accidents. The analysis should also distinguish between the number of offences detected and the number of individuals or vehicles involved, since repeated violations may affect the interpretation of enforcement statistics. Reliable comparisons would require consistent definitions, equivalent reporting periods, and clear documentation of changes in surveillance coverage. These measures would create a stronger empirical basis for determining whether ETLE contributes to sustained improvements in traffic discipline.

Institutional strengthening should be accompanied by improvements in data management and administrative coordination. Accurate vehicle registration records are essential for ensuring that electronic notifications reach the appropriate parties and that responsibility for a suspected violation can be verified. Technical audits should assess camera functionality, image recognition accuracy, maintenance requirements, and the consistency of electronic evidence. Standardised procedures for reviewing disputed cases would also help protect individuals from errors while maintaining the credibility of enforcement. Public communication should explain the legal basis of electronic ticketing, the applicable procedures, and the available mechanisms for resolving administrative discrepancies. These measures would strengthen the reliability of ETLE while supporting public confidence in traffic enforcement institutions.

Public education should be integrated into the broader enforcement strategy to address the cultural dimensions of traffic compliance. Information campaigns can help motorists understand that traffic regulations protect not only individual drivers but also passengers, pedestrians, and other road users. Education concerning helmet use, seat belts, traffic signals, speed management, and responsible vehicle ownership should complement electronic monitoring. The perceived legitimacy of enforcement may improve when motorists understand the reasons for regulatory requirements and believe that sanctions are applied consistently. A combination of preventive education and credible enforcement is therefore more likely to support lasting behavioural change than reliance on penalties alone. This approach is consistent with the objective of developing a legal culture in which compliance arises from an understanding of public responsibility rather than fear of immediate punishment.

The perspective of *fiqh siyasah* reinforces the importance of evaluating ETLE through the principles of public welfare, justice, and the prevention of harm. Government institutions have a legitimate interest in regulating road use, but the exercise of that authority should remain proportionate, transparent, and consistent with applicable legal standards. Policies that improve detection while neglecting procedural safeguards may undermine public trust and weaken the legitimacy of enforcement. Conversely, reliable evidence, accessible administrative remedies, and fair treatment can strengthen the relationship between governmental authority and public compliance. The principles of *maslahah 'ammah* and *maqashid al-shari'ah* provide a normative basis

for prioritising measures that protect life, property, and the rights of road users. ETLE should consequently be developed as an accountable public service instrument whose performance is judged by its contribution to safer roads and fairer enforcement.

The overall assessment indicates that ETLE has become an established component of traffic enforcement in Bengkulu, although the available statistics do not establish a sustained decline in traffic violations since its implementation. The increase in recorded enforcement actions between 2023 and 2024 demonstrates the need to distinguish changes in detection and enforcement activity from changes in actual road-user behaviour. A definitive conclusion concerning effectiveness requires consistent longitudinal data, evidence of compliance outcomes, and information about the reliability of the administrative process. The integration of institutional improvements, accurate data management, public legal education, and procedural safeguards would provide a stronger foundation for evaluating and improving the system. From the perspective of *fiqh siyasah*, the success of ETLE should ultimately be measured by its ability to advance public welfare while upholding justice, accountability, and the protection of human life. This assessment places technological enforcement within a broader framework of lawful governance and sustainable traffic safety.

Conclusion (خاتمة)

This study concludes that the implementation of Electronic Traffic Law Enforcement (ETLE) within the jurisdiction of the Bengkulu Regional Police represents an important development in technology-assisted traffic law enforcement. The recorded enforcement figures demonstrate that ETLE has become part of the existing enforcement system, although manual ticketing remains predominant. The available data do not yet establish a sustained decline in traffic violations following the implementation of ETLE, as changes in recorded enforcement figures may reflect variations in detection coverage, enforcement intensity, and administrative practices rather than changes in actual traffic behaviour. The effectiveness of ETLE is influenced by the availability of technological infrastructure, the accuracy of vehicle registration data, institutional capacity, procedural reliability, and public awareness of traffic regulations. From the perspective of *fiqh siyasah*, ETLE is consistent with the principles of *maslahah 'ammah* and *maqashid al-shari'ah* when implemented to protect human life and property, maintain public order, and prevent harmful conduct through fair and proportionate enforcement. The concept of *ta'zir* further supports the legitimacy of appropriate sanctions imposed by authorised institutions in accordance with applicable legal provisions. Strengthening camera coverage, improving administrative coordination, ensuring transparent enforcement procedures, and promoting public legal awareness are therefore essential to enhancing ETLE implementation. Future evaluations should employ comparable longitudinal data on traffic violations, repeat offences, and road safety outcomes to determine its actual impact. Sustainable effectiveness ultimately depends on the integration of technological reliability, legal certainty, institutional accountability, and a culture of voluntary compliance that advances justice and public welfare.

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