Journal of Law and Regulation Governance

Justice and Legal Certainty in the Implementation of E-Tilang in the Digital Era

Afriyanto[1]*, Abdullah Sulaiman[2], KMS Herman[3]
[1,2,3]Universitas Borobudur, Indonesia
Email: odegilang@gmail.com, afsulapdy@gmail.com, kemas_herman@yahoo.com

ABSTRACT

The rapid advancement of digital technology has significantly changed traffic law enforcement in Indonesia, especially through the introduction of Electronic Traffic Law Enforcement (e-Ticket). This system aims to increase transparency and efficiency, as well as guarantee fairness and legal certainty in traffic law enforcement. However, there are still several challenges to be faced, especially related to personal data protection and the unevenness of technological infrastructure in various regions. This research aims to evaluate the effectiveness of e-Tilang in promoting justice and legal certainty and to identify obstacles related to personal data protection and infrastructure equity. Using a normative juridical approach, this research analyzes primary legal materials such as Law No. 27 of 2022 concerning Personal Data Protection and Law No. 22 of 2009 concerning Traffic and Road Transportation, supplemented by secondary materials from legal literature, journals, and expert opinions. Qualitative analysis shows that e-Tilang reduces direct interaction between law enforcement and the public, thereby increasing transparency. However, this research also identifies significant challenges, including weak personal data protection and uneven distribution of technological infrastructure throughout Indonesia. These findings have implications that provide valuable insights into the implementation of e-Tilang, highlighting areas that need improvement in the legal and policy framework to increase effectiveness and fairness.
Keywords: e-ticketing, traffic law, justice; legal certainty, data protection.

INTRODUCTION

The development of digital technology has revolutionized various sectors, including law enforcement. In the era of digital transformation, technology has become the main solution to overcome complex bureaucratic challenges and improve efficiency in public services. One sector significantly impacted by these changes is traffic law enforcement, where technology is increasingly employed to enhance transparency, accountability, and effectiveness. One such innovation is the implementation of electronic ticketing or e-Tilang, a significant step in modernizing the traffic law system in Indonesia. The introduction of e-Tilang aims to reduce maladministration and boost public confidence in the justice system (Nagendra & Sushanty, 2022). e-Tilang is a technology-driven law enforcement system that utilizes electronic devices such as CCTV cameras and automated systems to detect traffic violations. This system is authorized under Law Number 22 of 2009 concerning Road Traffic and Transportation, particularly Article 272, which affirms that electronic devices can serve as valid legal evidence. Additionally, the National Police Chief's Regulation Number 5 of 2021 supports this initiative, advancing police services. By

minimizing direct interaction between law enforcement and the public, e-Tilang seeks to mitigate corruption risks, accelerating and improving the traffic law enforcement process.

While the urgency of e-Tilang implementation is well acknowledged in light of the modernization of law enforcement, there is a need to address several unresolved legal challenges. Conventional enforcement methods have been criticized for their lack of transparency, which can lead to societal harm. e-Tilang aims to offer a more accountable system by providing objective evidence via surveillance footage from CCTV cameras (CCTV) that automatically detects violations. Furthermore, its introduction aligns with the mandate set out in the National Police Chief's Regulation Number 5 of 2021, offering legal grounds for electronic-based law enforcement. While some studies highlight the positive impacts of e-Tilang, such as minimizing direct interactions and enhancing public trust (Perwitasari, 2024; Ramadhan et al., 2024a), it is crucial to explore gaps in the implementation that may hinder its full potential. These gaps are mainly related to the infrastructure disparities between urban and rural areas (Indarsih, 2021a; Luhukay et al., 2023) and the legal uncertainties surrounding the system's procedural details (Ramadhan et al., 2024b).

Despite the benefits, such as reducing physical contact between officers and violators to minimize abuses of power, the e-Tilang system faces challenges in ensuring fairness and accessibility across different regions. One notable issue is the disparity in infrastructure readiness, with certain regions lacking sufficient technological support for the optimal implementation of e-Tilang. These gaps could potentially lead to unequal treatment between urban and rural populations (Luhukay et al., 2023), highlighting the need for inclusive policies to address these infrastructural challenges. Additionally, legal uncertainties regarding the payment and appeal mechanisms for violations raise concerns about the system's consistency and fairness (Indarsih, 2021a). The existing literature offers limited insights into how these challenges affect the overall effectiveness of e-Tilang, thus creating an important research gap.

Based on the above background, this research aims to fill the gap by exploring the implications of e-Tilang implementation, with a focus on regulatory improvements, technological advancements, and the protection of legal rights in the digital age. The expected benefit of this research is to provide a more in-depth understanding of the application of e-Tilang in the law enforcement system in Indonesia, by highlighting the challenges faced in the distribution of technological infrastructure and the protection of personal data. In addition, this research is also expected to provide useful policy recommendations for the government and related institutions to improve the implementation of e-Tilang evenly throughout Indonesia, as well as to optimize the protection of individual rights in the use of this technology. Thus, the results of this research are expected to have a positive impact on the development of more inclusive and fair legal policies, in line with the rapid development of digital technology in society.

RESEARCH METHOD

This research uses a normative juridical method that focuses on the analysis of laws, regulations, and legal concepts relevant to the implementation of e-Tilang in Indonesia. The approach used includes a statute approach and a conceptual approach. The statute approach is carried out by reviewing regulations that govern the e-Ticket system, such as Law Number 22 of 2009 concerning Road Traffic and Transportation, Regulation of the National Police Chief Number 5 of 2021 concerning Registration and Identification of Motor Vehicles, and Law Number 27 of 2022 on Personal Data Protection. The conceptual approach is employed to understand the principles of justice and legal certainty in the implementation of the e-Tilang system as part of law enforcement in the digital era.

The sources of legal materials in this research are divided into primary, secondary, and tertiary legal materials. Primary legal materials include laws and regulations, court decisions, and official documents related to the implementation of e-Tilang. Secondary legal materials are obtained through literature studies of books, reputable scientific journals, legal articles, and previous research relevant to justice and legal certainty issues. Tertiary legal materials consist of legal dictionaries, legal encyclopedias, and legal expert opinions, which provide deeper insights into legal concepts and theories.

The technical analysis of legal materials is conducted using qualitative analysis, which systematically describes the collected legal materials to answer the research problem formulation. In addition to this, a comparative analysis is carried out by referencing similar implementations in other countries to provide a broader perspective. The analysis process involves legal interpretation, both grammatically and systematically, to understand the purpose and objectives of the regulations studied, as well as their connection to the principles of justice and legal certainty. The validity of the data is tested through triangulation, ensuring the accuracy and reliability of the findings. The results of this analysis are logically and systematically presented to provide suitable recommendations for enhancing the effectiveness of e-Tilang implementation. Thus, this research is expected to contribute significantly to the development of the traffic law system in Indonesia, particularly in terms of justice, legal certainty, and the protection of citizens' rights.

RESULTS AND DISCUSSION

The implementation of e-Tilang can ensure justice and legal certainty for the community in traffic law enforcement in the digital era

The implementation of e-Tilang as a form of modernization in traffic law enforcement has a strong legal foundation in Indonesia. This system is guided by Law Number 22 of 2009 concerning Road Traffic and Transportation, where in Article 5 Paragraph (3) it is stated that the implementation of traffic must ensure safety, security, order, and smooth traffic. In addition, the operational basis of e-Tilang is also regulated in the Regulation of the National Police Chief Number 5 of 2021 concerning Registration and Identification of Motor Vehicles, which stipulates provisions related to the enforcement of electronic-based violations. By using surveillance camera

(CCTV) technology, e-Tilang enables a more objective and accountable system in detecting and taking action against traffic law violations (Indarsih, 2021b)

In the context of justice, the implementation of e-Tilang answers the problem of the subjectivity of law enforcement officials which has often been criticized in the manual ticketing system. Electronic recordings from surveillance cameras become valid and irrefutable evidence so that any traffic violation can be dealt with fairly based on the recorded facts. Thus, the principle of non-discrimination in the law can be realized, because all traffic violators, regardless of background, are treated equally before the law. This is in line with the principle of justice contained in Article 27 Paragraph (1) of the 1945 Constitution, which affirms that every citizen has the same position in the law.

In addition to ensuring justice, e-Tilang also provides legal certainty for the community. This legal certainty is realized through a clear and transparent enforcement mechanism, where violators will receive official notifications through an electronic system. This action is based on visual evidence recorded by technology so that it does not raise doubts on the legal basis used. Legal certainty in the implementation of e-Tilang is also reflected in Article 24 Paragraph (1) of the 1945 Constitution, which emphasizes the importance of fast, simple, and low-cost judicial administration. The automatic and digital e-Ticket process accelerates the law enforcement stages so that it does not burden the community or law enforcement officials (Baskoro et al., 2024).

Efficiency and transparency in the e-Tilang system also strengthen the implementation of justice and legal certainty. The fully technology-based process reduces the lengthy bureaucracy in the manual ticketing mechanism, which often elicits complaints from the public. e-Tilang allows law enforcement to be carried out more quickly, as evidence of violations can be immediately processed and verified systematically. This transparency ensures that the legal process runs openly, where the public can find out information related to violations, sanctions, and fine payment mechanisms clearly and accurately. This principle supports the implementation of Law Number 14 of 2008 concerning Public Information Disclosure, which guarantees the public's right to obtain transparent information from state administrators (Pisu, 2020).

However, the implementation of e-Tilang also poses challenges related to the protection of people's personal data. Visual footage from surveillance cameras used as evidence of violations contains sensitive information, such as vehicle numbers, locations, and time of the incident. This requires strict protection in accordance with Law Number 27 of 2022 concerning Personal Data Protection, which regulates the obligation of electronic system operators to maintain the confidentiality of people's personal data. In this context, e-Tilang must be equipped with adequate security mechanisms so that there is no misuse or leakage of personal data.

The implementation of e-Tilang in Indonesia also shows significant differences between urban and rural areas in terms of technological infrastructure. Some regions in Indonesia do not have adequate surveillance camera facilities to support the effective implementation of this system. This technology gap can create inequalities in law enforcement, where people in urban areas tend to be more monitored compared to people in remote areas. This requires special attention from the

government so that the implementation of e-Tilang can run evenly throughout Indonesia, so that the principle of justice in traffic law can be realized.

On the other hand, the implementation of e-Tilang also has a positive impact on changes in people's behavior in traffic. The existence of a technology-based system makes people more aware of the importance of obeying traffic regulations, because every violation can be immediately recorded and acted upon. The deterrent effect arising from the implementation of this system can contribute to the reduction of the number of traffic violations and accidents. This is in line with the main purpose of traffic law enforcement as stated in Article 5 Paragraph (1) of Law No. 22 of 2009, which is to realize safe, orderly, and smooth traffic.

Overall, the implementation of e-Tilang provides a progressive step in modernizing the law enforcement system in Indonesia. With clear regulatory support, this system is able to create justice through objective mechanisms and legal certainty through a transparent and efficient process. The challenges faced, such as personal data protection and infrastructure gaps, need to be a concern to ensure that the implementation of e-Tilang can run optimally throughout Indonesia (Sari et al., 2025).

The impact of the implementation of e-Tilang on efficiency and transparency in the traffic law enforcement process in Indonesia.

The implementation of e-Tilang as a traffic law enforcement instrument in Indonesia has had a significant impact on efficiency and transparency in the law enforcement process. In the context of efficiency, this system cuts down on previously lengthy and bureaucratic procedures to be faster and simpler. Based on the Regulation of the National Police Chief Number 5 of 2021 concerning Registration and Identification of Motor Vehicles, the law enforcement process through e-Tilang utilizes surveillance camera (CCTV) technology that automatically detects violations. This process allows for the identification of violations without the direct involvement of officers in the field, so the time required to enforce and notify violations can be shortened. With notifications that are directly sent to vehicle owners through an electronic system, the legal administration process becomes more efficient than the conventional ticketing mechanism.

The efficiency resulting from the implementation of e-Tilang is also seen in the savings in human resources and operational costs. Law enforcement officials do not need to physically stop vehicles that commit violations, so that officers' concentration can be diverted to supervision and handling of other legal cases that require more attention. It also reduces the risk of violations of official discipline, such as illegal levies, which often occur in direct interactions between officers and violators. This regulation is in line with the mandate of Law Number 22 of 2009 concerning Road Traffic and Transportation, especially in Article 5 Paragraph (1) which requires traffic management to be carried out with a technological approach in an effort to increase the effectiveness and efficiency of law enforcement.

In terms of transparency, e-Tilang reduces the potential for irregularities in the traffic law enforcement process. CCTV technology functions as objective and valid evidence, so that every violation can be legally accounted for. Visual evidence from surveillance cameras minimizes

subjective judgment errors that may occur if relying on manual observation by officers. Violators have access to see evidence of violations through the online system, so that the legal process becomes more open and measurable. This transparency also prevents the public from potential intimidation or negotiation practices that often arise in direct interactions in the field.

Furthermore, transparency in e-Tilang is also regulated in Law Number 14 of 2008 concerning Public Information Disclosure. This regulation emphasizes that every legal process must be accessible and understood by the public, including the enforcement of traffic violations through e-Tilang. With an electronic system that clearly informs the details of violations, sanctions, and settlement procedures, the public's right to transparent information can be fulfilled. This condition creates public trust in law enforcement officials, as well as strengthens the legitimacy of law enforcement in the eyes of the public (Hidayah & Azis, 2023).

The implementation of e-Tilang also contributes to minimizing the potential for violations of citizens' rights. With a digital system, traffic violators have the opportunity to verify data and evidence of violations directly. This mechanism reflects the principle of accountability in law enforcement, where each process runs according to applicable procedures. This supports the principle of legal certainty, as mandated in Article 28D Paragraph (1) of the 1945 Constitution, which states that every citizen has the right to fair legal recognition, guarantees, protection, and certainty. e-Tilang technology avoids the practice of data manipulation and ensures that the legal process runs in accordance with the principle of legality.

The implementation of e-Tilang also shows an improvement in the systematic management of violation data. Data recorded through CCTV technology is processed centrally in an integrated system, so that law enforcement can be carried out evenly in various regions. Information on the number of violations, types of violations, and areas prone to violations can be analyzed to support public policies in improving traffic safety. With this system, law enforcement officials and stakeholders can formulate more appropriate policies based on accurate and measurable data. (Santoso et al., 2023).

However, in its implementation, the implementation of e-Tilang still faces challenges in the equitable distribution of technology infrastructure throughout Indonesia. Most urban areas have been supported by adequate surveillance camera technology, while rural areas are still lagging behind in the implementation of similar systems. This inequality has the potential to cause injustice in the law enforcement process, where some people have not been fully reached by the e-Tilang system. Therefore, strengthening technological infrastructure is an important aspect in supporting the transparency and efficiency of the e-Tilang system in Indonesia.

Overall, the implementation of e-Tilang has brought significant changes in traffic law enforcement, especially in terms of efficiency and transparency. The technology used ensures that the legal process runs faster, accountable, and open, in accordance with the principles of justice and legal certainty. Regulations that support this system, such as the Traffic Law and Public Information Disclosure, are a strong legal basis in supporting the implementation of e-Tilang. Existing challenges, such as equitable distribution of infrastructure, require further attention to

ensure effectiveness and fairness in law enforcement throughout Indonesia (Rohmy et al., 2024).

The implementation of e-Tilang faces challenges in terms of personal data protection and equitable distribution of technology infrastructure in Indonesia

The implementation of e-Tilang as part of the modernization of traffic laws in Indonesia faces significant challenges in terms of personal data protection. The e-ticketing system that uses electronic surveillance technology, such as CCTV cameras and vehicle databases, requires accurate and secure management of personal data. In this context, personal data in the form of vehicle owners' identities and traffic violation records must be protected from misuse. This is explicitly regulated in Law Number 27 of 2022 concerning Personal Data Protection, which states that any control and processing of personal data must be carried out with the consent of the data owner and meet the principles of data security and confidentiality (Article 39). However, in its implementation, there are loopholes that allow data leaks, both due to weak security systems and the actions of irresponsible parties (Jotia & Boikhutso, 2016).

In addition to personal data protection, technological infrastructure is the main obstacle in the implementation of e-Tilang. Indonesia, as an archipelagic country, has a significant technological disparity between urban and rural areas. Supporting infrastructure such as internet networks, electricity availability, and surveillance technology devices are not evenly distributed throughout the region. This causes the implementation of e-Tilang to be more effective in urban areas than in remote areas. This inequality is contrary to the principle of justice in law enforcement guaranteed by Article 28D Paragraph (1) of the 1945 Constitution, which states that everyone has the right to fair legal recognition, guarantee, protection, and certainty.

In addition, the challenge of protecting personal data in e-Tilang is reinforced by the lack of understanding of law enforcement officials and technology service providers on the principles of data security. In some cases, user data stored in the e-Tilang system is vulnerable to illegal access or hacking. In fact, Article 3 Paragraph (1) in the Personal Data Protection Law requires every electronic system operator to ensure the security and integrity of the data managed. This weakness in data management has the potential to reduce public trust in the e-Tilang system and technology-based law enforcement as a whole.

Regarding technological infrastructure, this weakness not only has an impact on the effectiveness of the implementation of e-Tilang, but also affects public access to this system. In areas with inadequate network infrastructure, information related to traffic violations sent through electronic notifications is often delayed or even does not reach vehicle owners. As a result, the process of paying fines or submitting objections is hampered. This condition shows an imbalance in access to legal justice, which is contrary to the principle of equal rights regulated in Article 27 Paragraph (1) of the 1945 Constitution.

The aspect of personal data protection in the implementation of e-Tilang is also influenced by weak supervision from the authorized institutions. Article 55 of the Personal Data Protection Law states that the government is responsible for ensuring the security of electronic systems used in public services. However, in practice, this supervision has not fully run optimally, so doubts

arise about the reliability of the e-Ticket system in maintaining the confidentiality of user data. The absence of a clear complaint mechanism for the public when data leaks occur also exacerbates this challenge (Milafebina et al., 2023).

On the other hand, the procurement of traffic surveillance technology, such as CCTV cameras integrated with the e-Ticket system, requires considerable costs. Local governments with limited budgets are often unable to provide the needed technological infrastructure, so the implementation of e-Tilang is only limited to certain areas. This inequality not only creates disparities in law enforcement, but also creates the impression that the implementation of e-Tilang is more in favor of areas with more advanced technological facilities. This situation hinders the principle of equal treatment in law enforcement, as mandated in Article 28H Paragraph (2) of the 1945 Constitution.

In addition to technical and regulatory issues, the protection of personal data in e-Tilang is also affected by the low awareness of the public regarding their rights related to data management. Many people do not understand that personal data recorded in the e-Tilang system has the potential to be misused if not managed properly. This requires more massive education from relevant parties, such as law enforcement agencies and technology service providers, so that the public is more proactive in protecting their rights.

Overall, the implementation of e-Tilang in Indonesia faces serious challenges in terms of personal data protection and equitable distribution of technology infrastructure. Existing regulations, although they have provided a strong legal basis, have not been fully implemented. The gap in data management and infrastructure provision reflects the unevenness in technology-based law enforcement, so efforts to modernize traffic laws through e-Tilang still require further improvement.

CONCLUSION

The conclusion of this research shows that the implementation of e-Tilang in Indonesia has great potential to modernize traffic law enforcement in the digital era. However, there are still several major challenges that need to be overcome. One of them is the protection of personal data, which, although supported by Law Number 27 of 2022 concerning Personal Data Protection, still faces problems related to data management and security in the e-Tilang system. Weak supervision and potential data leakage hamper the effectiveness of the system in protecting users' privacy rights. Therefore, this research recommends strengthening the oversight mechanism and increasing the capacity of electronic system operators to ensure stronger data protection.

Apart from data protection issues, another challenge is the uneven distribution of technological infrastructure throughout Indonesia. Limited access to the internet, electricity, and technological devices limits the functionality of the system, which is only effective in urban areas. This inequality risks creating injustice in traffic law enforcement, especially for people in remote areas. This research suggests that the government prioritize the distribution of technological infrastructure evenly so that the e-Tilang system can be applied more uniformly throughout

Indonesia, so that the principle of legal justice can be realized. Overall, to realize the full potential of e-Tilang, there is a need for stronger regulations, increased supervision, and equitable access to technological resources, as well as public education regarding rights and obligations in the e-Tilang system. These steps are expected to develop a more transparent, efficient, and fair e-Tilang system in the future.

REFERENCES

Baskoro, B. R., Pratama, R., Komariah, M., & Pandia, H. (2024). Penegakan Hukum Terhadap Pelanggaran Lalu Lintas Electronic Traffic Law Enforcement (Etle) Di Polres Metro Tangerang Kota. *Lex Veritatis*, *3*(1), 21–29.

Hidayah, N., & Azis, A. (2023). Implementation of Progressive Law in Sharia Banking Dispute Settlement: Case Research of Religious Court Decisions in Indonesia. *Ulumuna*, *27*(1), 227–257.

Indarsih, Y. (2021a). Application of Electronic Traffic Law Enforcement (E-TLE) Ticketing System Management at Polda West Java. *Enrichment: Journal of Management*, *11*(2), 402–406.

Indarsih, Y. (2021b). Application of Electronic Traffic Law Enforcement (E-TLE) Ticketing System Management at Polda West Java. *Enrichment: Journal of Management*, *11*(2), 402–406.

Jotia, A. L., & Boikhutso, K. (2016). Two worlds apart in Botswana's education system: Lessons from the 2010 examinations crisis. *Annual Review of Comparative and International Education 2015*, *28*, 251–278.

Luhukay, R. S., Luthfan, G. F. F., & Chrisjanto, E. (2023). The Problems of E-Ticketing from Legal Perpective. *Widya Pranata Hukum: Jurnal Kajian Dan Penelitian Hukum*, *5*(2), 166–179.

Milafebina, R., Lesmana, I. P., & Syailendra, M. R. (2023). Perlindungan Data Pribadi terhadap Kebocoran Data Pelanggan E-commerence di Indonesia. *Jurnal Tana Mana*, *4*(1), 157–169.

Nagendra, A. P., & Sushanty, V. R. (2022). Efektivitas Penerapan E-Tilang Dalam Penindakan Pelanggaran Lalu Lintas Di Wilayah Hukum Polrestabes Surabaya. *Jurnal Tatapamong*, 143–154.

Perwitasari, D. (2024). Keadilan Berketuhanan Dalam Konteks Hukum Dan Pancasila Di Indonesia. *Integralistik*, *35*(2).

Pisu, D. (2020). The INA Casa Watershed: Adalberto Libera and the Modelisation of the Collective. *Architectural Theory Review*, *24*(3), 241–261.

Ramadhan, R. Z., Yuzafilah, B., Gunawan, M. S., & Karina, S. (2024a). Analysis of The Effectiveness of Electronic Ticketing Lodaya In Enforcing Traffic Violations. *Jurnal Legisci*, *2*(1), 1–12.

Ramadhan, R. Z., Yuzafilah, B., Gunawan, M. S., & Karina, S. (2024b). Analysis of The Effectiveness of Electronic Ticketing Lodaya In Enforcing Traffic Violations. *Jurnal Legisci*, *2*(1), 1–12.

Rohmy, A. M., Hartiwiningsih, & Handayani, I. G. A. K. R. (2024). Judicial Mafia and ecological in-justice: Obstacles to policy enforcement in Indonesian forest management and protection. *Trees, Forests and People*, *17*, 100613. https://doi.org/10.1016/j.tfp.2024.100613

Santoso, G., Karim, A. A., & Maftuh, B. (2023). Kajian Penegakan Hukum di Indonesia untuk Membentuk Perdamian dalam Bhinneka Tunggal Ika Indonesia Abad 21. *Jurnal Pendidikan Transformatif*, *2*(1), 210–223.

Sari, V. K., Isbandono, P., Tartila, R. I., Hanum, S. S., Pradani, C. R., & Sugiarto, E. T. (2025). Implementation of E-Ticket Based Traffic and Road Transport Policies in Surabaya. *International Joint Conference on Arts and Humanities 2024 (IJCAH 2024)*, 1790–1802.