

Smart Policing: The Impact of E-TLE Implementation on Traffic Behavior in South Sumatra, Indonesia

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Abstract

This study examines the implementation of the Electronic Traffic Law Enforcement (E-TLE) system in South Sumatra, Indonesia, as a means to modernize traffic law enforcement and address longstanding challenges in managing road violations. Grounded in qualitative research, the study explores the technological and human resource dimensions critical to E-TLE's success, including stakeholder collaboration, public compliance, and institutional responsiveness. Using Grindle's policy implementation framework, the research highlights the interplay between policy design, political context, and societal reception, emphasizing the need for robust communication strategies and infrastructural improvements. Findings reveal that while E-TLE has enhanced efficiency in traffic law enforcement, challenges such as public unfamiliarity and resource limitations persist, necessitating targeted interventions to ensure sustained success.

Keywords: *Electronic Traffic Law Enforcement, Public Policy, Implementation, Grindle.*

Introduction

A notable advancement in traffic law enforcement is the implementation of Electronic Traffic Law Enforcement (E-TLE), commonly known as the electronic ticketing system. This policy aims to augment the efficacy of law enforcement by leveraging technology to automatically document traffic infractions, thereby minimizing reliance on traditional enforcement methodologies. The introduction of E-TLE reflects a broader commitment to integrating modern technology into public administration processes, particularly in areas where efficiency and transparency are critical. By replacing conventional manual ticketing procedures, E-TLE not only streamlines the enforcement process but also reduces the likelihood of corrupt practices, such as bribery, that often undermine the credibility of traditional traffic enforcement systems. Furthermore, the adoption of this system aligns with the growing global trend toward the digitization of governance, aiming to improve public trust and accountability through the application of technology.

The implementation of Electronic Traffic Law Enforcement (E-TLE) is in accordance with Law No. 22 of 2009 concerning Road Traffic and Transportation, which underscores the significance of a comprehensive Traffic and Transportation Information and Communication System. This system encompasses a network of interconnected subsystems designed to collect, process, store, and disseminate data pertaining to traffic and transportation management. The introduction of E-TLE is a strategic step toward fulfilling the objectives outlined in this law, as it seeks to ensure the efficient management of traffic while fostering greater public awareness of road safety regulations. By transitioning to a digital framework, E-TLE reduces administrative inefficiencies associated with paper-based systems, thereby allowing law enforcement officers to focus on addressing more complex violations and ensuring road safety. This approach is particularly beneficial in urban areas with high traffic volumes, where manual enforcement is often impractical and resource-intensive.

E-TLE, commonly referred to as *e-Tilang*, replaces the conventional manual ticketing process, which relied on paper-based tickets and manual documentation of violations by law enforcement officers. The system streamlines the ticketing procedure by leveraging information technology, aiming to modernize the entire process and enhance the efficiency of law enforcement in managing traffic violations and associated fines. Through the *e-Tilang* system, violators are required to settle fines for their respective offenses exclusively through their designated bank accounts (Setiyanto, Gunarto, and Wahyuningsih, 2017). This integration

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with financial institutions ensures transparency and accountability in the payment process, reducing the potential for cash-based transactions that could lead to corruption. Additionally, the system provides real-time tracking of violations and fines, offering a comprehensive database for monitoring traffic trends and policy effectiveness.

By leveraging information technology, Electronic Traffic Law Enforcement (E-TLE) aims to address longstanding challenges, such as the persistent issue of unaddressed traffic violations. This assertion is supported by traffic violation data collected within the jurisdiction of the South Sumatra Regional Police in 2022. Furthermore, accident data derived from two distinct camera systems, namely E-Police and Check Point, deployed across 13 designated areas within North Sumatra, reveal a staggering accident rate of 208,802 cases within a single year. These statistics underscore the critical need for a more systematic approach to traffic management and enforcement, as the existing manual systems have proven inadequate in addressing such high volumes of violations and accidents. Through the use of advanced camera technology and automated data processing, E-TLE not only identifies violators but also provides empirical evidence that can be used in legal proceedings, thereby strengthening the overall enforcement framework.

The successful implementation of Electronic Traffic Law Enforcement (E-TLE) hinges not solely on technological advancements but also critically on the preparedness of human resources and the capacity for effective system management. While the legal framework provides a clear foundation, practical implementation of E-TLE frequently encounters obstacles arising from inadequate inter-institutional communication and coordination. For example, challenges pertaining to the ticketing payment system and public unfamiliarity with e-Tilang procedures underscore the imperative for more robust communication and public outreach initiatives. Furthermore, factors such as an unstable internet infrastructure can impede the effective field implementation of this policy. These challenges highlight the importance of a multi-stakeholder approach that includes not only law enforcement and government agencies but also the active involvement of the private sector and civil society in ensuring the system's sustainability.

This dimension can be assessed by evaluating two key factors: (1) the impact or effect on individuals and societal groups, and (2) the extent of change and the level of acceptance exhibited by target groups, as well as the nature of the resulting transformations. This study further incorporates an in-depth examination of practical challenges encountered in the field, such as inadequate public outreach and infrastructural deficiencies, which are frequently overlooked in previous public policy research. Consequently, this study offers a more holistic perspective on evaluating the success of E-TLE policy implementation and provides a valuable contribution to the existing body of public policy literature in Indonesia. By addressing both the technological and human aspects of E-TLE, this research underscores the necessity of a balanced approach that integrates advanced tools with effective stakeholder engagement to ensure the long-term success and scalability of this innovative policy.

Theoretical Review

Policy Implementation

According to Abdul Wahab (2004:65), implementation, as defined by Webster and further elaborated by Van Meter and Van Horn, involves the practical steps taken by individuals, government agencies, or private organizations to achieve the objectives outlined in policy directives. Van Meter and Horn emphasize that implementation necessitates the active engagement of individuals, officials, or groups within both governmental and private institutions. These entities are responsible for undertaking the actions required to achieve the objectives outlined in the specific policy decision. Consequently, their activities directly impact the lives of citizens.

According to Winarno (2002:101-102), Lester and Stewart define policy implementation as the process by which various actors, organizations, and methods work together to put a policy into action and achieve its intended goals. This involves the use of legal and administrative tools to ensure successful execution.

Consequently, implementation encompasses the actions undertaken by the government to achieve the objectives stipulated within a policy decision. However, Grindle (as cited in Abdul Wahab, 2002:59) contends that policy implementation transcends the mere translation of political decisions into routine bureaucratic procedures. Instead, it encompasses a complex interplay of conflict, decision-making processes, and the identification of beneficiaries within the policy framework.

Stages of Policy Implementation

Merilee S. Grindle's approach, known as "Implementation as a Political and Administrative Process," identifies two variables influencing public policy implementation:

Outcome Achievement

The success of public policy implementation can be measured by the process of achieving final outcomes—whether or not the intended objectives have been realized. Grindle explains that the success of policy implementation can be evaluated through two aspects:

- a. Process Alignment: Assessing whether the policy execution aligns with its design, referring to the actions outlined in the policy.
- b. Goal Achievement: Determining whether the policy objectives have been achieved.

These dimensions are measured by evaluating two factors:

- a) The impact or effects on society, both at the individual and group levels.
- b) The degree of change achieved and the level of acceptance among target groups, along with the changes that occur.

Implementation Levels

The success of public policy implementation, according to Grindle, is significantly determined by the level of policy implementation, which consists of:

- a) Content of Policy
- b) Context of Implementation

Content of Policy

a. Affected Interests

This component examines the various interests that exert influence on policy implementation. Specifically, it assesses the extent to which these diverse interests impact the implementation process, seeking to understand how they contribute to both the successes and challenges encountered during implementation.

b. Type of Benefits

This aspect focuses on ensuring that the policy delivers a range of benefits, thereby demonstrating the positive outcomes generated by the implementation of the intended policy objectives.

c. Extent of Change Envisioned

Every policy establishes specific targets or desired changes. This component evaluates the magnitude of change envisioned within the policy framework, ensuring that these desired transformations are clearly defined and amenable to measurement.

d. Site of Decision-Making

Decision-making constitutes a critical factor in the successful implementation of policies. This component underscores the importance of identifying the specific locations or levels within the policy implementation process where key decisions are made.

e. Program Implementers

The successful execution of a policy hinges on the competence and capability of the designated program implementers. It is imperative to identify and clearly define the roles and responsibilities of the individuals or entities entrusted with the task of carrying out the policy.

f. Resources Committed

Effective policy implementation is contingent upon the availability of adequate resources. This aspect evaluates whether the program is adequately supported by sufficient financial, human, and material resources to ensure smooth and successful execution. By addressing these key components, the "Content of Policy" framework ensures that the policy's design and resource allocation are aligned with its intended goals, thereby facilitating effective implementation.

Propositions

a. Power, Interests, and Strategies of Actors Involved

The successful implementation of any policy necessitates a careful consideration of the power dynamics, vested interests, and strategic approaches employed by the various actors involved. Failure to adequately assess these factors significantly increases the likelihood of substantial deviations between the actual outcomes of policy implementation and the intended goals.

b. Institution and Regime Characteristics

The success of policy implementation is significantly influenced by the prevailing institutional and regime characteristics within the environment in which it is executed. Consequently, a thorough understanding of the institutional framework and the nature of the governing regime is crucial, as these factors exert a profound impact on the effectiveness of policy implementation.

c. Compliance and Responsiveness of Implementers

Another critical determinant of successful policy implementation lies in the level of compliance and responsiveness demonstrated by the designated implementers. This component assesses the extent to which implementers adhere to the policy guidelines and respond appropriately to its requirements. Following policy implementation, an evaluation can be conducted to determine whether the implementers have effectively executed the policy as intended, considering both the content of the policy and the contextual environment within which it is implemented. This evaluation also aims to assess the extent to which the prevailing policy environment influences the level of change achieved.

Grindle's Model

Grindle's Model emphasizes the critical importance of the contextual factors surrounding policy implementation, with a particular focus on the characteristics of implementers, target groups, and the potential for conflict and disagreement among the various actors involved in the implementation process. Furthermore, the model highlights the crucial role of resource availability in supporting effective policy implementation.

Responsiveness

Another critical dimension in achieving program goals within specific environments is the responsiveness of public institutions. Ideally, public institutions, such as bureaucracies, should be highly responsive to the most pressing needs of their stakeholders to ensure the delivery of adequate services. A lack of responsiveness during implementation can have significant consequences, including the failure of public officials to acquire crucial information necessary for evaluating program success. Furthermore, insufficient support can impede the achievement of policy objectives, particularly due to interventions from individuals or groups seeking to:

- **Obtain** specific goods or services in larger quantities than allocated.
- **Obstruct** the implementation of certain programs that they perceive as detrimental to their own interests.

Electronic Traffic Law Enforcement

The Directorate of Traffic of the South Sumatra Regional Police has implemented Electronic Traffic Law Enforcement (E-TLE), commonly referred to as electronic ticketing, for both automobiles and motorcycles. This initiative serves as an alternative mechanism for adjudicating traffic violation cases, replacing the traditional paper-based ticketing system in accordance with the Supreme Court Regulation of the Republic of Indonesia concerning Procedures for Resolving Traffic Violation Cases, which was promulgated on December 15, 2016, and subsequently implemented in January 2017.

Pursuant to Government Regulation No. 80 of 2012 concerning Procedures for Motor Vehicle Inspections on the Road and Enforcement of Traffic and Road Transport Violations, Article 28 stipulates the following provisions for enforcement actions based on electronically recorded evidence:

1. Traffic and road transport violations captured by electronic recording devices, as defined in Article 23, letter (c), authorize law enforcement officials, including members of the Indonesian National Police or Civil Service Investigators specializing in the field of traffic and road transport, to issue traffic violation tickets.
2. Traffic violation tickets issued must be accompanied by electronic evidence obtained through the utilization of enforcement devices.
3. Traffic violation tickets issued shall be delivered to the violators as a formal notification and summons to attend a court hearing.
4. In instances where the violator is unable to attend the court hearing, they may fulfill their fine payment obligations through a designated government bank.
5. Further provisions regarding the enforcement of violations based on electronically recorded evidence are governed by the Regulation of the Chief of the Indonesian National Police.

Research Method

This study falls within the domain of qualitative research, as the nature of the data and the analytical approach employed adhere to the principles of qualitative methodology. According to Creswell (2002), qualitative research constitutes a process aimed at comprehending social or human phenomena through the creation of a comprehensive and holistic narrative. This involves gathering detailed accounts from informants or respondents and presenting the findings within their natural context. Similarly, Pasolong (2013:32) and Moleong (2007) contend that qualitative research embodies a humanistic approach that prioritizes human beings as the primary subjects of inquiry within social and cultural contexts. Qualitative

methodology generates descriptive data in the form of written and spoken language, derived from individual perspectives and observed behaviors.

This study adopts a qualitative approach with the primary objective of understanding the social phenomena associated with the implementation of the E-TLE policy within the jurisdiction of the South Sumatra Regional Police. This approach emphasizes a comprehensive and holistic depiction of the phenomenon under investigation, aiming to gain an in-depth understanding of its various facets. This in-depth understanding serves as the foundation for drawing meaningful conclusions as the final outcome of the research. The study focuses on analyzing how the policy is interpreted, adopted, and implemented by relevant actors, while simultaneously evaluating the impact of the policy within the local context.

The collected data is analyzed utilizing the Interactive Model of Data Analysis proposed by Miles, Huberman, and Saldana (2014:31-33). This technique employs a reciprocal and iterative approach to data analysis throughout the research process. Miles and Huberman (1984) emphasize that qualitative data analysis is an iterative and ongoing process that continues until data saturation is reached—a point at which no new information is obtained. The analytical process encompasses three primary stages:

1. Data Collection
2. Data Reduction
3. Data Display

These stages are subsequently followed by a process of drawing conclusions and verifying their validity.

Results and Discussion

1. Strategies of the Actors Involved

Grindle's framework posits that the success of policy implementation hinges critically on the interactions and strategies employed by the various actors involved. While policy design and content are crucial, successful implementation necessitates effective collaboration and communication among all relevant stakeholders. In the context of E-TLE, collaboration between the government, the police force, and the public has not yet reached its full potential. This lack of synergy and effective communication among these parties hinders the attainment of policy objectives and undermines the anticipated positive impact.

Policy communication, as theorized by Lasswell (1948), constitutes a pivotal element of successful policy implementation. Effective communication ensures that the policy is effectively disseminated to the public, fostering public awareness, enhancing compliance, and mitigating public resistance. In the context of E-TLE, the utilization of media platforms such as television, radio, and newspapers for information dissemination and public outreach serves as a crucial strategy for enhancing public understanding of the new policy.

2. Institution and Regime Characteristics

Grindle (1980) emphasizes the crucial role of the "context of policy," encompassing the political and administrative factors that shape the implementation process. The leadership structure within the Ditlantas South Sumatra Regional Police, with the Dirlantas reporting directly to the Kapolda, reflects a clear hierarchical order and a well-defined division of responsibilities. This hierarchical structure, as identified by Mintzberg (1979), is instrumental in facilitating efficient decision-making and effective policy execution by minimizing ambiguity in roles and responsibilities and enhancing oversight and coordination across different organizational units.

Furthermore, the presence of specialized units such as Subbag Renmin, Bagbinopsnal, and Subditregident within Ditlantas signifies strong institutional capacity. Barzelay (2001) emphasizes the critical role of

adequate institutional capacity in facilitating effective planning, coordination, and implementation of policies. Therefore, an efficient organizational structure coupled with robust administrative capacity constitutes essential prerequisites for successful policy implementation.

3. Political Pressure and Public Support

Grindle (1980) underscores the significant influence of public support and the potential impact of political pressure on the success or failure of any policy. While political pressure may expedite decision-making in the policy implementation process, it can also pose significant challenges if not accompanied by adequate public support. Lipsky's (1980) theory of "street-level bureaucracy" highlights the challenges faced by frontline actors, such as those within Ditlantas, in navigating the complexities of top-down political pressures while simultaneously addressing the realities encountered on the ground.

In this context, Ditlantas may face political pressure to expedite the implementation of the E-TLE system to demonstrate immediate results. However, it is crucial to ensure that the policy is accepted and embraced by the public. By conducting a comprehensive analysis of external and internal factors, including political pressure, public support, and resource allocation, through the lens of various policy implementation theories, it becomes evident that the success of E-TLE implementation in South Sumatra hinges critically on Ditlantas' ability to effectively manage and navigate these multifaceted factors.

From a governmental perspective, political stability within South Sumatra plays a pivotal role in ensuring consistent resource allocation and sustained political support for the E-TLE policy (Grindle, 1980). The government's commitment to enhancing road traffic safety is clearly reflected in its support for the E-TLE initiative. Moreover, effective inter-agency coordination between Ditlantas, local government, and the Department of Transportation is crucial for ensuring holistic implementation and mitigating the risk of inter-agency conflict (Sabatier & Mazmanian, 1980).

4. Compliance and Responsiveness in Policy Implementation

Grindle's (1980) policy implementation theory provides a valuable framework for analyzing public compliance with the E-TLE system and the government's responsiveness in managing its implementation within South Sumatra. Public compliance signifies the extent to which the community accepts and adheres to the policy, while government responsiveness reflects the speed and effectiveness with which the government addresses public feedback and complaints related to policy implementation.

Tyler (1990) argues that public compliance with the law is significantly influenced by the perceived legitimacy of the authorities. In the context of E-TLE, public perception of the system's fairness and efficiency is crucial for fostering high levels of compliance.

Bovens (2007) emphasizes the critical role of responsiveness as an indicator of good governance and a healthy democratic system. In the context of E-TLE, the government's responsiveness to public input and violations serves as a crucial indicator of accountability and transparency.

Studies conducted by Cheng (2012) on the implementation of similar electronic law enforcement systems in Taiwan have demonstrated the positive impact of effective technology-driven systems on enhancing public compliance and expediting the handling of violations. The findings observed in South Sumatra exhibit a similar trend, demonstrating increased public compliance and improved government responsiveness.

Conclusion

The implementation of the E-TLE system in South Sumatra represents a significant advancement in traffic law enforcement, leveraging technology to enhance efficiency and accountability. This study identifies key factors influencing its success, including stakeholder coordination, public compliance, and the capacity of implementing institutions. Despite notable progress, the system faces challenges related to public awareness,

technological infrastructure, and political pressures. Addressing these issues requires concerted efforts in public communication, infrastructure investment, and inter-agency collaboration. Ultimately, the findings contribute to a deeper understanding of the complexities of policy implementation and offer valuable insights for enhancing E-TLE systems and similar initiatives in Indonesia and beyond.

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