

THE EFFECTIVENESS OF E-TLE SYSTEM IN SUPPRESSING THE NUMBER OF TRAFFIC ACCIDENTS IN THE JURISDICTION OF JAKARTA METROPOLITAN POLICE REGION

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ABSTRACT

Traffic problems are one part of the main tasks of Indonesian Nation Police, also known as Polri, especially the traffic police. Furthermore, the development of the strategic environment—in the form of the rapid growth of the number of motorized vehicles with various types in recent years followed by an increase of population—has resulted in various problems of security, safety, public order and the smoothness on highways. Such problems are increasingly causing various problems in the field of traffic, both in the form of traffic congestion and traffic accidents. In response to these problems as well as to build discipline and traffic compliance from road users, Traffic Directorate of Jakarta Metropolitan Police Region (Ditlantas Polda Metro Jaya) implements a law enforcement system for traffic violators through ETLE (Electronic Traffic Law Enforcement) system. This paper aims to find out the application of E-TLE system in suppressing the number of traffic accidents; factors affecting the effectiveness of the application of E-TLE system in reducing the number of traffic accidents; and the optimal efforts to implement E-TLE in providing sustainable driving safety and security services, the author employs the qualitative approach using the case study method. The sources of information are traffic officers of Ditlantas Polda Metro Jaya. Data are obtained through interviews. The results of the study reveal that E-TLE system has succeeded in reducing the level of traffic violations but has not been able to reduce traffic accidents.

Keywords: *ETLE system; traffic accident*

1. INTRODUCTION

Traffic problems are one part of the main tasks of the National Police, especially the Corps of Traffic (Korlantas Polri). Moreover, the development of the strategic environment—in the form of the rapid growth of the number of motorized vehicles with various types in recent years, followed by an increase in the number of population—has resulted in more annoying problems in the context

of security, safety, public order and the smoothness of traffic on highways. Such conditions are increasingly causing various problems in the field of traffic, both in the form of traffic congestions and traffic accidents. Responding to these problems as well as to establish discipline and traffic compliance from road users, Ditlantas Polda Metro Jaya has applied ETLE system as a law enforcement system for traffic violators.

Based on data taken from Korlantas Polri, the number of traffic accidents in Indonesia in 2015 reached 96,071 incidents and the material losses equal to IDR 262,442,702,379. In 2016, the number reached 193,021 incidents and the material losses equal to IDR 277,415,997,618 and in 2017, the number reached 185,000 incidents and the material losses equal to IDR 258,963,514,279. Based on the same data, it is found out that there are 107,500 traffic accidents in 2019. There is an increase by 103,672 incidents in 2018. And in 2020, there are 100,028 traffic accidents that resulted in 23,529 deaths. This means that the death toll is about a quarter of the total traffic accidents that occur every year.

In order to overcome these various traffic problems, it is necessary to raise public awareness of road users to have discipline and compliance with traffic rules. Indeed, as everybody knows, the culture of public related to traffic order is still a big problem that causes other problems occurs in almost all parts of Indonesia, including in the jurisdiction of Jakarta Metropolitan Police Region (Polda Metro Jaya). As a response to this problem, as well as an effort to build discipline and traffic compliance from road users, Ditlantas Polda Metro Jaya is implementing another way, a law enforcement system, for traffic violators.

One of these efforts is the implementation of electronic policing (e-policing) in the service of traffic function, especially in the implementation of law enforcement, namely ETLE. Electronic traffic law enforcement (E-TLE) is one of the innovations in the field of service in traffic function and is one of the implementations of public service programs based on information technology (IT), especially related to ticketing policies.

E-TLE is an effort to implement technology to record traffic violations electronically in order to support security, safety and public order. Actually, the implementation of E-TLE was first tested on October 1st 2018 in Jakarta. It is now applied nationally through the jurisdiction of the Republic of Indonesia. The utilization of ETLE aims to minimize the level of levies in enforcing laws and regulations on traffic violators. Moreover, the application of the system also aims to improve the discipline of motorists (Media Indonesia, 28 March 2021).

Such elaboration above is in accordance with Chryshnanda (2020: 76-77), stating that the services of security and safety is related each other and will have something to do with operational systems in the life of the nation and communities. Security and safety are the guarantees given in order to predict, anticipate and provide solutions in both conditions: normal and contingent ones.

Therefore, the utilization of information and communication technologies in organizing security and safety on highways as well as roads is a must. Using information and communication technologies is in the context of the development of technology in the era of globalization. Online systems have penetrated all aspects of community lives, and they are even become the trends and life styles of societies in doing their daily social activities. Thus, the National Police must be able to present the models and patterns of policing through electronic policing (e-policing). ETLE system, as part of the National Police e-policing, has been designed in such a way and automatically (by system) so that it will identify anybody who violates traffic regulations without exceptions. Besides, the presence of ETLE method will make motorist more careful and obey traffic

regulations which lead to the decrease of traffic accidents and the increase of security and safety of other motorists.

In fact, there are still high levels of traffic violations and traffic accidents in the jurisdiction of Polda Metro Jaya. Such conditions have raised questions about the effectiveness of ETLE system in suppressing the number of traffic violations and traffic accidents in the police region. Indeed, such situations and conditions will affect the achievement of the level of security as it is explained by Hadiman (2010: 33). He states that security is a situation that provides protections from all kinds of threats so that people can live safely and are free from fear, anxiety, hesitation as well as uncertainty.

2. LITERATURE REVIEW

2.1 Public Service

The decree of Minister of State Apparatus Empowerment Number 63/KEP/M.PAN/7/2003 defines public service as all service activities held by the organizers of public services as efforts to fulfil the needs of the service recipients as well as the organization of laws and regulations. Batinggi (1998: 12) explains that public services can be defined as an act or activity conducted by government to take care matters needed by societies or public in general. The obligation of government is to deliver public services that are the rights of every citizen. Meanwhile, Harbani (2007: 135) states that delivering services (serving) of the needs of other people or societies who have interests in an organization based on the established main rules and procedures.

2.2 Information Technology

Bambang Warsita (2008: 135) states that information technology is

a structure and infra-structure in the forms of hardware, software and user-ware systems and methods in order to obtain, to send, to process, to interpret, to save, to organize, and to use data meaningfully. Lantip and Rianto explain the same thing, stating that information technology can be defined as a science in the field of computer-based information. They, furthermore, say that information technology has experience a very rapid development.

2.3 Cost Benefit Analysis (CBA)

According to Schniederjans, Hamaker, dan Schiederjans (2004: 28), cost benefit analysis is a technique used to analyse the cost and benefits that involves estimation and evaluation of benefits or advantages related to an alternative action chosen. The technique compares the current value of the benefits with the investments from the investment costs as a tool in making decisions.

2.4 Public Digital Services (e-government)

Mustopadijaya (2002: 12) says that electronic administration is the synonym of the term 'electronic government' that is given to a government adopting the internet-based technology which completes each other and can improve services provided by the government itself. Electronic government, indeed, aims to deliver prime services to society as the users of the services. World Bank (2001: 11) states that e-gov is the organization of a government based on technology in order to improve its performance in delivering services to society, business groups and other groups or parties leading to a good

government as well as good governance.

2.5 E-policing

Electronic policing is a kind of policing in the era of digital that seeks to penetrate the partition of space and time so that police services can be done in a fast, precise, accurate, transparent, accountable, informative and accessible way (Chryshnanda, 2010: 355). Electronic policing is also a new idea to eradicate corruption, a method for reforming police bureaucracy and part of creative breakthrough (Chryshnanda, 2015).

2.6 Traffic Accident

Traffic accident is an incident on roads or highways that is unexpected and unintentional involving a vehicle with or without other road users, resulting in human casualties or property loss (Article 1 number 24 of the Republic of Indonesia Law No. 22/2009).

2.7 Previous research

a. This 2021 research entitled “*The Effectiveness of Electronic Traffic Law Enforcement (E-TLE) Policy Implementation in the Jurisdiction of Polda Metro Jaya: Edward III Perspective Model.*” Based on the previous research, it can be seen that the two papers discuss about the implementation of E-TLE in the jurisdiction of Polda Metro Jaya and use the descriptive method. Meanwhile, the first paper conducted a research using the quantitative approach, while the author uses the qualitative approach. Then, the first paper focuses the research on the implementation of law

enforcement using E-TLE, while the author focuses the research on the effectiveness of the application of E-TLE in reducing the number of traffic accidents.

- b. This research, published in an international journal in 2020, entitled “*Design and Application of E-Policing: Police Practice Management Through the Use of Information Technology in Indonesia.*” Based on the previous research, it can be seen that both paper discuss about the use of information technology in police services. They both also use the qualitative methods and observational studies in collecting data. Meanwhile, the first paper, written by Chryshnanda Dwilaksana, focuses on the overall implementation of e-policing and the author focuses on the effectiveness of the application of E-TLE in reducing the number of traffic accidents.
- c. This 2013 research entitled “*Effectiveness of Information and Communication Technology (ICT) in Policing in Nigeria.*” Based on the previous research, it can be seen that the two papers study the use of information technology. They also use the qualitative approach and observational studies in collecting data. Meanwhile, the first paper written by Frank and Binpe examine the impact of information technology and technology (ICT) on an effective policing using the quantitative approach and survey methods. On the other

side, the author conducts a research on the effectiveness of the application of E-TLE in reducing the number of traffic accidents by using the qualitative approach and a case study method.

- d. This 2015 research entitled “*The Enhancement of Homeland Security in Kenya through E-Policing.*” Based on this previous research, it can be seen that the two papers study the use of information technology. They also use the qualitative approach and observational studies in data collection. Meanwhile, the paper written by Oktoi studies about e-policing in an effective policing, whereas the author conducts a research on the effectiveness of the application of E-TLE in reducing the number of traffic accidents.
- e. This 2021 research, written in an international journal, entitled “*The Application of Electronic Traffic Law Enforcement (E-TLE) Ticketing System Management at West Java Police Region.*” Based on this previous research, it can be seen that the two papers discuss about the use of information technology and E-TLE program. They also use the qualitative approach and interview and observation studies in data collection. Meanwhile, the paper written by Indarsih studies about the application of E-TLE in the jurisdiction of the West Java Police Region and uses the descriptive analysis method and the normative juridical approach, while the author studies about the effectiveness of the application of E-TLE in reducing the number of traffic accidents and uses a case study method with the qualitative approach.
- f. This 2018 research, written by a postgraduate student of Diponegoro University, entitled “*Juridical Review of the Use of CCTV Records as Evidence of Traffic Violations.*” Based on this previous research, it can be seen that the two papers study about the use of information technology in traffic law enforcement. Meanwhile, the first paper written by Manalu conducts a research on CCTV footage as evidence of violations, while the author conducts a research on the effectiveness of the application of E-TLE in reducing the number of traffic accidents.
- g. This 2019 research, written by a postgraduate student of Indonesian National Police Science College, entitled “*The Practice of E-Tilang System Implementation (a study case on policy implementation at Polda Metro Jaya).*” Based on this previous research, it can be seen that the two papers discuss the application of E-TLE in the jurisdiction of Polda Metro Jaya and use the qualitative approach and the case study method. In addition, the two papers are conducted in the jurisdiction of Polda Metro Jaya. Meanwhile, the first paper written by Agung Asmara studies about the implementation of the e-ticket system with an emphasis on

policy implementation, while the author studies about the effectiveness of the application of E-TLE in reducing the number of traffic accidents.

- h. This 2020 research entitled "*Electronic Traffic Law Enforcement (E-TLE) Program Innovation in the City of Surabaya.*" Based on this previous research, it can be seen that the two papers study about the use of information technology and E-TLE program. They also use the qualitative approach and interview and observation studies in data collection. The first paper, written by Ika Devi Lestari *et al.*, studies about the application of E-TLE in the jurisdiction of the Surabaya City Police, while the author conducts a research on the effectiveness of the application of E-TLE in reducing the number of traffic accidents.
- i. This 2020 research entitled "*The Effectiveness of the Application of Electronic Tickets against Traffic Violations in the Jurisdiction of Jakarta Metropolitan Police Region.*" Based on this previous research, it can be seen that the two papers study about the implementation of E-TLE in the jurisdiction of Polda Metro Jaya area. They also use the case study method and interview and observation studies in data collection. The first paper, written by Rahman Amin *et al.*, studies about the application of E-TLE using the normative juridical approach, while the author conducts a research on the effectiveness of

the application of E-TLE in reducing the number of traffic accidents with the qualitative approach.

- j. This 2020 research entitled "*Problematics of the Application of Electronic Tickets in Reducing Traffic Violations.*" Based on this previous research, it can be seen that the two papers study about the application of E-TLE. They also use interview and observation studies in data collection. The first paper, written by Sulis Aditya and Andi Safriani study about the implementation of E-TLE and field research method, while the authors conducts a research on the effectiveness of the application of E-TLE in reducing the number of traffic accidents and uses the case study method.
- k. This 2020 research entitled "*The Implementation of Electronic-Traffic Law Enforcement Program (A Case Study at the Traffic Directorate of Jakarta Metropolitan Police Region)*". Based on this previous research, it can be seen that the two papers study about the implementation of E-TLE at Jakarta Metropolitan Police Region. They also employ the qualitative approach, the case study method, and interview and observation studies in data collection. The first paper, written by Satrio Prayogo, studies about the implementation of E-TLE emphasizing on policy implementations, while the author conducts a research on

the effectiveness of the application of E-TLE in reducing the number of traffic accidents.

2.8 Research Problems

Based on the background, the main problem can then be taken, namely that the implementation of E-Policing, especially E-TLE by Polda Metro Jaya, as experienced in other police regions may not have been implemented properly. Furthermore, from these main problems the author also makes several problems that want to be raised to describe the problem more clearly, including: How is the application of E-TLE system in reducing traffic accident rates? What are the factors that affect the effectiveness of implementing E-TLE system in reducing the number of traffic accidents? How is the optimal implementation of E-TLE in providing sustainable driving safety and security services?

3. METHOD

The author employs the qualitative approach. The qualitative research is used because it is in accordance with what the author wants to do because the characteristics of the research regarding the application of E-TLE by Polda Metro Jaya. A direct involvement of the researcher in the field is needed to find and collect valid data and information. In order to obtain information related to this research, the authors chose the multiple cases research method (a case study). The author uses a case study model because the research problem that the researcher has determined previously is regarding the application of the E-TLE system by Polda Metro Jaya in reducing the number of traffic accidents is a specific problem and has its own

characteristics that are different from other problems.

4. RESULTS AND DISCUSSIONS

4.1 Implementation of E-TLE system in reducing traffic accident rates

The problem of security, safety, orderliness and smoothness of traffic is one part of the main tasks of the National Police, including traffic police to regulate, to discipline, to accelerate, and to enforce traffic law enforcement on motorists on highways in order to provide services to road users. However, along with the development of various aspects of the nation's life, especially those related to unbalanced road traffic activities, on one hand the development from the economic aspect is very rapid which requires roads as a means of transportation to facilitate its activities. On the other hand, the development in the field of road betterment and the addition of unbalanced road infrastructure facilities such as the growth of motorized vehicles which is less measurable is exacerbated by the level of legal awareness of road users who are still not good at complying with traffic signs. Therefore, such conditions can cause traffic problems, such as annoying traffic jams, violations and traffic accidents which have not only caused material losses but also non-material losses such as the loss of a person's life.

Based on the data taken from Korlantas Polri, the number of traffic accidents in Indonesia in 2015 reached 96,071 incidents with material losses of IDR 262,442,702,379. In 2016, it reached 193,021 incidents with material losses of IDR 277,415,997,618 and in 2017 it

reached 185,000 incidents with material losses of IDR 258,963,514,279. Based on data obtained from the National Police,

there are 107,500 traffic accidents in 2019. There is an increase from 103,672 incidents in 2018.

Table 1
Number of Traffic Accidents (2015-2020)

No.	Year	Number police reports	Number of casualties	Loss	
				Materials	Money (IDR)
1	2015	6,434	7,569	9,535	18,521,665,600
2	2016	9,535	7,415	7,415	21,910,806,300
3	2017	5,642	6,633	8,090	16,760,650,000
4	2018	5,903	7,157	8,387	14,221,420,000
5	2019	8,877	10,557	11,344	18,336,250,000
6	2020	8,052	9,485	10,256	15,673,750,000

Source: Indonesian National Police Corps of Traffic (Korlantas Polri)

Meanwhile, based on the observations, the level of traffic accidents in the jurisdiction of Polda Metro Jaya in the last six years can be seen in Table 1 above with the following details:

- a. In 2015, there are 6,434 police report on traffic accidents with material losses of IDR 18,521,665,600. Then, in 2016 it increased to 9,535 with material losses of IDR 21,910,806,300. Thus, it can be said that in 2016 there was an increase in police reports by 32.52% and material losses increased by IDR 3,389,140,700.
- b. In 2016, there are 9,535 police reports on traffic accidents with material losses of IDR 21,910,806,300. Then, in 2017, it decreased to 5,642 police reports with material losses of IDR 16,760,650,000. Thus, it can be concluded that in 2017, the police reports decreased by 40.83% and material losses

- decreased by IDR 5,150,156,300.
- c. In 2017, there are 5,642 police reports on traffic accidents with material losses of IDR 16,760,650,000. Then, in 2018, it increased to 5,903 police reports with material losses of IDR 14,221,420,000. Thus, it can be said that in 2018 there was an increase in police reports by 4.42% and material losses decreased by IDR 2,539,230,000.
- d. In 2018, there are 5,903 police reports on traffic accidents with material losses of IDR 14,221,420,000. Then, in 2019, it increased to 8,877 police reports with material losses of IDR 18,336,250,000. Thus, it can be said that in 2019 there was an increase in police reports by 33.50% and material losses increased by IDR 4,114,830,000.
- e. In 2019, there are 8,877 police reports on traffic accidents with material losses of IDR 18,336,250,000. Then, in 2020,

it decreased to 8,052 police reports with material losses of IDR 15,673,750,000. Thus, it can be concluded that in 2020, the police report decreased by 9.29% and material losses decreased by IDR 2,662,500,000.

Based on the explanation above, it can be seen that the decrease in the number of traffic accidents that occurred in 2017 is by 40.83% and in 2020 it decreased by 9.29%. Whereas in 2016, there was an increase in traffic accidents reports by 32.52%; in 2018, there was an increase by 4.42%; and in 2019 there was an increase by 33.50%. This is very interesting due to the fact that the National Police has begun implementing ETLE system since 2018. The electronic ticketing system or electronic traffic law enforcement (E-TLE) was first tested on Monday, October 1, 2018. After testing the implementation of

E-TLE, then E-TLE phase 1 was officially launched on the 25 November 2018 at Hotel Indonesia roundabout.

The enactment of ETLE system in 2018 is highly expected to reduce the number of traffic violations as well as traffic accidents. However, an interesting fact was found due to the fact that the number of traffic accident in 2019 (a year after ETLE was implemented) actually increased very significantly by 33.50% and material losses increased by IDR 4,114,830,000. This is contrary to 2016 (when ETLE system has not yet been implemented) the increase was only by 32.52% and material losses increased by IDR 3,389,140,700. Indeed, in 2020 there was a decline, but it was only 9.29%. Then, if we look at the blackspot data for areas that have already equipped with ETLE system, it can be explained as shown in Table 2.

Table 2
Levels of Traffic Accidents on Venues Equipped with ETLE System

No.	Year	Number of incidents	Casualties			Number of KRB	Loss	
			Dead	Severe injured	Light injured		materials	Money (IDR)
1	2018	721	81	147	642	870	1070	1,865,151,400
2	2019	1070	89	205	954	1207	1369	1,600,550,000
3	2020	420	81	67	349	497	545	701,250,000

Source: Ditlantas Polda Metro Jaya and Korlantas Polri

Based on the Table 2, it can be explained that for areas that have been equipped with ETLE system, in 2019 there was a very significant increase in the context of the number of traffic accidents by 32.62% and the number of victims increased by 27.92%. Then, in 2020, there was a decrease in the number of traffic incidents by

60.75% and the number of victims also decreased by 58.82%. Based on the research findings, it is found out that the human error factor was the most dominant cause of traffic accidents throughout 2019. The high number of traffic vulnerabilities that occurred was mostly caused by human factors, such as lack discipline in traffic,

which can be seen from the number of violations of traffic regulations.

In the context of research findings related to traffic violations, it can be told that the trend of violations tends to experience a

significant decrease in the initial period of the ETLE trial to the launches of E-TLE phase 1 which is carried out on November 25, 2018 which can be described as follows:

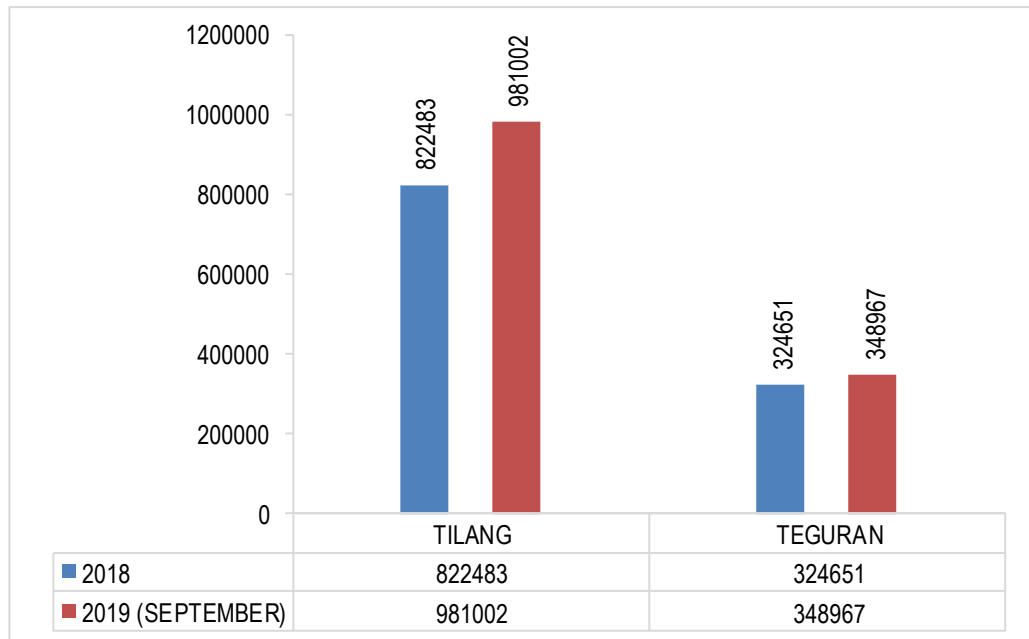


Figure 1 Law enforcement actions on traffic violations (2018-2019)

Based on Figure 1, it can be said that in 2018 there are 822,483 tickets and 324,651 warnings issued. In 2019 (until September) there is a significant increase to 981,002 tickets and 348,967 warnings issued. Thus, there was an increase in issuing tickets by 16.16% and warnings by 6.97%. The enforcement on these violations is carried out throughout the jurisdiction of Polda Metro Jaya.

Meanwhile, the enforcement on traffic violations at ETLE spots in July–November 2019 experiences a significant decrease by 39.10%. Unfortunately, in December 2019 there is a significant increase to 9,907 enforcements, meaning that in that

month enforcements experienced an increase by 30.67%.

Then, in 2020, enforcements through ETLE system is carried out using thirty E-Police cameras and 27 checkpoint cameras, resulting in an extraordinary increase in enforcement results. During the period of January–July 2020, there is a spike in enforcements by 25,604. Then, in the period of August–November it decreased again by 19.24% which then increased again in December in the same year.

Thus, if it is calculated, in the period of 2019 (61,160 enforcements) to 2020 (109,553 enforcements) there is an increase by 44.17% in the context of

enforcement. Such increase is certainly not because the ETLE system is not optimal. In fact, in 2020 Ditlantas Polda Metro Jaya installed more equipment of ETLE system, especially e-police cameras and checkpoint cameras. Therefore, the number of violations that can be detected by the ETLE system also increases. The increasing number of enforcements on violations is due to the significant addition of e-police cameras and check point cameras in 2020. Thus, it is possible that in 2019 the number of violations will also be high, but they are not detected by ETLE because it was not installed at that time.

Based on the research findings, it can be concluded that the application of ETLE system has not been able to reduce the number of traffic accidents optimally. Based on the research findings, it can be explained that ETLE system is not directly a tool to reduce the number of traffic accidents. It is built to suppress traffic violations. It may indirectly reduce the number of traffic accidents through suppressing the number of traffic violations. If it is examined further, ETLE system can be used as evidence in the incident of a traffic accident in areas where the ETLE system has been installed, because it can record and capture vehicles, even people who are driving vehicles that have crashed, for example. However, it cannot prevent traffic accidents directly. This is in accordance with the opinion of Wicaksono (2020: 317) which states that the purpose of the existence of ETLE is as an effective road traffic law enforcement system using electronic technology support to obtain evidence of road traffic law violations as well as incidents.

ETLE system can be said to be effective in reducing the level of traffic violations, especially in certain spots that have been equipped with the system. Based on the data obtained, it can be said that in spots that have been equipped with ETLE system the number of traffic violations tends to fluctuate. In August–November 2019 it decreased. Then, in December 2019 it increased again. Then in September 2020, the number of violations decreased by 11.25% from the previous month. Then, there was a decline again in October 2020 by 27.48%. In November 2020, it increased again by 27.51% and decreased again in December 2020 by 9.04%.

However, if analysed using data for all violations that occurred in the jurisdiction of Polda Metro Jaya, it appears that the level of violations from 2018 experiences a significant increase in 2019 (until September), in which ETLE system was applied by Ditlantas Polda Metro Jaya. Thus, the reduction of traffic violations only occurs at spots that have been equipped with ETLE system. Meanwhile, in areas that have not been equipped with ETLE system, traffic violations committed by road users tend to increase significantly.

Regarding the increase of traffic violations in 2019, it can be explained as follows:

- a. E-TLE system was first tested on Monday, 1 October 2018. During the trial, Ditlantas Polda Metro Jaya had not taken any actions against traffic violators.
- b. After testing the implementation of E-TLE, then the launching of E-TLE phase 1 was carried out on November 25, 2018 at Hotel

Indonesia roundabout. By applying this E-TLE system, traffic violators who are captured in E-TLE cameras will be directly verified by officers and the office at E-TLE of Polda Metro Jaya.

- c. Then, the second phase of E-TLE development was carried out on July 1 to November 2019.

Thus, it can be explained that the increase in 2019 is due to the fact that during the trial period in 2018, Ditlantas Polda Metro Jaya had not taken any actions against traffic violators. Thus, traffic violations that occurred during the trial period are still permitted by Ditlantas Polda Metro Jaya so that in the recorded data in 2019, there is a fairly high spike in terms of the number of traffic violations.

4.2 Factors affecting the effectiveness of the implementation of E-TLE system in reducing the number of traffic accident

The security, safety, orderliness, and smoothness of traffic is basically the reflection of the level of community discipline in traffic on highways. Furthermore, traffic order in a community is a barometer of the level of traffic security and safety in the area where the community lives. In a community where a secure, safe, orderly, and smooth traffic exists, it can be ensured that the traffic control system is good. In the contrary, if the traffic conditions seem chaotic, it indicates that the traffic management system in that place is still not optimal, causing various problems in the field of traffic, both in the form of traffic congestion and traffic accidents.

In order to overcome these various traffic problems, it is necessary to raise public awareness of road users to have discipline and compliance with traffic rules. However, the culture of public traffic order is still a big problem that occurs in most of Indonesia police regions, including the jurisdiction of Polda Metro Jaya. Based on the presentation delivered by the director of Ditlantas Polda Metro Jaya in 2019, it is found out that for the last five years, there have been 5,408,079 traffic enforcements, in which 4,149,671 violations are perpetrated by motorbike riders and 1,258. 408 violations are perpetrated by car drivers.

In the previous findings, it appears that the implementation of the E-TLE system at Polda Metro Jaya has been carried out well, especially in reducing the level of traffic violations. But it does not directly have an effect on reducing the level of traffic accidents. Based on the findings above, it is necessary to further examine what are the factors that affect the effectiveness of the application of E-TLE system in reducing the number of traffic accidents. It is expected that researchers will review the factors that affect the effectiveness of the implementation of ETLE system using public service theory.

Malau (2009: 10) explains that there are several aspects that are considered to have a direct impact on efforts to improve the quality of public services:

- a. **Leadership Aspect**—this aspect has been implemented well where the leader has a good vision and high innovation

power in order to improve public services, especially things related to the implementation of E-TLE system. The task of public service is the obligation of the National Police in realizing it, starting from the level of the National Police Headquarters to the smallest units in police regions to provide quality services, open information and fulfil the rights of community. Thus, if you examine the research findings, the role of a leader as a motivator is highly necessary in improving performance. It implies that a leader is expected to be able to present a vision, show the ways and set organizational targets (goals) and support the participation of subordinates in doing their duties in order to support the organizational success.

- b. **Institutional Aspect**—this aspect has been implemented well. Ditlantas Polda Metro Jaya is led by a director who is responsible to the chief of Polda Metro Jaya, and in carrying out the daily tasks the director is under the control of the vice chief of Polda Metro Jaya. The director, in carrying out the daily duties, is assisted by the vice director who is responsible to the director. Meanwhile, regarding the division of authority in the implementation of E-TLE, Polda Metro Jaya has established a special task force for the implementation of E-TLE so that the implementation can be efficient and effective.
- c. **Human Resources Aspect**—Ditlantas Polda Metro Jaya is an

element of implementing the main tasks in the fields of security, safety, orderliness and smoothness of traffic at the regional police level supervised by the chief of Polda Metro Jaya. Therefore, in providing services in context of a secure, safe, orderly and smooth traffic at police region level, it is necessary to have professional police officers who have sufficient capacity and capability. Based on the results of the study, it is found out that, in general, Ditlantas Polda Metro Jaya has a shortage of personnel in some sections. There are only several sections, such as administration planning, registration and identification, and highway patrol that outnumber the personnel stated in DSP. However, such conditions do not reduce the effectiveness of the task implementations, especially regarding the implementation of E-TLE system. Polda Metro Jaya has been appointed as the area of pilot project for implementing E-TLE and everything has been prepared and taken into account. This lack of personnel does not have to become a significant obstacle in implementing E-TLE. It is a fact that the quality and quantity of Ditlantas Polda Metro Jaya personnel has not been optimal. Although based on the results of interviews, it was found out that the gap in context of the number of personnel was indeed a bit large and could interfere with work effectiveness, Ditlantas Polda Metro Jaya has strived to provide the best services for the community so that the effects of

this lack of personnel are not too disturbing the daily activities. This should be a concern of the police region management because it can hinder the optimal implementation of E-TLE.

d. **Community Participation**

Aspect—The participation has been couched and fostered by Ditlantas Polda Metro Jaya through a cross-sectoral collaboration, a society education on traffic, and assessment of problems in traffic sector. This point has been implemented well by Ditlantas Polda Metro through:

- 1) coordinating with related agencies, namely PT. Indonesian Post;
- 2) coordinating with related institutions, namely High District Court;
- 3) coordinating activities with related institutions, namely East Jakarta District Court and Central Jakarta District Court;
- 4) holding audience activities with public service experts;
- 5) holding forum group discussion activities; and
- 6) coordinating activities on the establishments of E-TLE as well as the consolidation of the trial and application of ETLE in Jakarta.

Furthermore, regarding this community participation the results of the study showed that in operating ETLE in Jakarta, Polda Metro Jaya has collaborated with several third parties in the context of developing the application, maintaining the networks in the field and back office, and

maintaining back office facilities. These activities employ outsourcing experts in information technology.

4.3 Optimal E-TLE implementation efforts in providing continuous driving safety and security services

According to the results of a study conducted by Harvard JFK School of Government, it is now necessary to apply the concepts of digitalization in public sectors if a government wants to deliver fast and qualify public services. According to the same study, it is known that there are three elements of success that must be taken seriously (Indrajit, 2002:15). They are:

- a. **Support**—this element has been implemented. However, improvements are still needed so that the support can run optimally.
- b. **Capacity**—the purpose of this second element is the existence of an element of ability or empowerment of the local government in realizing the related e-government dreams to becoming a reality. This availability is already there even though adjustments are still needed in various aspects in order to run optimally.
- c. **Value**—the first and second elements are two aspects that are seen from the government side as the public service provider (supply side). Various e-government initiatives will not be useful if there are no parties who feel benefited from the implementation of the concept and in this case, it is not the government itself that determines the size of the

benefits derived from the existence of e-government, but the community and those who are interested in.

These points are currently being implemented because the society does expect prime services from the police, especially in traffic sector. Public services related to traffic that are supported by excellent services by utilizing information technology will result in a good image of traffic police. Optimizing excellent services, especially in the traffic functions, are highly expected to support the National Police efforts in achieving goals related to *Presisi* program so that it can further increase public trust in the National Police institutions in providing services.

Therefore, in order to accommodate the interests of community, the National Police should reform the community service system which consists of improving service methods or procedures in every part of the organization. The task of public services is indeed the obligation of police institution in realizing it, starting from the level of the National Police Headquarters to the smallest unit in the regions to provide quality services, open information and fulfil the rights of community.

5. CONCLUSIONS AND IMPLICATIONS

5.1 Conclusions

Based on the results of the study and the discussion, it can be concluded that:

a. The implementation of E-TLE system in reducing the number of traffic accident has been running

optimally. Based on the research findings, it can be said the application of ETLE system—by looking at the comparison of traffic data in the period of April 2016-October 2018 and the period of November 2018-June 2021—has not been able to reduce the number of traffic accidents optimally. However, if we look at the accident rate in Jakarta for the January-June 2021 period, the accident rate has decreased by 9 percent compared to January-June 2020 period. This decline is also inseparable from the role of E-TLE cameras. Thus, it can be synthesized that ETLE system has not been able to directly reduce the number of traffic accidents optimally. If examined further, ETLE system can be used as evidence in the incident of a traffic accident in areas equipped with ETLE system, because it can record and capture vehicles, even people who are driving vehicles that have crashed, for example. However, this system cannot prevent traffic accidents directly.

b. In order to see the success of the implementation of E-TLE by Ditlantas Polda Metro Jaya, it is necessary to look at factors that influence the implementation of ETLE system using Malau's theory (2009: 10) which consists of leadership, institutional system, and community participation which can be explained as follows:

1) Based on the results of the study, it can be concluded that leadership aspect has been implemented well where the leader has a good vision and high innovation

- power in order to improve public services, especially related to the implementation of ETLE system.
- 2) Based on the results of the study, it can be concluded that institutional system aspect has actually been implemented by Ditlantas Polda Metro Jaya, although the provision is still not optimal.
 - 3) Based on the results of the study, it can be concluded that community participation aspect has been carried out by Ditlantas Polda Metro Jaya, though the implementation is still not optimal.
- c. Optimal implementation efforts of ETLE system in providing sustainable safety and security services driving is reviewed using the results of studies from Harvard JFK School of Government which include support, capacity and value. The points of this theory have also been implemented by Ditlantas Polda Metro Jaya. However, improvements are still needed from various aspects so that the implementation of the ETLE system can run optimally.

5.2 Implications

Based on the conclusions above, the author proposes the recommendations as follows:

- a. Polda Metro Jaya chief should propose to Corps of Traffic head to compile a more detailed table system for fines in order to make it easier for traffic officers in the fields to determine the amount of fines and the similarity in

determining fines in all regional units.

- b. Director of Ditlantas Polda Metro Jaya should propose to Polda Metro Jaya chief to revise rules regarding manual ticket proof sheets as a condition for administration of ticket incentives for officers to also use electronic ticket proof sheets (e-tilang) in the process of disbursing ticket incentive funds.
- c. Polda Metro Jaya chief should propose to the National Police chief to establish an MoU between the Supreme Court, the Attorney General's Office and the National Police which regulates the use of electronic evidence in law enforcement of traffic violations as well as on the implementation of online ticketing nationally in which the fines for the ticketing table are adjusted to the characteristics of people in each police region.

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