

# Compliance and Awareness as Mediation Variables on the Influence of Utility and Trust of Electronic Traffic Law Enforcement on the Traffic Habit

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*Abstract:* - Road safety is the most important and main thing in traffic management. This is the shared responsibility of all elements of the nation, including regulators, law enforcement, road users, and so on. Based on this background, the purpose of this study is to determine and analyze the direct effect of Compliance and Awareness as mediating variables on the Effect of Utility and Trust in Electronic Traffic Law Enforcement on Behavior. The analysis of this research uses a survey method conducted at the intersection of Jalan Merdeka Selatan, Gambir, Central Jakarta. The population in this study were road users, namely four-wheeled drivers who passed the Jalan Merdeka Selatan intersection. The sampling technique used is non-probability sampling. The nine hypotheses gave a decision to reject the null hypothesis which means significant, meaning that each variable has a direct and significant effect on each other, namely: ETLE utility affects Compliance, Awareness, and Habits directly and significantly; ETLE trust directly and significantly influences Compliance, Awareness, and Habits; Compliance directly and significantly affects Consciousness and Habits; Awareness directly and significantly influences Habits. ETLE utility indirectly and significantly affects Compliance, Awareness, and Habits. ETLE trust indirectly and significantly influences Compliance, Awareness, and Habits. Compliance has an indirect and significant effect on Awareness and Habits. Develop a Habits in Traffic model defined by ETLE Utility and Trust mediated by Compliance and Awareness. The authenticity of this study can be seen in the indirect effect where there is still no research with the direction of such relationships and variables.

*Key-Words:* - Awareness, Compliance, Road safety, Habit, Trust of ETLE, Utility of ETLE

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## 1 Introduction

Road safety is the most important and major concern in traffic management. This is the joint responsibility of all elements of the nation, including regulators, law enforcers, road users, and so on. All should jointly help each other to achieve this. Network traffic monitoring is a collection of techniques used sequentially to determine the nature of traffic per packet or flow rate. In addition, the network is monitored based on traffic statistics and network analysis depending on the availability of network traffic measurements [1]. With today's high-speed life, traffic jams are an urgent issue to talk about and avoid. Traffic congestion causes a decrease in the productivity of individuals and society because most of the productive working hours are wasted in traffic lanes. The increasing number of road vehicles, limited road infrastructure, and the unreasonable spread of signaling systems are causing frequent congestion on roads today [2].

One of the things that are very important and closely related to road safety is the compliance of road users with traffic rules and regulations. The more people obey the traffic rules and regulations, the fewer traffic accidents or safety on the road will increase. Therefore, community traffic compliance must always be improved, and it is hoped that it will become a habit over time. If this has been achieved, it is believed that traffic accidents will be reduced or road safety will increase.

The government in trying to improve safety, security, and comfort on the road has made various efforts. Several policies have been formulated and implemented. One of them is technology utilization, namely ETLE (Electronic Traffic Law Enforcement). This policy is expected to increase the compliance of road users with traffic regulations. The expected output is that public awareness will increase, and then good social order will be formed. On the other hand, the expected outcome is that the community becomes accustomed

to obeying the traffic rules and regulations. However, how successful the policy implementation is, it is necessary to conduct an in-depth and scientific study through a research activity. If the implementation of the policy is successful, it is expected and believed to be able to reduce accidents and improve traffic safety.

Electronic Traffic Law Enforcement (ETLE) is a traffic law enforcement system based on information technology using an electronic device in the form of a camera which can detect various types of traffic violations and present motor vehicle data automatically (Automatic Number Plate Recognition). ETLE camera recordings can be used as evidence in a traffic violation case. There is an orientation behind the implementation of electronic ticketing using ETLE cameras are to reducing traffic violations and efforts to increase the value of non-tax state revenue from ticket fines. ETLE is expected to reduce the number of traffic violations. Motorists must obey all traffic regulations if they do not want to be sent a "love letter" by the police. The public generally only wants legal certainty, and law enforcement in principle must be able to provide benefits or use (Utility) for the community. In addition, the community expects law enforcement to achieve justice. However, we cannot deny that what is considered useful (sociologically) is not necessarily fair, and vice versa, what is considered fair (philosophically) is not necessarily useful for society [3].

Orderly traffic in Indonesia is a big problem that requires the support and cooperation of all parties. Community support and cooperation in supporting the police's duties can be seen in the form of trust given. Public trust in the police is very important. Public trust must also be supported by the seriousness of the police in handling the various traffic. Trust is a basic component of forming cooperative relationships [4].

An orderly society can only be achieved if each individual carries out his obligations and receives his rights from others. With the existence of Utility and Trust for ETLE, it is hoped that they can provide understanding to the community in obeying the prevailing traffic regulations to form a social order. Social order is a condition in which social relations between community members are harmonious in accordance with the values and

norms in society. Social order is basically the order of society, which is governed by moral rules [5].

Based on the descriptions that have been explained, it is necessary to harmonize the ETLE concept in Indonesia, especially Jakarta. With the change in the system with ETLE (Electronic Traffic Law Enforcement), this study aims to examine trust as a habit through the mediation of compliance, awareness, and social order, as well as culture as moderation.

## 2 Literature Review

### 2.1 Utility of ETLE

Fahmi's research (2016) examines the utility of the implementation of the 1945 Constitution in general elections. Fahmi (2016) found that general elections should have a high utility for the community, if implemented in accordance with the mandate of the 1945 Constitution. For the Utilitarianism school, actions are right if they are proportional to their tendency to encourage happiness, and wrong if proportional to their tendency to produce the opposite of happiness. At least, there are two main principles contained in the teachings of this school, namely: 1) The purpose of life is happiness; and 2) The truth of an action is measured by how much it contributes to the achievement of happiness.

### 2.2 Trust of ETLE

Trust, in the concept of public administration, is a sense of trust in the policy object (society) towards the implementer of the policy (government/bureaucrats). Trust can also influence the community in implementing and respecting government policies. Without trust, a policy may only become a theory without clear practice.

Tepe's research [6] tried to find out people's trust in public services in the United States. Trusts tested include the point of view of humanities students, who are expected to be more sensitive to social issues. This research showed that trust boosts the implementation of public policies significantly. According to Moorman [7], trust is defined as the desire to give something to a trusted partner. This opinion can illustrate research conducted by Rotter's, which stated that trust is the general expectation that individuals have that the words that come from other parties are reliable. When a person makes a decision, he will prefer decisions based on

the choices of people whom he can trust more than those who are less trusted. Trust is very important for a commitment or promise, and commitment can only be realized if it means something.

Morgan and Hunt [8] in Darsono & Dharmmesta [9] stated that when one party has confidence that the other party involved in the exchange has reliability and integrity, it can be said that there is trust. Trust is important in having an interpersonal relationship. Scientifically, trust is defined as relying on the behavior of other individuals to achieve the desired goals, whose achievement is uncertain and in a situation full of risks (Giffin, in Rakhmat [10]).

Zalabak, et al. [11] explained that there are five key dimensions of trust, namely: ability, openness, attention, reliability, and identification. So, based on the definition described above, the definition of trust is the willingness of the community to accept the police based on the positive expectation that the police have the ability, are open, have a concern, are reliable, and reflect their institution.

### 2.3 Compliance

According to Rosana [12], obedience is the perception and loyalty of the community to the law, which is usually applied as a result of living together (the rules of the game), where loyalty manifests itself in the form of actions such as: Follow the rules. Law (between *das sein* and *das sollen* are the same thing). Compliance according to Hartono [13] is the attitude of trust between individuals towards others and acceptance of other people's demands and one's actions to carry out orders or requests from others. There are several factors that cause people to comply with the law [14], namely: (1) Compliance; (2) Identification; (3) Internalization; (4) Interests of the citizens are guaranteed by existing legal institutions.

### 2.4 Awareness

Awareness comes from the word aware, which means being aware, feeling, knowing, or understanding [15]. Aware means knowing, realizing, and feeling. Awareness means realization, a state of understanding, what a person feels or experiences. Legal awareness can mean conviction, the condition of someone who really understands what law is, the function, and the role of law for himself and the community around him. Mertokusumo [16] stated that legal awareness

means awareness of what we should do or what we shouldn't do, especially towards other people. This means awareness of our legal obligations towards others.

According to Soekanto [17], high legal awareness will make community members obey the applicable legal provisions. However, if legal awareness is very low, then the level of law obedience is not high either. Soekanto also pointed out four elements of legal awareness, namely: (1) Legal regulations; (2) Legal acquaintance; (3) Legal attitude; (4) Legal behavior patterns.

### 2.5 Habit

Habit has two meanings, namely: something that is usually done and a pattern for responding to certain situations that an individual learns and does repeatedly for the same thing. Actions that are often repeated will certainly become a habit. If the habit is repeated, it will certainly become one's character. Furthermore, the character becomes a stamp of that person by practicing the same action, so a person has a certain personality.

Said [18] argues that a habit is something that is repeated without reason over and over again, in the same way, most of the time, or something inherent in the soul something that happens repeatedly and is accepted naturally. It can be concluded that people make habits without thinking because they are rooted in the human mind and become human nature. If people have the habit of obeying the rules, then this habit will be seen in the regular traffic on the highway.

## 3 Research Method

The approach in this research was a quantitative approach by using the survey method. The population of this study was road users, namely four-wheeled drivers who pass the Intersection of Merdeka Selatan street, Gambir, Central Jakarta. The sampling technique was nonprobability sampling, considering that the population is infinite, so there is no sampling frame (list of sample members). The side technique was a combination of quota sampling and accidental sampling to obtain an overall sample of  $n = 200$  drivers. Variable measurement in this study used a questionnaire with Likert scale. The response items were on a scale ranging from 1 to 5. Two analyzes were conducted, namely descriptive analysis and SEM. The

following are the research conceptual model which is presented in Figure 1.

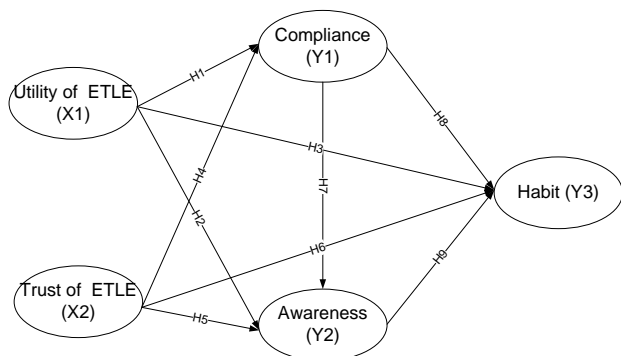


Fig 1. Research Conceptual Model

The following is the research hypothesis:

- H1. Utility of ETLE has a significant effect on Compliance
- H2. Utility of ETLE has a significant effect on Awareness
- H3. Utility of ETLE has a significant effect on Habit
- H4. Trust of ETLE has a significant effect on Compliance
- H5. Trust of ETLE has a significant effect on Awareness
- H6. Trust of ETLE has a significant effect on Habit
- H7. Compliance has a significant effect on Awareness
- H8. Compliance has a significant effect on Habit
- H9. Awareness has a significant effect on Habit.

### 4 Result

Data from the questionnaire were analyzed using GSCA. Variables, ETLE Utility, ETLE Trust, Compliance, and Awareness using a reflective indicator model. The reflective indicator model in the measurement model obtained the magnitude of the loading factor coefficient which serves to determine which indicator is the strongest in reflecting these variables. The greater the coefficient of the loading factor, the greater the indicator that measures the variables. Table 1 is the outer loading table and the mean of the research variables.

Table 1. Variable Measurement

Variable	Indicator	Outer Loading	Mean Indicator
Utility of ETLE (X1)	Possession Utility (X.1.1)	0.846	4.69
	Goal Utility (X.1.2)	0.858	4.62

Utility of ETLE (X1)	Place (X.1.3)	Utily	0.856	4.47
	Fom (X.1.4)	Utily	0.831	4.65
	Time (X.1.5)	Utily	0.833	4.62
	Actualiation Utility (X.1.6)		0.878	4.57
Trust of ETLE (X2)	Shared Value (X.2.1)		0.917	4.49
	Communication (X.2.2)		0.921	4.59
	Opportunistic Behaviour Control (X.2.3)		0.922	4.58
Compliance (Y1)	The personal tendency to be honest (Y1.1.1)		0.904	4.65
Awareness (Y2)	Awareness that orderly traffic is a form of participation in supporting national development (Y.2.1)		0.941	4.67
	The awareness that disorderly traffic is very detrimental (Y.2.2)		0.948	4.64
	The awareness that traffic order is established by law and can be enforced (Y.2.3)		0.942	4.65
Habit (Y3)	Order (Y.3.1)		0.762	4.66
	Human Nature (Y.3.2)		0.774	4.62
	Response (Y.3.3)		0.825	3.91
	Behavior (Y.3.4)		0.500	2.41

Based on Table 1, it can be seen that Utility of ETLE is measured by six indicator which shows that the indicator with most dominant effect in measuring Utility of ETLE (X1) is Actualiation Utility (X.1.6) with an outer loading value of 0.878 with a mean of 4.57. This indicates that the Utility of ETLE in Jakarta society is already in the good category. Furthermore, there are three significant

measuring Trust of ETLE (X2) namely Shared Value, Communication dan Opportunistic Behaviour Control. Opportunistic Behaviour Control (X.2.3) has an outer loading value of 0.922 with a mean of 4.58. This indicates that Trust of ETLE in Jakarta society is already in the good category. Compliance (Y1) is measured significantly by three indicators, namely the personal tendency to be honest, the personal tendency to feel always being watched, and the personal tendency not to cheat. However, the dominant indicator in measuring Compliance is the personal tendency not to cheat (Y1.3) with an outer loading value of 0.418 and a mean of 3.34. Next, Awareness (Y2) is measured significantly by three indicators has the dominant indicator with a value of 0.948 and a mean 4.64 which is owned by The awareness that disorderly traffic is very detrimental (Y.2.2). The last, Habit (Y3), the dominant indicator is

Habit variable (Y3), the strongest measuring indicator is Response (Y4.3) with an outer loading value of 0.343 and a mean of 3.37. This shows that the response of the community around the Jakarta Metrojaya Police gave a good response to the existence of ETLE..

#### 4.1 Direct Effect Testing

Based on the test at Table 2, the results obtained that the effect has a p-value of less than 0.05, which means that the influence between research variables is significant.

Table 2. Direct Effect Hypothesis Testing.

Variables	Coefficient	p-value
X1 → Y1	0,235	<0.001
X1 → Y2	0,118	0.045
X1 → Y3	0,231	<0.001
X2 → Y1	0,552	<0.001
X2 → Y2	0,557	<0.001
X2 → Y3	0,001	0.493
Y1 → Y2	0,207	0.001
Y1 → Y3	0,171	0.007
Y2 → Y3	0,498	<0.001

So that the following conclusions can be drawn.

- 1) Utility of ETLE (X1) has a significant effect on Compliance (Y1) with a path coefficient of 0.235 and p-value <0.001
- 2) Utility of ETLE (X1) has a significant effect on Awareness (Y2) with a path coefficient of 0,118 and p-value 0.045

- 3) Utility of ETLE (X1) has a significant effect on Habit (Y3) with a path coefficient of 0.231 and p-value <0.001
- 4) Trust of ETLE (X2) has a significant effect on Compliance (Y1) with a path coefficient of 0.552 and p-value <0.001
- 5) Trust of ETLE (X2) has a direct significant effect on Awareness (Y2) with a path coefficient of 0.0557 and p-value <0.001
- 6) Trust of ETLE (X2) has a direct significant effect on Habit (Y3) with a path coefficient of 0.001 and p-value 0.493
- 7) Compliance (Y1) has an indirect significant effect on Awareness (Y2) with a path coefficient of 0.207 and p-value 0.001
- 8) Compliance (Y1) has an indirect significant effect on Habit (Y3) with a path coefficient of 0.171 and p-value 0.007

Awareness (Y2) has an indirect significant effect on Habit (Y3) with a path coefficient of 0.498 and p-value <0.001

#### 4.2 Indirect Effect Testing

Based on the table 3, the result shows that the effect has a p-value of less than 0.05, which means that the influence between research variables is significant.

Table 3. Indirect Effect Hypothesis Testing.

Variables	Coefficient	p-value
X1 → Y1 → Y2	0.049	0.012
X1 → Y1 → Y3	0.059	0.038
X2 → Y1 → Y2	0.114	0.040
X2 → Y1 → Y3	0.094	0.006
X2 → Y2 → Y3	0.277	0.000
Y1 → Y2 → Y3	0.103	0.036

So that the following conclusions can be drawn.

- 1) Utility of ETLE (X1) has an indirect significant effect on Awareness (Y2) through Compliance (Y1) with a path coefficient of 0.049 and a p-value of 0.012
- 2) Utility of ETLE (X1) has an indirect significant effect on Habit (Y3) through Awareness (Y2) with a path coefficient of 0.059 and a p-value 0.038
- 3) Trust of ETLE (X2) has an indirect significant effect on Awareness (Y2) through Compliance (Y1) with a path coefficient of 0.114 and a p-value 0.040
- 4) Trust of ETLE (X2) has an indirect significant effect on Habit (Y3) through Compliance (Y1) with a path coefficient of 0.094 and p-value 0.006

- 5) Trust of ETLE (X2) has an indirect significant effect on Habit (Y3) through Awareness (Y2) with a path coefficient of 0.090 and p-value 0.035
- 6) Compliance (Y1) has an indirect significant effect on Habit (Y3) through Awareness (Y2) with a path coefficient of 0.103 and p-value 0.036

## 5 Discussion

### 5.1 The Effect of Utility of ETLE on Compliance

The hypothesis result shows that Utility of ETLE gives a positive direct significant effect on Compliance. This can be seen from the path coefficient of 0.235 with p-value <0.001. This positive relationship indicates that the better the ETLE Utility that is implemented in Jakarta, the better community compliance (having higher compliance) in traffic. **So that Hypothesis 1 is accepted.**

The results of this study are in line with several previous studies, namely Verma et al. (2011) and Barker et al. (2008). Verma et al. (2011) in his research discusses traffic law enforcement in India, particularly related to the traffic law enforcement system. In the study of Verma et al. (2011) discuss driver behavior and licensing procedures as an effective preventive measure and road safety. Verma explained that driving education and licensing in driving will support road safety. Thus the results of this study develop the concept of the research results of Verma et al. (2011), previously researched on objects related to traffic law enforcement, and traffic compliance. Barker et al. (2008) in his research discusses the interaction of the police with civil society in Korea. In the study of Barker et al. (2008) explored the effect of police officer communication accommodation and reported trust in police about attitudes about police compliance. Barker explained that the perception of police communication accommodation will support the public to comply with police requests. Thus, the results of this study develop the concept of the research results of Barker et al. (2008), previously studied on objects related to communication accommodation, in this study provides a perspective related to the utility of ETLE its effect on community compliance in traffic.

### 5.2 The Effect of Utility of ETLE on Awareness

The hypothesis result shows that Utility of ETLE gives a positive direct significant effect on Awareness. This can be seen from the path coefficient of 0.118 with p-value 0.045. This positive relationship indicates that the better the Utility of ETLE will give the better community Awareness (having higher awareness) in traffic. **So that Hypothesis 2 is accepted.**

The results of this study are in line with several previous studies, namely Bates et al. (2016), Goodwin and Foss (2004) and Razip et al. (2014). Research Bates et al. (2016) and Goodwin and Foss (2004) discuss the violations detected by the system while driving. Research by Goodwin and Foss (2004) shows the large role of parents in giving consent to driving. And the large percentage of teenagers who commit violations. The results of this study provide a new perspective on the concept of research by Bates et al. (2016), Goodwin and Foss (2004) regarding Utility ETLE which has an effect on driving awareness. Razip et al. (2014) in his research explored the design and use of mobile visual analytics tools for public safety data that equip law enforcement agencies with effective situation awareness and risk assessment tools. In line with this research, namely exploring the ETLE system in enforcing public awareness in driving. Where, ETLE Utility is a system that provides a set of interactive tools for users that allows them to analyze and detect various types of driving violations. This research has similarities with the research concept of Razip et al. (2014), previously investigated on objects related to system design to enforce laws that will affect public awareness

### 5.3 The Effect of Utility of ETLE on Habit

The hypothesis result shows that Utility of ETLE gives a positive direct significant effect on Habit. This can be seen from the path coefficient of 0.059 with p-value 0.038. This positive relationship indicates that the better the Utility of ETLE will give the better community Habit in traffic. **So that Hypothesis 3 is accepted.**

The results of this study are in line with previous research conducted by Dewanto [19] discussing applying information technology in realizing an orderly traffic community (a case study on electronic traffic law enforcement programs conducted by traffic directorate of Jakarta metropolitan police region in 2019-2020). Dewanto's research [19] shows the use of information technology in assisting the police task

and reducing the number of traffic violations that occur in the jurisdiction of the Polda Metro Jaya by using ETLE. The results of this study reveal that the ETLE system has facilitated the work of traffic officers in enforcing traffic regulations..

#### **5.4 The Effect of Trust of ETLE on Compliance**

The hypothesis result shows that Trust of ETLE gives a positive direct significant effect on Compliance. This can be seen from the path coefficient of 0.552 with  $p\text{-value} < 0.001$ . This positive relationship indicates that the better the Trust of ETLE that owned by Jakarta community, will give the better community Habit in traffic. **So that Hypothesis 4 is accepted.**

This means that Trust ETLE has a significant effect on Compliance. The research developed Shalhoub's [20] research which aims to address the problem. Lack of trust in online is one of the main reasons for the relatively low adoption of electronic commerce, especially in developing and developing countries such as the Gulf Cooperation Council (GCC). In addition, this study is in line with the research of Oliva and Compton [21] which aims to collect narrative data from police officers about the social environment of law enforcement rooms and classroom experiences that are valued by law enforcement officers. This study develops Weiss and Freels [22] with the results of the study not providing clear evidence that providing more traffic law enforcement will reduce crime. For now, the relationship between aggressive policing and crime remains uncertain. Retting, et al. [23] conducted a study that resulted in a large and very significant reduction in red light violations within one year following the implementation of the red light camera enforcement program at Fairfax. Most Fairfax residents know about cameras, and the rate of violations on camera and non-camera sites decreased by about 40 percent one year after law enforcement began.

#### **5.5 The Effect of Trust of ETLE on Awareness**

The results of hypothesis testing indicate that Trust of ETLE has a positive and significant effect on Awareness. This can be seen from the path coefficient of 0.557 with a  $p\text{-value} < 0.001$ . This positive relationship indicates that the better the Trust of ETLE owned by the people of Jakarta, the better public awareness (having higher awareness) in traffic. Trust of ETLE mediated by Compliance has a significant effect on Awareness. This means

that Compliance mediates the effect of Trust of ETLE on Awareness. The higher the Trust of ETLE followed by an increase in Compliance, the higher the Awareness will be. **So that Hypothesis 5 is accepted.**

This research is in line with Grindle's Theory which suggests that the success of public policy implementation is influenced by the content variable, and the implementation environment variable or contacts. One of the variables in Grindle's theory (1990) suggests that one of the scopes of the content variable is the type of benefit received by the target. In this study, the target is the people of Jakarta who can obey in driving because of the trust factor in an ELTE system that is enforced.

#### **5.6 The Effect of Trust of ETLE on Habit**

The hypothesis result shows that Trust of ETLE gives a positive direct significant effect on Habit. This can be seen from the path coefficient of 0.277 with  $p\text{-value} 0.000$ . This positive relationship indicates that the better the Trust of ETLE will give the better community Habit in traffic. **So that Hypothesis 6 is accepted.**

The results of this study are in line with previous research conducted by Oktaviana [24] discussing the effect of the intensity of watching ETLE news on traffic law awareness behavior in Central Jakarta City. Oktaviana's research [24] shows that news programs broadcast by television media provide positive things regarding the news of the expansion of the ETLE camera to the public. The results of this study reveal that the sheer volume of news regarding the expansion of ETLE cameras around the city of Central Jakarta can affect public habits.

#### **5.7 The Effect of Compliance on Awareness**

Hypothesis 4, which tests between Compliance (Personal tendency to be honest (Y1.1), Personal tendency to feel always being watched (Y1.2), and Personal tendency not to cheat (Y1.3)) to Awareness (Awareness that orderly traffic is a form of participation in supporting state development (Y2.1), Awareness that disorderly traffic is very detrimental (Y2.2), and Awareness that traffic order is established by law and can be enforced (Y2.3)), has a coefficient value in group 1 of 0.191 with a  $p\text{-value}$  of 0.006 and group 2 of 0.275 with a  $p\text{-value}$  of 0.000. **So that hypothesis 7 is accepted.**

This means that the higher the compliance, the higher the awareness of the drivers. The results of this study are in line with Arora's [25] research, which showed that most drivers follow driving

traffic rules and signs. A minority of drivers do not believe that following traffic rules can lead to accidents and other traffic problems. In addition, research Zhao, et al. [26] conducted a study aimed to investigate the correlation between driver safety awareness and several indexes and proposed an objective evaluation criterion, which could include multiple safety awareness for a measurable objective index. This study supports the research conducted by Anam, et al. [27], which generates awareness of taxpayers, and taxpayers who have a significant influence on tax payment compliance in Salatiga.

### 5.8 The Effect of Compliance on Habit

Hypothesis 5, which tests between Compliance (Personal tendency to be honest (Y1.1), Personal tendency to feel always being watched (Y1.2), and Personal tendency not to cheat (Y1.3)) to Habit (Repetition (Y4.1), Human Nature (Y4.2), Response (Y4.3), and Behavior (Y4.4)) has a coefficient value in group 1 of 0.173 with a p-value of 0.013 and group 2 of 0.246 with a p-value of 0.000. So that Hypothesis 5 is accepted. In addition, Y1 also has a significant indirect effect on Y4 through Y2 with a path coefficient of 0.087 and a p-value of 0.040. **So that Hypothesis 8 is accepted.**

This means that compliance has a significant direct or indirect effect on habits. The higher the compliance, the better the habit will be. This study is in line with the research of Pahnla, et al. [28], which showed that the quality of information has a significant effect on actual IS security policy compliance. Attitudes, beliefs, and normative habits of employees have a significant effect on the intention to comply with the IS security policy. Threat assessment and facilitation conditions have a significant impact on attitudes towards compliance while coping assessments do not have a significant effect on employee attitudes towards compliance. Sanctions have no significant effect on the intention to comply with IS security policies and rewards have no significant effect on actual compliance with IS security policies. In addition, this study is also in line with the research of Bowes, et al. [29], which aimed to apply the Theory of Planned Behavior (TPB) to explore the factors that influence non-compliance with off-leash dog regulations on visitors of the Canadian Pacific Rim National Park Reserve. Haj Taieb [30] conducted a study using system dynamics to identify the factors that influence driver compliance with the law and how these factors can be affected to increase compliance, and thus safety. Dan Vance, et al. (2012) conducted a study to integrate habits (routine forms of past

behavior) with Protection Motivation Theory (PMT), to explain compliance.

### 5.9 The Effect of Awareness on Habit

Hypothesis 7, which tests between Awareness (Awareness that orderly traffic is a form of participation in supporting state development (Y2.1), Awareness that disorderly traffic is very detrimental (Y2.2), and Awareness that traffic order is established by law and can be enforced (Y2.3)) to Habit (Repetition (Y4.1), Human Nature (Y4.2), Response (Y4.3), and Behavior (Y4.4)), has a coefficient value in group 1 of 0.254 with a p-value of 0.000 and group 2 of 0.330 with a p-value of 0.000. So that hypothesis 7 is accepted. In addition, Y2 has an indirect significant effect with Y4 through Y3 with a path coefficient of 0.065 and a p-value of 0.065. **So that Hypothesis 9 is accepted.**

Awareness has a significant direct effect but does not have a significant indirect effect on habits. The direction of the influence of awareness on habits is positive. So, the higher the driver's awareness of driving, the higher the habits he will have. The results of this study, which indicate a positive and significant effect, are supported by research by Kremers, et al. [31], Bayer, et al. [32], and Lally, et al. [33]. In detail, the research results of Kremers, et al. [31] showed that children with high awareness of personal behavior and high habitual strength reported being more physically active. In addition, psychosocial factors are less associated with physical activity in children with low awareness of their personal physical activity levels. Furthermore, research by Bayer, et al. [32] presented a model of how unconscious "trigger" to check mobile devices, or connection cues, affect communication flow. Research Lally, et al. [33] aimed to investigate the process of forming habits in everyday life.

### 5.10 The Indirect Effect

The results of the hypothesis test of the indirect effect show that there is a positive and significant influence between the variable relationships. This indicates that the mediating variables, namely Compliance and Awareness, have a role to strengthen the influence of the Utility of ETL and Trust of ETL on Habit. The originality of this research is seen in the indirect effect where there is still no research with such a direction of relationship and variables.



## 6 Research Limitations

There are two research limitations in this study, namely:

1. This research on the implementation of policies regarding the application of ETLE (Electronic Traffic Law Enforcement) uses a quantitative approach. Research variables were measured quantitatively using a research instrument in the form of a questionnaire. On the other hand, the research method used is to take samples from the population. The survey was conducted by giving questionnaires to respondents.
2. This research is also confirmatory research, namely through empirical hypothesis testing. The integration of all hypotheses into a research model, namely a model of obedient traffic habits.
3. This research was conducted at the intersection of Merdeka Selatan street, Gambir, Central Jakarta. The location was chosen as the research setting considering that the location has implemented the ETLE system.
4. This study only used Utility of ETLE (X1) and Trust of ETLE (X2) as a predictor variables and Compliance (Y1), Awareness (Y2) and Habit (Y3) as the response variable.

## 7 Conclusion and Implication

Based on the results of the analysis, it can be concluded that the nine hypotheses have a significant influence. Which means that each variable has a direct effect on each other, namely: Utility of ETLE has a direct and significant effect on Compliance, Awareness and Habits; Trust of ETLE has a direct and significant effect on Compliance, Awareness and Habits; Compliance has a direct and significant effect on Awareness and Habits; Awareness has a direct and significant effect on Habits. Utility of ETLE has an indirect and significant effect on Compliance, Awareness, and Habits. Trust of ETLE has an indirect and significant effect on Compliance, Awareness, and Habits. Compliance has an indirect and significant effect on Awareness and Habits. The implications of the results of this study are as a perspective to obtain information that Utility of ETLE and Trust of ETLE have an effect on increasing traffic awareness. Thus, it is necessary to increase the use of ETLE (Electronic Traffic Law Enforcement) to increase awareness of morning traffic for motorized vehicle drivers. With increased compliance and awareness

of traffic, traffic violations and the number of traffic accidents can be reduced or decreased as well as more orderly and orderly motorized vehicle drivers. Moreover, If you want to create a habit for orderly traffic, the police need to socialize with the public about the advantages of ETLE and make people believe that driving will always be supervised by ETLE. These two things can create an orderly habit of driving if it is supported by an obedient attitude and awareness of orderly traffic by the community.

### References:

- [1] Vijay Prasad, Uwais Ali, Mansour H. Assaf, Sunil R. Das, Satyendra N. Biswas, "Real Time Intelligent Traffic Light System", WSEAS Transactions on Systems, vol. 19, hlm. 20-25, 2020.
- [2] Omran M. A. Alssaheli, Z. Zainal Abidin, N. A. Zakaria, Z. Abal Abas, "Implementasi Network Traffic Monitoring using Software Defined Networking Ryu Controller," WSEAS Transactions on Systems and Control, vol. 16, hlm. 270-277, 2021.
- [3] Arief B N, Masalah penegakan hukum dan kebijakan penanggulangan kejahatan, Citra Aditya Bakti, 2001.
- [4] Hutapea P., & Nurianna Thoha M B A, Kompetensi plus, Gramedia Pustaka Utama, 2008.
- [5] Berry D, Pokok-Pokok Pikiran dalam Sosiologi, Jakarta, PT. Raja Grafindo Persada, 2003.
- [6] Tepe M, In Public Servants We Trust?: A behavioural experiment on public service motivation and trust among students of public administration, business sciences and law, Public Management Review, Vol.18, No.4, 2016, pp. 508-538.
- [7] Moorman C., Deshpande R., dan Zaltman, G, Factors affecting trust in market research relationships, Journal of marketing, Vol. 57, No.1, 1993, pp. 81-101.
- [8] Morgan R M, & Hunt S D, The commitment-trust theory of relationship marketing, Journal of marketing, Vol. 58, No. 3, 1994, pp.20-38.
- [9] Darsono L I., & Dharmmesta, B. S, Kontribusi Involvement Dan Trust In A Brand, Jurnal Ekonomi dan Bisnis Indonesia, Vol. 20, 2005.
- [10] Rakhmat J, Psikologi Komunikasi. Edisi Revisi, Cetakan ke-24, Bandung: PT. Remaja Rosdakarya Offset, 2007.
- [11] Zalabak S., Pamela S., Morreale Sherwyn P., Hackman Michael Z, Building the High-Trust Organization, USA: Jossey-Bass and

The International Association of Business Communicators, 2010.

- [12] Rosana, E, Kepatuhan Hukum Sebagai Wujud Kesadaran Hukum Masyarakat, *Jurnal Tapis: Jurnal Teropong Aspirasi Politik Islam*, Vol. 10, No. 1, 2014, pp.61-84.
- [13] Hartono, Kepatuhan dan Kemandirian Santri (Sebuah Analisis Psikologis) Ibdia, Purwokerto: P3m Stain, Vol. 4, No. 1, 2006.
- [14] Ali A, Menguak teori hukum (Legal theory) dan teori peradilan (Judicialprudence) termasuk interpretasi undang-undang (Legisprudence), Jakarta: Kencana, 2009.
- [15] Suharso & Retnoningsih, *Lalu Lintas dan angkutan jalan, Indonesia Legal Center*, Jakarta, 2005.
- [16] Mertokusumo S, *Meningkatkan kesadaran Hukum Masyarakat*, Liberty, 1981.
- [17] Soekanto S, *Faktor-faktor yang mempengaruhi Penegakan Hukum*, Rajawali, 1983.
- [18] Sayid, *Kebiasaan Baik dan Buruk dalam Hidup Manusia*, Gema Insani Press: Jakarta, 2006.
- [19] Dewanto R S, *Applying Information Technology In Realizing An Orderly Traffic Community (A Case Study On Electronic Traffic Law Enforcement Program Conducted By Traffic Directorate Of Jakarta Metropolitan Police Region In 2019-2020*, 2019.
- [20] Shalhoub Z K, Trust, privacy, and security in electronic business: the case of the GCC countries, *Information Management & Computer Security*, Vol. 14, No.3, 2006, pp.270-283.
- [21] Oliva J R., dan Compton M T, What do police officers value in the classroom? A qualitative study of the classroom social environment in law enforcement education, *Policing: An International Journal of Police Strategies dan Management*, Vol.33, No.2, 2010, pp.321-338.
- [22] Weiss A., & Freels S, The effects of aggressive policing: The Dayton traffic enforcement experiment, *American Journal of Police*, Vol.15, No.3, 1996, pp.45-64.
- [23] Retting R A., Williams A E., Farmer C M, & Feldman A F, Evaluation of red light camera enforcement in Fairfax, Va, USA. *ITE journal*, Vol. 69, 1999, pp.30-35.
- [24] Oktaviana, S., Mahriani, R., & Murti, K, Pengaruh Intensitas Menonton Berita Etle Terhadap Perilaku Sadar Hukum Lalu Lintas Masyarakat Kota Jakarta Pusat (Doctoral Dissertation, Sriwijaya University), 2021.
- [25] Arora P, A Descriptive Study on the Consciousness of Traffic Rules among the people of 'Amdavad'. *Socio – economic voices*, 2017.
- [26] Zhao W., Han,W., Wen Y., dan Zhang D, Study on objective evaluation method of taxi driver safety consciousness, *Procedia-social and behavioral sciences*, Vol.138, 2014, pp.11-21.
- [27] Anam M. C., Andini R., dan Hartono H, Pengaruh Kesadaran Wajib Pajak, Pelayanan Fiskus Dan Sanksi Pajak Terhadap Kepatuhan Wajib Pajak Orang Pribadi Yang Melakukan Kegiatan Usaha Dan Pekerjaan Bebas Sebagai Variabel Intervening (Studi di KPP Pratama Salatiga), *Journal Of Accounting*, Vol.4, No.4, 2018.
- [28] Pahnla S., Siponen M., & Mahmood A. Employees' Habittowards IS security policy compliance, In 2007 40th Annual Hawaii International Conference on System Sciences (HICSS'07), 2007, pp. 156b-156b.
- [29] Bowes M., Keller P., Rollins R., & Gifford R, *Habits, Beaches, Dogs and Leashes: Non- Compliance with Park Regulations*, PARKS, 2018.
- [30] Haj Taieb R, Energy, climate and air quality challenges: the role of urban transport policies in developing countries, CODATU, Istanbul, 2015.
- [31] Kremers S P., Dijkman M A., de Meij J S., Jurg M E., & Brug J, Awareness and habit: Important factors in physical activity in children. *Health Education*, 2008.
- [32] Bayer J. B., Campbell S. W., & Ling R, Connection cues: Activating the norms and habits of social connectedness, *Communication Theory*, Vol.26, No.2, 2016, pp.128-149.
- [33] Lally P., Van Jaarsveld C H., Potts H W., & Wardle J, How are habits formed: Modelling habit formation in the real world, *European journal of social psychology*, Vol.40, No.6, 2010, pp.998-1009.

### **Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)**

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Abdul Hakim Application of statistical and Management and coordination responsibility for the research activity.

Mardiyono Preparation of publication and conducting a research investigation

Solimun develop design and control methodologies for research activities.

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