

Effectiveness of Safety Helmet Use Policy in Reducing Traffic Accident Rates (Study at Semarang Police Traffic Unit)

Reyhan Brilianto¹⁾ & D. Djunaedi²⁾

¹⁾Faculty of Law, Universitas Islam Sultan Agung (UNISSULA) Semarang, Indonesia, E-mail: <u>Reyhanbrilianto.std@unissula.ac.id</u>

²⁾Faculty of Law, Universitas Islam Sultan Agung (UNISSULA) Semarang, Indonesia, E-mail: <u>D.</u> <u>Djunaedi@unissula.ac.id</u>

Abstract. In Indonesia, motorcycles are the main mode of transportation that is widely used because of its economical and efficient nature. Data shows that the majority of vehicles that pass through the highway are motorcycles. However, the high number of these two-wheeled vehicles is also one of the dominant factors contributing to accidents. Accidents involving motorcycles not only cause material losses but also significant fatalities. This makes the safety of motorcycle users a top priority in traffic management. However, in reality, the implementation of this regulation still faces various challenges. There are still many motorcyclists who ignore the obligation to wear helmets, either because of ignorance, indifference, or even because of a lack of awareness of the importance of safety. This phenomenon reflects a gap in the implementation of traffic safety policies. Helmets are often only used as a formality to avoid legal sanctions, not as a safety tool whose benefits are understood and appreciated. This shows the need for more intensive law enforcement and ongoing education for the community. The increasing trend in the number of accidents involving helmet use was also recorded in 2023, which was 1,153 cases, with 126 fatalities, 1 serious injury, and 1,098 minor injuries. Meanwhile, for accidents without helmet use, the number reached 103 cases, with 25 fatalities, no serious injuries, and 85 minor injuries. These data show that although the number of accidents involving helmet users is higher overall, the fatality rate for helmet users is relatively lower compared to victims who do not wear helmets. In 2024, there was another increase in accidents involving helmet users of 1,339 cases, with 121 fatalities, 1 serious injury, and 1,240 minor injuries. Meanwhile, accidents without helmet use were recorded at 102 cases, with 22 fatalities, no serious injuries, and 88 minor injuries. The same pattern can be seen, where fatalities from the group not wearing helmets remain proportionally higher than those wearing helmets.

Keywords: Accident; Helmet; Rates; Safety; Traffic.

1. Introduction

The Indonesian government has regulated the obligation to use helmets through Law Number 22 of 2009 concerning Traffic and Road Transportation. Provisions regarding the use of helmets are stated in Article 106 paragraph (8) which states that:

"Everyone who drives a motorbike and motorbike passengers are required to wear a helmet that meets Indonesian national standards."¹

This provision does not only apply to motorcyclists, but also to their passengers, so that every individual who uses a two-wheeled vehicle is required to use a helmet with the Indonesian National Standard (SNI). This aims to ensure that the helmet used has proven quality and is able to provide optimal protection in accident situations. To enforce this rule, the government has also set sanctions for violators. These sanctions are regulated in Article 291 paragraph (1) and (2) of the same law, which reads:

Verse (1):

"Any person who drives a motorbike without wearing a helmet as referred to in Article 106 paragraph (8) shall be punished with imprisonment for a maximum of 1 (one) month or a maximum fine of IDR 250,000.00 (two hundred and fifty thousand rupiah)."

Verse (2):

"Every motorcycle passenger who does not wear a helmet as referred to in Article 106 paragraph (8) shall be punished with imprisonment for a maximum of 1 (one) month or a maximum fine of IDR 250,000.00 (two hundred and fifty thousand rupiah)."²

This regulation shows the government's commitment to enforcing traffic safety by implementing strict sanctions for drivers and passengers who do not use SNI standard helmets. The implementation of sanctions is expected to increase public awareness of the importance of using helmets as a form of self-protection and prevent fatal injuries due to accidents. Semarang City as one of the metropolitan areas in Indonesia faces the same challenges. The high level of community activity, coupled with the rate of urbanization, has made the city's roads increasingly congested. Semarang Police, as a law enforcement institution responsible for traffic order, has initiated various programs to improve road user safety, including requiring motorcycle riders to wear helmets. However, the number of traffic

¹ Syahriwal, Pery Rehendra Sucipta, and Irwandi Syahputra, "The Role of Traffic Police Units in Handling Traffic Accidents Involving Children in the Jurisdiction of the Tanjungpinang Police Resort" (King Ali Haji Tanjungpinang Maritime University, 2022), <u>http://repositori.umrah.ac.id/3785/</u>.

² Utami Saha Nabla, Mahzaniar Mahzaniar, and M. Ridwan Lubis, "Legal Protection for Victims of Traffic Accidents on Highways from the Perspective of Law Number 22 of 2009," *Kalam Keadilan* 10, no. 1 (2022): 255–71.

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accidents in the city is still relatively high, indicating a problem with the effectiveness of the policy.³

Year	Category	Number of Accidents	MD	LB	LR
2022	Using a Helmet	950	104	4	890
	Not Wearing a Helmet	98	22	0	93
2023	Using a Helmet	1153	126	1	1098
	Not Wearing a Helmet	103	25	0	85
2024	Using a Helmet	1339	121	1	1240
	Not Wearing a Helmet	102	22	0	88
Total Ac	cidents	•	•		

Table 1.1 Data on the Number of Traffic Accidents Involving and Not Wearing a Helmet

Source: Republic of Indonesia National Police, Central Java Region, Semarang City Resort

Information:

MD = Died

LB = Serious Injury

LR = Minor Injury

The increasing trend in the number of accidents involving helmet use was also recorded in 2023, which was 1,153 cases, with 126 fatalities, 1 serious injury, and 1,098 minor injuries. Meanwhile, for accidents without helmet use, the number reached 103 cases, with 25 fatalities, no serious injuries, and 85 minor injuries. These data show that although the number of accidents involving helmet users is higher overall, the fatality rate for helmet users is relatively lower compared to victims who do not wear helmets. In 2024, there was another increase in accidents involving helmet users of 1,339 cases, with 121 fatalities, 1 serious injury, and 1,240 minor injuries. Meanwhile, accidents without helmet use were recorded at 102 cases, with 22 fatalities, no serious injuries, and 88 minor injuries. The same pattern can be seen, where fatalities from the group not wearing helmets remain proportionally higher than those wearing helmets.⁴

Table 1.2 Differences in Characteristics of SNI Helmets and Non-SNI Helmets	

Aspect	SNI Helmet	Non-SNI Helmet		
Test Standards	 Has passed the impact resistance, penetration, locking system, and face protection tests according to SNI 1811- 2007 	 Not passed official safety standards testing 		
Material	 ABS (Acrylonitrile Butadiene Styrene) material or high quality composite material that is impact resistant 	 Thin plastic or low quality fiber material 		

³ Nursanthy, Aji Titin Roswitha, and Maria Ana Liwa, "Legal Review of the Role of Traffic Police in the Implementation of Alternative Dispute Resolution (ADR) in Resolving Accident Cases in Kutai Kartanegara Regency," *Collegium Studiosum Journal* 4, no. 1 (2021): 28–36.

⁴Andrew R, Traffic Law Enforcement (Bandung: Nuansa, 2011), p. 77.

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Thickness	 According to minimum safety standard specifications (generally 4 mm and above) 	Often thinner than the minimum standard
Locking System	 Using a strong locking system (Double D-ring or micrometric buckle) that passes the tensile test 	 Many use plastic clips that come off easily
Label or Certification	 Has an official SNI logo printed/embossed on the helmet 	 No official label or using fake label
Impact Protection	 Designed to optimally absorb impact energy 	 Minimal protection against high impacts
Helmet Weight	 Adjusted for stability and wearing comfort (not too light or too heavy) 	 Tends to be very light but reduces protection
Shelf Life	 Recommended 3–5 years of normal use 	 No recommended lifespan, wears out quickly
Price	 Relatively more expensive due to material quality and safety testing. 	 Generally cheaper because of the materials available
Legal Compliance	 Must be used in accordance with Article 57 paragraph (2) and Article 106 paragraph (8) of Law Number 22 of 2009 concerning Traffic and Road Transportation 	 Not fulfilling legal requirements, may be subject to sanctions

2. Research Methods

This study uses a sociological legal approach method. The sociological legal method, also known as empirical legal research, is an approach that examines law not only as a written norm but also as a social phenomenon that lives and develops in society. This approach combines analysis of legislation (legal aspect) with the reality of implementation and its impact in society (sociological aspect).⁵

3. Results and Discussion

3.1. Implementation and Effectiveness of the Safety Helmet Policy by Semarang Police in Reducing Traffic Accidents

Road traffic safety issues are a serious concern in the legal system and public policy in Indonesia. The high number of traffic accidents involving two-wheeled vehicles has made efforts to protect drivers a strategic agenda in national transportation policy. Various legal instruments have been issued by the state to ensure the safety of road users, including regulations regarding the mandatory use of safety helmets. Helmets not only function as head protection from impacts, but have also been normatively established as a mandatory driving requirement that has binding legal force. In this framework, the use of helmets is no longer just a technical driving practice, but rather a symbol of the state's commitment to protecting the rights of citizens to life.

The development of traffic safety regulations in Indonesia shows that the state does not only unilaterally set norms, but also formulates policies based on empirical needs and mature

⁵ Djulaeka and Devi Rahayu, *Legal Research Methods* (Surabaya: Scopindo, 2019), p. 54.

technical studies. One concrete step taken is the implementation of the Indonesian national standard (SNI) for helmets for two-wheeled motor vehicle drivers. This standard is not set arbitrarily, but through a process of testing materials, structures, and impact resistance, so that every product bearing the SNI label is considered to have met the minimum standards for head protection. In the context of national law, this provision is part of the traffic law system that binds all citizens without exception.

The implementation of the SNI helmet policy also represents the government's efforts to prioritize a preventive approach (preventive law), namely preventing losses or accidents through rational legal regulations. In a complex modern society, the law not only acts as a tool for controlling conflict, but also as a means of social engineering. The obligation to use SNI helmets is part of this engineering: changing people's driving habits from initially ignoring safety to complying with the self-protection standards that have been approved by the state. This shows a shift in the role of law from merely being a regulator to being an active and measurable social education agent.

However, the effectiveness of a legal policy cannot only be measured from the clarity of the norms and the strength of its sanctions, but also from the success of its implementation in the field. In practice, many factors influence the extent to which the SNI helmet policy can run optimally, starting from the readiness of the implementing institutions, public understanding of the contents of the policy, to the legal culture that is developing in society. Therefore, it is important to review how this policy is implemented by law enforcement institutions in concrete terms, especially at the local level, such as that carried out by the Semarang Police Traffic Unit as the main implementing agency for this policy in its area.

The policy of wearing national standard safety helmets (SNI) for motorcycle riders and passengers emerged as part of the legal protection system for the right to human safety in public spaces. This provision is explicitly regulated through Article 106 paragraph (8) of Law Number 22 of 2009 concerning Traffic and Road Transportation which stipulates that:

"Everyone who drives a motorcycle and motorcycle passengers are required to wear a helmet that meets Indonesian national standards."

This obligation is not symbolic, but is manifested in criminal norms as stated in Article 291 paragraph (1) and paragraph (2), which respectively state that:

Article 291 paragraph (1):

"Any person who drives a motorbike without wearing an Indonesian national standard helmet as referred to in Article 106 paragraph (8) shall be punished with imprisonment for a maximum of 1 (one) month or a maximum fine of IDR 250,000.00 (two hundred and fifty thousand rupiah),"

and Article 291 paragraph (2):

"Any person who drives a motorbike and allows his passengers to not wear helmets as referred to in Article 106 paragraph (8) shall be punished with imprisonment for a maximum of 1 (one) month or a maximum fine of IDR 250,000.00 (two hundred and fifty thousand rupiah)."

The provisions of the above article emphasize that the state actively protects the lives of its citizens through safety-based normative interventions, not merely for the sake of formalistic legal compliance, but as a reflection of constitutional values in maintaining the safety of life as part of the most fundamental human rights.

The implementation of SNI helmet provisions is not only based on traffic law norms, but is also strengthened through sectoral technical devices, namely the Regulation of the Minister of Industry of the Republic of Indonesia Number 40/M-IND/PER/6/2008 concerning the Mandatory Implementation of Indonesian National Standards (SNI) for Helmets for Two-Wheeled Motor Vehicle Riders. This regulation enforces SNI 1811:2007 as the national standard that must be met by all helmet manufacturers, importers, and distributors.⁶

The standards include structural criteria, material strength, locking systems, and helmet performance in withstanding hard impacts. The implementation of SNI on motorcycle helmets shows the integration between legal aspects and technical protection aspects, so that helmets are not merely administrative symbols, but function as head protection equipment that has passed strict and scientific quality tests.

⁶ Romo Septiani, Margareth Suryaningsih, and Dyah Lituhayu, "Implementation of Law Number 22 of 2009 Concerning the Implementation of SNI Standard Helmets in Semarang City," Journal of Public Policy and Management Review 2, no. 3 (2022): 53–62.

The implementation of SNI helmet provisions is also closely related to transportation safety instruments that are part of the national traffic management system. Standard helmets not only protect the rider's head from injuries due to accidents, but also play a strategic role in reducing the fatality rate caused by direct impacts on vital areas of the head. Empirical statistics from the police show that traffic accident victims who do not wear SNI helmets tend to experience severe head injuries that lead to death. Therefore, regulations regarding SNI helmets have a substantive dimension in terms of life protection, as well as being part of systemic prevention of the impact of traffic accidents that claim human lives or cause major socio-economic losses for the country and the victim's family.

The mandatory stipulation of SNI standard helmets did not emerge incidentally, but rather based on a strong empirical basis regarding the high number of traffic accidents involving two-wheeled riders in Indonesia. Based on data from the Indonesian National Police Traffic Corps, the number of traffic accidents involving motorcycles throughout 2020 reached 93,319 cases, in 2021 it increased to 97,095 cases, and from January to August 2022 it reached 85,691 cases. The number of fatalities in 2020 reached 21,525 people, then in 2021 it reached 22,626 people, and in 2022 it reached 16,115 people, this shows that the number of accident cases is dominated by motorcycles by 81 percent,⁷ and of that number, most of the victims were found not wearing helmets or wearing helmets that did not meet technical standards.

The protective function of SNI helmets is also recognized internationally through technical standards that are almost similar to regulations from other countries, such as DOT (Department of Transportation) in the United States and ECE R22.05 in Europe. Indonesia through the National Standardization Agency (BSN) adopted a similar approach and established the technical parameters of SNI 1811:2007 as the only valid and legally recognized standard.⁸Therefore, every helmet used on the highway must have an SNI label permanently attached to the inside or outside of the helmet. The label includes the registration number and identification of the helmet manufacturer. Helmets that do not contain the label are considered legally invalid and their use is the basis for a traffic violation in accordance with Article 291 of the LLAJ Law.

The existence of legal norms on SNI helmets also aims to shape the legal behavior of the community that is aware of the importance of personal safety. This regulation aims to create awareness that wearing a helmet is not just a matter of compliance with traffic officers, but is part of an individual's responsibility in maintaining the safety of themselves and others. The state, through written norms, encourages the formation of a traffic law culture that is based on awareness, not just coercion. In this context, the implementation of SNI helmet regulations is expected to stimulate changes in collective behavior, where the use of standard helmets becomes part of a safe and orderly driving lifestyle.

⁷ Admin, "KNKT Emphasizes Everyone to Care About Safety," knkt.go.id, 2022, https://knkt.go.id/news/read/knkt-tekankan-setiap-orang-agar-peduli-akan-keselamatan#:~:text=The death toll in 2020 reached 21,525 people%2C, accidents were dominated by motorbikes at 81 percent.

⁸ Ilham Fauzi, "The Origin of the Mandatory Implementation of SNI for Motor Vehicle Helmets," bbkk.kemenprin, 2020.

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The legal instrument on SNI helmets also contains the meaning of distributive justice, because the state through this provision seeks to provide equal protection to every citizen regardless of economic background or social status. Although access to SNI helmets may vary depending on financial ability, the law provides uniform standards for all motor vehicle users. This means that everyone, without exception, has the same obligation to protect themselves and others. This approach reflects the principle of equality before the law and the utilitarian principle that emphasizes the greatest benefit for the greatest number of people.

The consequences of the SNI helmet provisions are not only related to criminal or administrative aspects, but also related to the sustainability of an efficient and safe national transportation system. When vehicle users comply with safety standards such as SNI helmets, the fatal accident rate will decrease, the burden on hospitals will decrease, economic productivity will not be disrupted due to loss of labor, and the state can save on social protection budgets.⁹In other words, the SNI helmet regulation is part of comprehensive national risk management and cannot be separated from efforts to develop a modern, humane and safety-based transportation system.

The rational aspect of the SNI helmet policy also arises from the consideration that not all individuals are able to measure risk objectively. The state through this policy is present as a rational actor who takes over the responsibility to prevent potential dangers that are not realized by the community. Many drivers assume that driving short distances or on small roads does not require a helmet, even though data shows that most accidents actually occur within a radius of less than 5 kilometers from the victim's house. Therefore, the state sets a minimum standard of protection that must be met by all road users without looking at the subjective context of distance or travel time.

The SNI helmet provisions also serve as a benchmark for the formation of derivative legal instruments related to helmet trade, distribution supervision, and eradication of illegal products. The government through the Ministry of Industry and the National Standardization Agency has set administrative and criminal sanctions for manufacturers and sellers who trade non-SNI helmets illegally. Thus, the SNI helmet provisions do not stop at the end user alone, but spread throughout the distribution chain to ensure that helmets that reach the public have met legitimate and verified protection standards.

The above explanation shows that the legal basis and objectives of the SNI helmet policy are part of the traffic law system that not only prioritizes the aspect of sanctions, but also contains the values of safety, social justice, collective awareness, and rationality of state policies that favor the protection of human life. This basis is then used as a foothold by implementing institutions, such as the Semarang Police, to translate these norms into real implementation in the field.

⁹ Deni Teras et al., "The Importance of Safe Roads in Indonesia," Proceedings of the 2024 National Engineering Seminar (Senastika 2024) October 24 (2024).

The program and strategy for implementing the policy of wearing SNI standard helmets by the Semarang Police was designed as a response to the need to reduce the number of traffic accidents, especially those involving motorcycle users. The implementation strategy does not run linearly, but is a combination of educational approaches, repressive approaches, and technology-based approaches. The three approaches are carried out simultaneously and target two main aspects, namely increasing public awareness of the importance of driving safety and increasing compliance with applicable traffic law norms.

Based on the author's interview with Briptu Anang Setyo Pambudi as BA Satlantas Polrestabes Semarang, it is known that the concrete form of the implementation of educational strategies has been realized through the "Police Goes to School" program which was officially implemented in a series of MPLS (School Environment Introduction Period) activities in various secondary schools in Semarang.¹⁰Through this program, Satlantas delivers traffic safety material and the function of SNI helmets directly to students, while also introducing the basic principle that safety is not just a rule, but part of an individual's responsibility in public spaces.

This educational program is not only one-way, but involves active interaction between officers and students through question and answer sessions, simulations of the use of SNI helmets, and providing real examples of the impact of accidents on drivers who do not use standard helmets. The delivery of the material is carried out in an interesting and communicative manner, including with visual presentations through presentation media and video displays of traffic accident cases. The main target of this program is to form an understanding and attitude of legal awareness from school age, so that students are not only obedient because they are afraid of being ticketed, but because they understand the meaning of safety as a life value. Semarang Police also strengthens this educational message by installing banners in strategic locations, such as the intersection of Jalan Pandanaran, Jalan Gajahmada, and Jalan Dr. Cipto, which contain visual appeals using simple and easy-to-understand language.

In addition to counseling in schools, Satlantas also implements a socialization strategy to the general public through the use of official social media. According to Briptu Anang, the use of this digital channel is an important part of disseminating traffic safety messages, including the importance of using SNI standard helmets. Through the official Instagram and Facebook accounts of Polrestabes, visual content such as infographics, short videos, and testimonials from accident victims are published regularly as a form of strengthening legal and safety values informally. This digital campaign is intended to reach urban communities and the younger generation who are more active in interacting on online platforms. The Polrestabes also broadcasts information via local radio and electronic news channels as a form of expanding the reach of information to road users who are not exposed to social media.

¹⁰Interview with Briptu Anang Setyo Pambudi as BA of Semarang Police Traffic Unit on May 4, 2025.

The implementation strategy is also implemented through a national agenda in the form of annual traffic operations. Based on the statement of Briptu Anang, Semarang Police carry out three main operations every year, namely Candi Safety Operation, Candi Zebra Operation, and Candi Obedience Operation. The three operations are the mandate of the Indonesian Police Traffic Corps which are carried out in a coordinated manner throughout Indonesia, including the city of Semarang.¹¹One of the main focuses of the operation is to take action against helmet violations, especially violations of not wearing a helmet or wearing a helmet that does not meet SNI standards. The Traffic Police prioritizes dense and accident-prone road points as operation locations, such as Jalan Majapahit, Jalan Sriwijaya, and Jalan Sukun Raya.

The implementation of these operations is not only repressive, but also contains an educational dimension. Briptu Anang explained that Satlantas officers do not always take action against violators directly, but also provide verbal warnings, legal explanations, and brief guidance to drivers who commit minor violations. The goal is to create awareness that traffic law is not intended to punish, but to maintain safety.¹²Officers also actively check the type of helmet used by the rider, check for the presence of the SNI label, and ensure the helmet is worn correctly with the hook perfectly attached. When finding a violation, officers will provide a technical explanation of why a non-standard helmet is not suitable for use, as well as provide examples of helmets that meet national safety standards.

The implementation strategy is also strengthened by the application of Electronic Traffic Law Enforcement (ETLE) technology, which functions as an automatic monitoring tool for traffic violations. The ETLE system has been installed at several strategic points in Semarang City and is equipped with high-resolution surveillance cameras that can detect helmet violations. This camera can recognize riders who are not wearing helmets or wearing inappropriate helmets, and violation data will be automatically sent to the traffic command center for verification. Briptu Anang said that ETLE is part of the modernization of an effective law enforcement system because it is able to work objectively, minimize direct interaction, and reduce the risk of deviation in the field. In addition, this system runs 24 hours and is able to detect violations outside of manual operating hours.

The Semarang Police Traffic Unit also expanded its educational strategy by distributing leaflets, pamphlets, and brochures during community service activities such as SIM, STNK, and mass vaccination activities held together with other government agencies. The material presented in the leaflets includes basic information on SNI helmet requirements, legal sanctions for violators, and tips for recognizing fake helmets. This strategy is designed so that the public remains informed even though they are not directly involved in raids or school programs. Even at several main traffic light points, loudspeakers are installed that periodically play traffic safety messages including an invitation to wear SNI helmets. This effort is a form of location-based public communication that brings legal messages closer to the daily lives of citizens.

¹¹ Intan Nur Fitriana, "Prevention of Juvenile Delinquency Against Traffic Violation Crimes in Semarang City" (Sultan Agung Islamic University (UNISSULA) Semarang, 2023).

¹²Interview with Briptu Anang Setyo Pambudi as BA of Semarang Police Traffic Unit on May 4, 2025.

All forms of program and strategy implementation run simultaneously and complement each other. School education forms the foundation of awareness from adolescence, media socialization expands the reach of legal information, enforcement operations provide a deterrent effect as well as active supervision, while the implementation of ETLE ensures the continuity of legal control without a time limit. The Semarang Police Traffic Unit through all these programs not only seeks to enforce the law procedurally, but also builds a new legal culture that places safety as a norm of life, not just a state order. All of these strategies are aimed at creating changes in traffic behavior based on awareness, not just because of fear of being sanctioned.

The comprehensive approach in the implementation strategy shows a strong institutional understanding that the success of the SNI helmet policy cannot be achieved with a single method. Therefore, the diversity of strategies and program segmentation based on community characteristics are the main keys in bringing legal norms closer to social reality. However, to find out to what extent these programs have achieved the expected results, and how effective they are in reducing the number of violations and accidents.

Evaluation of the effectiveness of the SNI helmet policy by the Semarang Police Traffic Unit shows that the implementation of this program is not only seen from the administrative aspect or statistical figures alone, but also through measuring its impact on changes in community behavior and reducing the risk of accidents. The comprehensive approach in the implementation strategy shows a strong institutional understanding that the success of the SNI helmet policy cannot be achieved with a single method. Therefore, the diversity of strategies and program segmentation based on community characteristics are the main keys in bringing legal norms closer to social reality. However, to find out to what extent these programs have achieved the expected results, and how effective they are in reducing the number of violations and accidents, an evaluation based on actual data is needed.

Traffic accident data collected by the Semarang Police Traffic Unit shows complex dynamics over the past three years. Although the number of accidents involving helmeted drivers is much higher, it is comparable to the proportion of people who already wear helmets in their daily driving activities. However, when analyzed proportionally, the number of fatalities or fatalities due to accidents is more dominant in the group that does not wear helmets. This is a strong indicator that the use of helmets, especially SNI standard helmets, plays an important role in reducing the risk of death due to head impacts during accidents.

The following presents traffic accident data based on helmet use during 2022 to 2024 in the jurisdiction of the Semarang Police:

Year	Accident (With Helmet)	Victim Died (With Helmet)	Accident (Without Helmet)	Victim Died (Without Helmet)
2022	950	104	98	22
2023	1.153	126	103	25
2024	1,339	121	102	22

The above data shows that even though accidents with helmets continue to increase from year to year, the fatality rate tends to be stable and even decreases slightly in 2024. In contrast, the number of fatalities from accidents without helmets shows a higher proportion when compared to the number of cases. This fact confirms that the use of SNI helmets is not only a fulfillment of legal obligations, but also a vital instrument in saving lives, which has a real impact on reducing the risk of death in traffic accidents. Therefore, the effectiveness of the SNI helmet use policy can be proven empirically through the correlation between the level of compliance and the decrease in fatalities.

Based on the author's interview with Briptu Anang Setyo Pambudi as BA Satlantas Polrestabes Semarang, the effectiveness of the SNI helmet policy can be seen from the results of monitoring referral hospitals such as Bhayangkara Hospital and Dr. Kariadi General Hospital, where victims who use SNI helmets tend to experience lighter head injuries compared to victims who do not use helmets or use non-SNI helmets.¹³This confirms that the existence of SNI helmets significantly reduces the risk of fatal accidents.

In terms of legal implementation, Semarang Police Traffic Unit refers to Article 291 paragraph (1) and (2) of Law Number 22 of 2009 concerning Traffic and Road Transportation. Action against helmet violations is carried out in various operations such as Operation Zebra Candi and Operation Safety Candi. Repressive measures combined with educational efforts create a balance between law enforcement and fostering public morals.

However, the substantive effectiveness of this policy is not only measured by the enforcement action alone. Based on Lawrence M. Friedman's legal system theory, the effectiveness of the law is largely determined by three main elements: legal structure, legal substance, and legal culture. The legal structure in this context refers to the institutional capacity of the Polrestabes Traffic Unit, which is seen actively in raids, counseling, and patrols. The legal substance, in the form of mandatory SNI helmet norms, has been clearly stated in the applicable laws and regulations. Meanwhile, the legal culture element is actually the biggest challenge. There is still a gap between compliance due to legal awareness and compliance due to fear of sanctions.

An effective legal structure not only reflects the presence of formal institutions such as the police, but is also reflected in the ability of these institutions to build cross-sector coordination, respond quickly to social dynamics, and carry out policy innovation at the implementation level. Semarang Police have so far shown positive indicators in involving the education sector and motorcycle communities to form a traffic safety culture, including the implementation of the "Police Goes to School" program and social media-based campaigns. However, the effectiveness of this structure still depends on the consistency of its implementation, the availability of adequate personnel, and the even distribution of resources, especially to reach outlying areas that have so far been less touched by active supervision.

¹³Interview with Briptu Anang Setyo Pambudi as BA of Semarang Police Traffic Unit on May 4, 2025.

Legal culture as the third element in Friedman's theory occupies a very strategic position, especially because of the characteristics of Indonesian society which tends to obey the law not because of awareness, but because of concerns about sanctions. In the context of SNI helmets, many road users still view the use of helmets as a formal obligation that is only carried out when there is a raid or police presence. This kind of behavior shows the weak internalization of legal norms in the collective consciousness of society. Therefore, the effectiveness of legal culture must be built not only through repressive laws, but also with a continuous educational and cultural approach.¹⁴The formation of this legal culture requires time and an approach that touches on the value dimension, not just procedures. If a strong legal culture is successfully grown, then the sustainability of the SNI helmet policy will no longer depend on raid operations, but will become part of everyday practices carried out consciously by the community.

As revealed in previous research results, public compliance in using SNI helmets is more driven by efforts to avoid sanctions than intrinsic awareness of the importance of safety. In this context, William J. Chambliss and Robert B. Seidman's law enforcement theory becomes relevant. Law enforcement in the field of traffic, including helmet policies, is sometimes selective, stricter towards certain community groups, and has not been fully evenly distributed in reaching outlying areas. Some people consider this policy to be more beneficial to officers and helmet entrepreneurs than to actually aim to protect public safety.¹⁵

Chambliss and Seidman view that law often operates as a tool of domination used by powerful groups to control subordinate groups.¹⁶In the implementation of the helmet policy, a selective approach can be seen from the higher intensity of raids in densely populated areas with lower middle class compared to elite areas. This raises the perception that law enforcement is not carried out evenly and fairly, but rather targets groups that are considered socially and economically weak. When law enforcement emphasizes the aspect of taking action against certain groups, the law is no longer seen as an instrument of justice, but rather as a tool of pressure that creates public distrust of the motives of the policy.

This theory asserts that laws that are not perceived as common property will lose their social legitimacy. When the public believes that the SNI helmet policy only benefits a handful of parties, for example helmet manufacturers who benefit from the obligation to purchase SNI helmets, then participation in supporting the policy will be passive, transactional, and based solely on external pressure. This situation has the potential to erode the effectiveness of the policy in the long term because it is not supported by voluntary acceptance from the public. Therefore, a law enforcement approach that is oriented towards equal treatment, transparency, and public accountability is very much needed so that the law can truly carry out its function as a protector and guardian of the community, not a tool for controlling power.

¹⁴Ibid.

¹⁵ Chambliss and Seidman, Op. Cit. ¹⁶Ibid.

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From the side of justice, John Rawls' approach through the principle of justice as fairness demands that this helmet policy provide proportional benefits to the most vulnerable groups in society, namely those who live in densely populated areas and have limited access to standard helmets. If not, then this policy has the potential to create new inequalities, where certain communities feel like they are merely objects of fines.

Rawls's first principle of justice is that everyone should have an equal right to the most extensive basic liberties, including the right to be protected by law in matters of road safety. The second principle is that social and economic inequalities can only be justified if they provide the greatest benefit to the least advantaged.¹⁷In the context of the SNI helmet policy, this means that the implementation of the rules should not only apply universally normatively, but must also be accompanied by affirmative efforts such as the provision of subsidized helmets or free distribution programs for low-income groups. If the policy only regulates obligations without providing access to their fulfillment, then the principle of substantive justice is not achieved because it only serves groups that are able, not all citizens equally.

Justice in Rawls' perspective is not only seen from the formality of the rules, but also from how the rules are implemented fairly in practice. Equal law enforcement, education that targets vulnerable groups, and feedback mechanisms from the community are important in ensuring that helmet policies do not result in social exclusion. If the implementation of the policy only results in fear of fines and worsens the economic burden on poor groups without providing equal protection, then the policy has failed to meet the principle of justice as fairness. Therefore, local governments together with the police must develop community involvement and empowerment strategies based on distributive justice to realize safety policies that are not only legal, but also morally and socially just.

Within the framework of Islamic law, maslahah theory provides strong normative and ethical justification for the obligation to use SNI standard helmets. This obligation is in line with the main objective of Islamic law, namely maintaining the safety of the human soul (hifz al-nafs), one of the five maqāşid al-sharīʿah which is the basis for ijtihad and public policy formulation from the perspective of ushul fiqh.¹⁸When someone wears an SNI helmet, this action is not merely a form of compliance with state law, but also a form of effort to preserve Allah's trust in the form of life.

On the other hand, ignoring the use of a helmet, especially using a helmet that does not meet safety standards, can be categorized as a form of negligence which opens up the potential for major harm (mafsadah) to the safety of oneself and others. Thus, from a sharia perspective, the SNI helmet policy is not only normatively valid as a product of positive state law, but is also spiritually and ethically legitimate because it aims to prevent humans from mental damage and physical suffering.

¹⁷John Rawls, Op.Cit.

¹⁸ Imam Al-Ghazali, Al-Mustashfa fi Ilm al-Usul, trans. Ahmad Hasan (Beirut: Dar al-Kutub al-Ilmiyyah, 1997), p. 240.

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The concept of maslahah also emphasizes that all forms of benefit aimed at maintaining the balance of people's lives, both at the individual and societal levels, can be the basis for formulating laws, as long as they do not conflict with qath'i texts. In this context, the SNI helmet policy falls into the category of maslahah mu'tabarah, namely a benefit that is explicitly recognized by the general principles of sharia even though it is not mentioned textually in the Qur'an or Hadith.

Textually, there is no explicit command to wear a helmet, but the command to protect one's life (QS. al-Mā'idah [5]: 32) and the prohibition of endangering oneself (hadīš "lā darar wa lā dirār") provide a strong basis that all instruments that function to protect human safety must be considered as part of the realization of the objectives of the sharia. Thus, the obligation to use a national standard helmet fulfills the criteria of jalb al-manāfi' (attracting benefit) as well as dar' al-mafāsid (repelling harm), and according to Islamic law is an action that is close to obligatory, no longer merely permissible or socially recommended.

In the taxonomy of ushul fiqh, the SNI helmet policy can also be classified as maslahah mursalah, which is a form of maslahah that is neither supported nor directly rejected by sharia evidence, but is in line with the general spirit of Islamic law. The state, as an institution that has the authority to regulate the social life of the community, has the right to establish laws that are considered to bring general good as long as they do not conflict with sharia principles. In this case, the state establishes helmet standards that must be used based on the results of scientific research and safety considerations, not merely administrative interests.

Therefore, enforcing this policy is part of the state's duty to realize siyāsah shar'iyyah (sharia public policy) which aims to maintain five main things: religion, soul, mind, descendants, and property. Given that traffic accidents are one of the highest causes of death in Indonesia, all forms of efforts to minimize the impact of accidents, such as the use of legal and proper helmets, are part of maslahah darūriyyah, namely primary benefits that cannot be negotiated in Islamic law.

The application of the maslahah principle in the context of the SNI helmet policy also does not stop at the individual protection aspect, but rather includes the collective social responsibility of the state and society. The principles of daf' al-mafsadah (eliminating harm) and sadd al-dharā'i (closing the road to harm) are the basis for strengthening the validity of preventive policies like this. In the context of modern society, preventive efforts based on national technical standards are a concrete form of taysīr (convenience) and tahqīq al-maslahah al-'āmmah (realization of public interest).

By normalizing the use of SNI helmets, the state also helps secure the social structure from the systemic impacts of traffic accidents, such as the burden of hospital costs, the loss of the head of the family, or mental damage to children due to being abandoned by their parents. Therefore, the SNI helmet policy is not only valid from a positive and sociological legal perspective, but also has religious value because it aims to maintain the order of people's lives according to the principle of rahmatan lil 'ālamīn.

The effectiveness of this policy is also closely related to the sustainability of education. Briptu Anang stated that his party routinely conducts education through social media, installing banners at traffic nodes, and direct counseling to schools through the "Police Goes to School" program. This program is designed not only to instill knowledge, but also to form a legal awareness attitude from a young age.

However, as reflected in the social reality in Semarang City, especially in the suburbs, the challenges to the effectiveness of this policy are still real. Many people do not yet understand that SNI helmets are not just administrative obligations, but protective instruments that can save lives. The public perception that the SNI helmet policy is only a ticketing tool weakens the social legitimacy of the policy.

The future evaluation approach cannot stop at statistics alone. New indicators must be developed based on legal awareness, behavioral changes, and public perception. Only then can the effectiveness of this safety helmet policy be measured in a complete and fair manner in accordance with the values of social justice, protection of the right to life, and the state's responsibility to ensure the safety of its citizens. In addition, it is necessary to further investigate whether the downward trend in accident fatalities is a direct result of the policy or is influenced by other variables such as improved road quality, ambulance response speed, or changes in community mobility patterns post-pandemic.

In other words, the effectiveness of this policy does not stand alone, but is highly dependent on the synergy between the quality of the policy, consistency of implementation, and support and trust from the community as the main subject. An in-depth evaluation of all these aspects will be discussed further in the next point to find out how the implementation of the SNI helmet policy is related to the trend of decreasing traffic accidents in the jurisdiction of the Semarang Police.

3.2. Obstacles Faced in Implementing the Safety Helmet Policy and Solutions Applied at Semarang Police Headquarters

The level of success of implementing a policy is not only determined by the strength of the norms and the firmness of the sanctions attached to it, but is also determined by the ability of the implementing institution to reach all social, cultural, and structural aspects that influence community behavior. The policy of wearing SNI helmets in Semarang City implemented by the Semarang Police Traffic Unit faces various complex challenges that not only originate from internal institutions, but also from social resistance from the community and economic conditions that do not fully support the accessibility of safety protection evenly.

The low level of public legal awareness is still one of the most striking obstacles. Many riders view helmets only as formal attributes to avoid sanctions, not as safety protection equipment. This functional awareness makes helmet-wearing behavior dependent on the presence of law enforcement officers alone. People tend not to wear helmets when riding on neighborhood roads or non-protocol areas because they feel unsupervised.¹⁹This phenomenon shows that the intrinsic value of the rules is not yet firmly embedded in people's mindsets.

The pragmatic attitude of the community is largely influenced by educational background, access to information, and habits that have been formed for a long time. In many cases, helmets are only used when going through a raid post or meeting with officers. This is also caused by the low effectiveness of socialization that has not touched the affective aspects of the community. Based on the author's interview with Briptu Anang Setyo Pambudi as BA Satlantas Polrestabes Semarang, although socialization has been carried out through the "Police Goes to School" program, social media, and banners at traffic nodes, not all elements of society can be reached effectively, especially those who live in suburban areas or are not exposed to digital technology.²⁰

The inaccessibility of educational programs in outlying areas such as Mijen, Gunungpati, and Banyumanik is a structural obstacle that influences public perception of the urgency of using SNI helmets.²¹Many people in this area still do not understand the difference between standard helmets and regular helmets, because technical information about the SNI label and helmet protection is not conveyed visually and practically. They judge helmets more from the appearance and price, not from the quality or ability to withstand impacts.

Another obstacle that arises comes from the economic side. The price of SNI helmets is more expensive than regular helmets, causing people, especially those from the lower middle class, to be reluctant to replace them. Helmets with the official SNI label are marketed at prices two to three times higher than conventional helmets. For motorcycle taxi drivers, students, and laborers, the price of SNI helmets is considered a burden that is not commensurate with the benefits they understand. They prefer helmets with cheap prices even though they do not guarantee safety.²²

This purchasing power gap is exacerbated by the absence of a government aid or helmet subsidy distribution scheme. SNI helmets are only available in official stores at a fixed price, while counterfeit or non-standard helmets are widely available in traditional markets and online trading platforms at affordable prices. Many people are unaware that the helmets they buy have been counterfeited, especially because the counterfeit SNI stickers are neatly attached and difficult to distinguish with the naked eye.

Sellers of non-SNI helmets often engage in misleading trade practices by claiming that the helmets they sell have SNI standards. The absence of strict supervision from the Department of Industry and Trade over the distribution chain of illegal helmets has flooded the market with products that are not fit for use. On the other hand, the police can only take action against end users, not manufacturers or distributors, because the legal authority is limited to the aspect of road users.

The influence of the social environment, including the role of the family, has also not been used as a basis for intervention in socialization programs. Not all families provide their children with proper helmets from an early age. In fact, children who are carried during school hours or during holidays are often seen without helmets or only wearing ordinary hats. The lack of control from parents reinforces a permissive attitude towards safety from an early age.

The absence of a cultural approach used by the Semarang Police in the outreach program also widens the gap between legal norms and values believed in by the community. Local culture that upholds a sense of togetherness, a family approach, and reminding each other has not been optimally utilized in building a culture of orderly traffic law.

Another obstacle that is no less important is the economic burden that is not directly borne by the community due to this obligation. For some people, especially those who have more than one motorbike in the household, the obligation to buy more than one SNI helmet is a burden in itself. Not to mention if the helmet is damaged or lost, then buying a new helmet again burdens the family's expenses.²³

This condition is exacerbated by the lack of intervention from helmet business actors to provide quality products at affordable prices. Helmet manufacturers tend to target the middle to upper market, while the needs of the lower class are not met. There are no trade schemes such as discounts, savings package sales, or trade-in programs from official manufacturers. As a result, people are looking for cheaper helmet alternatives even without a guarantee of safety.

The solution from the economic aspect is realized through cooperation with certified helmet manufacturers to present a helmet exchange program. Through this program, people who have non-SNI helmets can exchange them for SNI helmets with discounts of up to 40%. The program is also supported by the provision of cheap helmets by local governments through bazaars or mobile cheap markets, especially in densely populated areas and suburban areas.

The solution to the economic aspect in the implementation of the SNI helmet policy by the Semarang Police Traffic Unit is not realized in the form of direct assistance such as helmet subsidies or trade-in programs, but through educational strategies and strengthening community-based collaborative approaches. Based on the author's interview with Briptu Anang Setyo Pambudi as BA of the Semarang Police Traffic Unit, until now there has been no policy that directly provides SNI-certified helmet assistance to low-income communities.²⁴However, the approach taken places more emphasis on efforts to raise public awareness about the importance of investing in personal safety through the use of standard helmets.

Strengthening public accountability is also a priority. The public is given access to submit complaints, questions, and suggestions through online complaint channels and mobile service posts. This system is equipped with a feedback mechanism, where every report received is processed, followed up, and answered openly. This kind of transparency is very important to maintain public trust in policy implementing institutions.

The solutions that have been implemented or are being designed by the Semarang Police reflect the transformation of the policy approach from being top-down to being more participatory and adaptive to field needs. Traffic safety, including the obligation to use SNI helmets, is positioned no longer merely as a legal obligation, but as a collective movement to build a driving culture that values life and safety as the main values.

The implementation of this strategy also shows that the effectiveness of the policy is not only supported by strong legal instruments, but must also be supported by social legitimacy and public trust. Active community involvement in campaigns, supervision, and education makes the SNI helmet policy a living and dynamic legal product, not a rigid text that only appears during raids.

This justice-based, participatory, and beneficial approach is also in accordance with the theoretical framework used in the study, such as Lawrence M. Friedman's legal system theory which emphasizes the importance of synergy between legal structure, substance, and culture. When all elements of the legal system move simultaneously and support each other, the law is not only obeyed because of fear of sanctions, but because it is believed to be a common need that must be maintained.

From the substantive justice perspective, protection-based solutions for vulnerable groups such as subsidized helmets, training for daily driver communities, and strengthening education for students embody the principle of justice as fairness as analyzed in John Rawls' theory. Meanwhile, from the perspective of Islamic law, all policies aimed at maintaining the safety of lives are included in the category of maslahah mu'tabarah, which must be realized by the state because it is in line with maqashid al-shariah.

4. Conclusion

The implementation of the policy of using SNI standard safety helmets by the Semarang Police Traffic Unit has generally been carried out through an integrated educational, repressive, and technological approach in annual work programs such as Operation Zebra Candi, Operation Patuh Candi, and the "Police Goes to School" education program. In addition, the use of social media, appeal banners, and the use of the ETLE system also mark the modernization of traffic supervision. Officers not only enforce the law administratively, but also provide technical and educational information about the importance of SNI standard helmets. Traffic accident data in the city of Semarang over the past three years shows a positive correlation between increased compliance with the use of SNI helmets and decreased fatality rates, especially for victims who experience head impacts. This confirms that SNI helmets play a vital role in reducing the risk of death due to traffic accidents. However, the substantive effectiveness of this policy has not been fully achieved because there is still a gap between the understanding of normative law and the internalization of the legal culture of the community. As analyzed using Lawrence M. Friedman's legal system theory, the success of this policy is only optimal in the aspects of legal structure and substance, while the legal culture is still dominated by compliance due to fear of sanctions. Therefore, the effectiveness of this policy can be stated to be running quite well in the context of life protection, but requires strengthening in terms

of legal culture and the formation of intrinsic public awareness so that the use of SNI helmets truly becomes part of everyday driving habits, not merely because of legal pressure. The implementation of the safety helmet policy by the Semarang Police is faced with various interrelated multidimensional obstacles. From a social perspective, there is still low public awareness of the safety function of SNI helmets, marked by the pragmatic attitude of most drivers who only wear helmets when there is a raid or when officers are present. Institutionally, the limited number of personnel, the lack of patrol vehicles, and the lack of SNI helmet verification tools are technical obstacles that reduce the reach of field supervision. Meanwhile, from a cultural and economic perspective, wearing a helmet is not yet considered a primary need, especially among low-income people who prefer cheap non-SNI helmets due to limited funds and access. Resistance also arises due to the inequality of legal treatment, where some people view that enforcement only targets certain groups and tends to be transactional. In facing these challenges, the Semarang Police has implemented a number of strategic solutions such as strengthening education programs through digital media and school communities, optimizing thematic operations with a dialogical approach, and collaborating with various stakeholders to expand the reach of safety campaigns.

5. References

Journals:

- Novia Putri Romadhoni, "Lack of Public Awareness for Motor Vehicle Testing: Causes and Effects," *Journal of Student Research* 2, no. 1 (2024): 59–68.
- Nur Shinta Sundari, Mukhlis R, and Elmayanti Elmayanti, "Law Enforcement Against Children Who Do Not Wear Helmets in Pekanbaru City," *Jurnal Ilmiah Wahana Pendidikan* 10, no. 21 (2024): 672–80, https://doi.org/https://doi.org/10.5281/zenodo.14504178.
- Nursanthy, Aji Titin Roswitha, and Maria Ana Liwa, "Legal Review of the Role of Traffic Police in the Implementation of Alternative Dispute Resolution (ADR) in Resolving Accident Cases in Kutai Kartanegara Regency," *Collegium Studiosum Journal* 4, no. 1 (2021): 28– 36.
- Romo Septiani, Margareth Suryaningsih, and Dyah Lituhayu, "Implementation of Law Number 22 of 2009 Concerning the Implementation of SNI Standard Helmets in Semarang City," *Journal of Public Policy and Management Review* 2, no. 3 (2022): 53–62.
- Utami Saha Nabla, Mahzaniar Mahzaniar, and M. Ridwan Lubis, "Legal Protection for Victims of Traffic Accidents on Highways from the Perspective of Law Number 22 of 2009," *Kalam Keadilan* 10, no. 1 (2022): 255–71.

Books:

Andrew R, Traffic Law Enforcement (Bandung: Nuansa, 2011),

Deni Teras et al., "The Importance of Safe Roads in Indonesia," Proceedings of the 2024 National Engineering Seminar (Senastika 2024) October 24 (2024).

Djulaeka and Devi Rahayu, Legal Research Methods (Surabaya: Scopindo, 2019),

Effectiveness of Safety Helmet Use Policy in Reducing Traffic Accident Rates (Reyhan Brilianto & D. Djunaedi)

- Ilham Fauzi, "The Origin of the Mandatory Implementation of SNI for Motor Vehicle Helmets," bbkk.kemenprin, 2020.
- Imam Al-Ghazali, Al-Mustashfa fi Ilm al-Usul, trans. Ahmad Hasan (Beirut: Dar al-Kutub al-Ilmiyyah, 1997),
- Intan Nur Fitriana, "Prevention of Juvenile Delinquency Against Traffic Violation Crimes in Semarang City" (Sultan Agung Islamic University (UNISSULA) Semarang, 2023).
- Syahriwal, Pery Rehendra Sucipta, and Irwandi Syahputra, "The Role of Traffic Police Units in Handling Traffic Accidents Involving Children in the Jurisdiction of the Tanjungpinang Police Resort" (King Ali Haji Tanjungpinang Maritime University, 2022), http://repositori.umrah.ac.id/3785/.

Internet:

Admin, "KNKT Emphasizes Everyone to Care About Safety," knkt.go.id, 2022, https://knkt.go.id/news/read/knkt-tekankan-setiap-orang-agar-peduli-akankeselamatan#:~:text=The death toll in 2020 reached 21,525 people%2C, accidents were dominated by motorbikes at 81 percent.

Interview:

Interview with Briptu Anang Setyo Pambudi as BA of Semarang Police Traffic Unit on May 4, 2025.