

# Assessing The Factors Affecting Traffic Accidents And Its Preventions: A Case Study

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**Abstract:** This study was intended to explore the factors that caused the traffic accidents and was to find out the efforts to decrease the traffic accidents in legal regions in the resort police in Muaro Jambi, Indonesia. The data were collected through interviews with police officers and the perpetrators or violators. We also used documents related to accident reports. The results of the data analyses indicated that two factors that influence the occurrence of traffic accidents that cause the death of other people in the jurisdiction of the resort police in Muaro Jambi, including are internal factors (e.g., driving in a drowsy condition) and external factors (e.g., there are sharp turns, unavailability of crossing facilities or zebra cross). The findings of our study also revealed that the efforts to overcome traffic accidents include preventive efforts (e.g., sufficient rest, adding zebra cross) and repressive efforts (e.g., arrest and detain traffic violators in accordance with applicable laws).

**Index Terms:** Indonesian Law, Indonesian Government, Legal Regions, Traffic Accidents

## 1. INTRODCUTION

The Indonesian government is actively carrying out development in all fields, both physical and non-physical fields. One of the fields is related to highways. The purpose of the highway development is to manifest a fair and prosperous Indonesia community. Highways are one of the physical developments built by government. Moreover, it aims to connect between regions as traffics and transportations hold a significant role in supporting the national development as an effort in promoting commonwealth. It is mandated by the 1945 Constitution of the Republic of Indonesia. The construction of these highways also aims to manifest security, welfare, traffic order and public transportation in order to support the national development. If a region is incapable to fulfill its own necessity, therefore another region may aid to fulfill it. Thus, highways are built as a means of connecting between the regions so do legal regal regions in the resort police in Muaro Jambi, Indonesia. The increasing public demands for transportation is one of the impacts of the construction of the highways, both four-wheeled and two-wheeled vehicles. This impact leads to other issues in traffic such as traffic accidents causing the death of others.

Based on data obtained from the record of Muaro Jambi Police Station, plenty of traffic accidents have caused the losing of ones' lives. In 2011, there were (5) five cases with (78) seventy eight dead victims, while there were (10) ten cases with (84) eighty-four dead victims in 2012. On the other words, the traffic accidents that cause fatality have increased within two years. The prevention has to be carried out to decrease the chart of transportation crashes. Legal occurrences are an event that causes legal consequences or move certain

regulations hence the existing regulation concretely applied (Arrasjid, 2008; Marzuki, 2008). According the data, it can be concluded that accidents that cause the death of others must be prevented so that traffic accidents that cause the death of others can be reduced. Every event which is related to the law certainly has sanctions, such sanctions are shown to those who violate the law and the sanctions are the result of an action or reaction from another party (human or social organization) for an action. The perpetrator must be sanctioned in accordance with the crimes based on the legal rules contained in law of Republic of Indonesia number 22 Year 2009 concerning road traffic and transportation. The cause of the crime is not only derived from a factor, but also it is influenced by several factors from the individual (internal) and external factors which are the impacts of the perpetrator of the crime's environment (external). The preventions need to be applied so that traffic accidents, which cause the death of others, will be decreased. It is also hoped that the number of victims will be decreased as well. This study was intended to explore the factors that caused the traffic accidents and was to find out the preventive ways to decrease the traffic accidents in legal regions in the resort police in Muaro Jambi, Indonesia. To achieve the purposes of this study, two research questions guided this study: (1) What are the factors that affect traffic accidents which cause the losing of people's lives in legal regions in the resort police in Muaro Jambi, Indonesia? (2) What are the preventive ways of traffic accidents that cause the losing of people's lives in legal regions in the resort police in Muaro Jambi, Indonesia?

## 2 LITERATURE REVIEW

The occurrence of an accident is caused by several factors. The causes of traffic accidents are divided into four factors: (1) human factor, (2) vehicle factor, (3) road factor, and (4) environmental factor (weather) (Enggarsasi & Sa'diyah, 2017). It is explained In the Criminal Code particularly Article 359 "whosoever is due to negligence causes another person to die and is threatened with a sentence of five years imprisonment or a maximum of one year imprisonment". The driver's negligence in driving the vehicle can be caused due to fatigue and drowsiness. To prevent this happens, in Article 203 paragraph (2) of law of Republic of Indonesia number 22 Year 2009 concerning road traffic and transportation states: (a) Preparation of national programs on traffic safety and road

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transportation activities, (b) Provision and maintenance of safety facilities and equipment road traffic and transportation, (c) Assessment of traffic safety and road transport issues, and (d) Traffic safety and road transport management. However, this law is not adhered to by the community so that this law becomes futile (Ali & Haryani, 2012; Martokusumo, 2008; Najwan, Fathni, & Nugraha, 2015; Sidharta, 2000). To avoid the occurrence of negligence which results in other people being injured or dying in driving a motorized vehicle which is finally classified as a criminal offense, the step taken is to take a countermeasure. Broadly speaking, it can be divided into two (Hoefnagels), through the path of "Penal" (criminal law) and through the "Nonpenal" path (not or outside of criminal act). Crime prevention effort through the "Penal" path is more focused on the "repressive" nature (suppression, eradication, destruction) right after the crime has occurred, while the "NonPenal" pathway focuses more on the "Preventive" nature (prevention, deterrence, control) right before the crime occurs.

### 3 METHODS

This study was located in the resort police in Muaro Jambi, Indonesia. This study was a qualitative study. The data were collected through interviews (Johnson & Christensen, 2008; Lincoln and Guba, 1985; Miles & Huberman, 1994; Marshall & Rossman, 1999; Patton, 1990, 2002) and descriptively delineated related to the factors affecting the occurrence of traffic accidents in Muaro Jambi Police Station, Jambi, Sumatra, Indonesia. This study utilized a juridical criminological approach (Hart, 1968; Norrie, 2014; Suratman & Dillah, 2012; Wignjosoebroto, 1974) which is to study the laws and regulations relating to traffic accidents that cause the death of other people and the causes of crime and countermeasures in the Muaro Jambi Police station. The sample technique used in this study was purposive sampling based on the criteria of the area, duty, position, authority and experience in dealing with cases. We used interviews as a data collection tool done by asking questions directly to the participants guided by an interview protocol (Mukminin, Kamil, Muazza, & Haryanto, 2017). Additionally, we also used documents that were related to the Road Traffic and Transportation Act (law of Republic of Indonesia number 22 year 2009). The obtained data, then, were analyzed qualitatively, which were not based on statistically or mathematically calculations. However, it was in the form of statements contained in the findings part. To establish the trustworthiness of data and interpretations (Creswell, 1998, 2007), the data were shared with the participants to get their feedback on the data. In the words of Lincoln and Guba (1989 in Mukminin & McMahon, 2013), this is "the most critical technique for establishing credibility" (p. 314). Additionally, rich and thick descriptions (Creswell, 1998, 2002; Merriam, 1998) and narratives of participants were provided. This included verbatim examples from the transcribed interviews data (Marzulina et al., 2018; Patton, 2002).

### 4 RESULTS

#### 4.1 Assessing factors affecting traffic accidents causing the death in the resort police in Muaro Jambi, Indonesia

The traffic accidents that lead the losing of people's lives in legal region in the resort police in Muaro Jambi, Indonesia are caused by these following several factors. The data of this study indicated several factors. Two factors that influence the

occurrence of the accident are internal and external factors. Based on the data in this study, internal factors consist of human factors, there were ten out of ten of these cases, there was only one accident that caused by vehicle factor and there were five accidents that caused from environment or weather. For example, the accident was caused by the state of drowsiness and high speed. Case one, Anwar (50) years – a truck driver who hit two motorcycle riders named Rizki and Nando. At that time, the victim, Rizki who rode the motorcycle and Nando was at his back. They wanted to cross the street to buy some gas at the gas station. They were hit by the perpetrator resulted in the death. A state of drowsiness and high speed were the motives of this traffic accident. Case 2, Parimin bin Bawon (29) years old - a truck driver. The incident happened as the driver (suspect) was about to overtake another truck at the junction when another car showed up from the opposite direction. The crash was inevitable. The car carried about 10 people. All the victims were bounced off and collided by the street. Case 3, Ahmad Fahrurrozi (38) years old - a truck driver who hit two elementary students name Ripin (12 years old) and Roni (13 years old) when they were about to go home after school at around 12 pm. Both victims were dragged around 5 meters. Both passed away. According to the driver's confession, he was driving fast when the two students showed up to cross the street. In fact, those children did not cross the street at Zebra Cross. Case 4, Ahmad Baitil was a truck driver who hit a motorbike ridden by a couple. The husband had severe wound on his head while his wife had broken neck. They died on the spot. Case 5, Azwir was a truck driver. The accident happened when Azwir's truck was taking oil palm fruits at the back of the truck. It turned out the truck could not hold the load; consequently, the truck went backward in sudden. There was a woman riding her motorcycle named Lisa Ernawati with her two children being hit by the running truck. The three victims were dead on the spot. The incident happened simple because of overloaded oil palm fruit. Case 6, Ramses Sinaga drove a car and hit a housewife named Susi with her eight-years old child who rode a motorbike. They bounced off for five meters and died on the spot. The incident occurred because the car driver was feeling drowsy while driving and led to the crash with the motorcycle. Case 7, Usman, 47 years old was a truck driver. This dump truck was about to turn around to gas station when a motorcycle hit at the back of the truck. The rider along with his wife and child had a severe hemorrhage on their heads. They were dead on the spot. The truck driver did not obey the traffic signs while in fact there is a forbidden sign to turn around on that highway. Case 8, Solatu, 48 years old, a minibus car driver had an accident at the intersection. The car hit a motorcycle having two people. Case 9, M. Sani Bin Ahmad Kanan was a truck driver who truck was loaded with oil palm fruits. The truck was hit from behind by a motorcycle. The victims hit at the back of the truck made by steel and had a severe bleeding. Both were hospitalized for one day, unfortunately they were passed away then. Case 10, Luhut malan was a minibus driver crashed into a motorbike with victims. Factors that caused the accident and caused other people dead at that time. The truck driver said that he drove his vehicle with a high speed in the rain while the rain just stopped his car right behind the victim's motorcycle exactly, his car hit the back side of victim's motorcycle that caused the victim lost control and the victim fell down because the motorcycle hit pile of sand in the bend at that moment it was rain and the victims fell down on the street and he could

not hit the brake that why the driver hit the victim's stomach part that caused the death of the victims. Of the ten cases above, it can be concluded that the traffic accident which caused the death of someone in the resort police in Muaro Jambi, Indonesia, there were four perpetrators in 2011 and 6 perpetrators in 2012. Based on the documents, interviews, and the traffic reports that caused other people death in the jurisdiction of the resort police in Muaro Jambi, Indonesia was human negligence such as (1) careless/negligent/sleepy drivers and (2) lack of driver's awareness in obeying the traffic regulations. Additionally, according to one interviewee (a police officer) traffic accidents were caused by several factors such as vehicles are not roadworthy, the load of road transport cars that exceed tonnage, the number of sharp turns, and the number of roads that is damaged or hollow.

#### **4.1. Efforts to overcome traffic accidents causing the death of other in the resort police in Muaro Jambi, Indonesia**

With the increasing number of traffic accidents as presented above which caused the death of someone other in the resort police in Muaro Jambi, Indonesia, the accidents have to be addressed immediately. The interview data with interviewees (police officers) revealed that the resort police in Muaro Jambi has done various efforts and implemented several countermeasures in the forms of preventive efforts such as drivers must have enough stamina and rest in carrying a vehicle, carrying out socialization to organized and non-organized elements of society regarding Law No. 22 of 2009 concerning traffic and road transport, implementing appeals to all walks of life for road users by distributing orderly traffic strikers and traffic safety tips, both through print and electronic media, and installing banners appealing and warning on prone areas. Another police officer also shared their feelings that preventive efforts has been done by (1) carrying out traffic management activities, (2) carrying out traffic patrol in areas prone to accidents, (3) putting up banners / billboards, be a pioneer of traffic safety, (4) cultivating safety as a necessity, in places that are easily read by the public, and (5) installing banners / billboards with a motto of "3 ready": ready for drivers, ready for vehicles, and ready to obey traffic regulations. One police officer added that a number of a preventive effort have been carried out by members of the resort police in Muaro Jambi including (1) coordinating with related agencies in traffic forums, including turning on traffic light at intersections and adding traffic signs, (2) installing the spot light on the corners, and (3) giving a warning to the public who violated traffic rules so that traffic can be orderly. Also, if viewed from various factors that influence the occurrence of traffic accidents that cause the death of other people in the jurisdiction of the resort police in Muaro Jambi, the results of interviews with the perpetrators of traffic accidents, preventive efforts that must be taken are (1) for the driver, it is expected not to drive a vehicle when in a drowsy condition and if feeling tired and sleepy in carrying a vehicle, the driver must stop the vehicle or replace it with another driver. (2) The need to multiply installing light spot on the corners, because in the jurisdiction of the resort police in Muaro Jambi, there are many sharp turns that often cause traffic accidents. (3) It is expected that drivers will not drive their vehicles at high speed in crowded places, and for pedestrians if they want to cross they should be more careful not to cross suddenly and preferably crossing the zebra, and for the government zebra cross is

needed to be built in crossing place. (4) For drivers when they want to cross their vehicles, they are expected to be careful, do not be hastily expected to be able to monitor road conditions when they want to cross, and for the victims, they are expected to pass the intersection in order to reduce speed, and for the government to coordinate with relevant agencies in traffic forums, including turning on the traffic light at the intersection and adding traffic signs. (5) For the driver, especially the truck driver. They need to be able to calculate the vehicle load, do not carry exceeds load from the recommended capacity, and for the government when building the road, it is expected that the incline is not too steep. (6) It is expected that drivers will comply with existing traffic signs because the traffic signs are made to be adhered to with the aim of road user safety. For police officers the need to routinely carry out socialization to the public regarding Law Number 22 of 2009 concerning road traffic and transportation. So that people know and have awareness about the importance of obeying existing traffic rules. (7) The need for drivers to always be careful when driving their vehicles on corners, especially on rainy days which results in slippery roads and for all the community and police officers to repair and clean up the accumulated sands that are in the corners caused by the sand piled up because it was carried away by the rain which could endanger the safety of road users. Other efforts that have been done to overcome traffic accidents causing the death of other in the resort police in Muaro Jambi, Indonesia are repressive efforts. According to one police officer, repressive efforts are arresting and detaining traffic violators in accordance with the provisions of applicable laws, namely prosecution or imposition of penalties against traffic violators. Criminal penalties that can be imposed if violations occur include violating the provisions of Law Number 22 Year 2009 concerning Road Traffic and Transportation. Particularly in Article 229, then Article 310 which states sanctions from accident classification from Article 229. Classification of traffic accidents stated in Article 229 of Law Number 22 Year 2009, namely: traffic accidents are classified as light traffic accidents, moderate traffic accidents; or heavy traffic accidents. A light traffic accident is an accident resulting in damage to the vehicle and / or goods. Medium traffic accidents constitute an accident resulting in minor injuries and damage to vehicles and / goods. Heavy traffic accidents are accidents resulting in death or serious injury. Based on this classification, then the sanctions are stated by Article 310 of Law Number 22 Year 2009, namely:

- (1) Any person driving a Motorized Vehicle due to negligence results in a Traffic Accident with damage to the vehicle and / or goods as referred to in Article 229 paragraph (2), shall be punished with imprisonment for a maximum of 6 (six) months and / or a maximum fine IDR 1,000,000.00 (one million IDR).
- (2) Any person driving a motorized vehicle due to negligence results in a traffic accident with a minor injury and damage to the vehicle and / or goods as referred to in Article 229 paragraph (3), subject to a maximum of 1 (one) year imprisonment and / or a maximum fine of IDR. 2,000,000.00 (two million IDR).
- (3) Anyone who drives a Motorized Vehicle due to his negligence resulting in a Traffic Accident with a serious injured person as referred to in Article 229 paragraph (4), shall be punished with imprisonment



for a maximum of 5 (five) years and / or a maximum fine of IDR. 10.000.000 (ten million IDR).

- (4) In the event of an accident as referred to in paragraph (3) which results in the death of another person, it shall be subject to a maximum imprisonment of 6 (six) years and / or a fine of a maximum of IDR 12,000,000.00 (twelve million IDR).

The imposition of criminal penalties is carried out so that the offender or the offending driver no longer repeats his actions. Criminal penalties imposed on those who committed traffic violations resulting in injury or death of the victim, including in this case the imposition of criminal penalties against the driver of the vehicle who failed to drive the vehicle so as to cause the victim to die.

## 5 CONCLUSION

Based on the result of this study, it can be concluded that factors that influence the occurrence of traffic accidents that cause the death of other people in the jurisdiction of the resort police in Muaro Jambi are internal factors such as driving in a drowsy condition, driving with a high speed and overtaking the corner, driving a vehicle with a high speed when the streets are crowded, pedestrians cross suddenly and are not orderly, crossing a vehicle at an intersection carelessly, carrying loads exceeding capacity, drivers do not comply with traffic signs. The other factors that cause traffic accidents are external factors such as there are sharp turns, unavailability of crossing facilities or zebra cross, there is no traffic light, the car is unable to climb the incline and the incline design is too steep, and damage to the road surface and rainy weather resulting in slippery roads. The efforts to overcome traffic accidents that cause the death of other people in the jurisdiction of the resort police in Muaro Jambi include preventive efforts (e.g., sufficient rest, adding zebra cross) and repressive efforts (e.g., arrest and detain traffic violators in accordance with applicable laws).

## REFERENCES

- [1] Arrasjid, C. (2008). *Dasar-dasar ilmu hukum [Legal Basics]*. Sinar Grafika: Jakarta.
- [2] Ali, A., & Heryani, W (2012). *Menjelajahi kajian empiris terhadap hukum [Exploring the Empirical Study of Law]*. Kencana Prenada Media Group: Jakarta.
- [3] Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Sage Publications, Inc.: Thousand Oaks, CA.
- [4] Creswell, J. W. (2002). *Research design: Qualitative, quantitative, and mixed methods approaches*. (2nd ed.). Sage Publications, Inc.: Thousand Oaks, CA.
- [5] Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five traditions*. Sage Publications: Thousand Oaks, CA.
- [6] Enggarsasi, U., & Sa'diyah, N.K. (2017). Kajian terhadap faktor-faktor penyebab kecelakaan lalu lintas dalam upaya perbaikan pencegahan kecelakaan lalu lintas. *Perspektif*, 22(3): 228-237.
- [7] Hart, H. (1968). *Punishment and responsibility*. Clarendon: Oxford.
- [8] Johnson, B., & Christensen, L. B. (2008). *Educational research: Quantitative, qualitative, and mixed approaches*. Sage Publications: Boston, MA.
- [9] Lincoln, S. Y., & Guba, G. E. (1985). *Naturalistic inquiry*. SAGE Publications: New York, NY.
- [10] Marshall, C., & Rossman, G. B. (1999). *Designing qualitative research*. Sage: Thousand Oaks, CA.
- [11] Martokusumo, S. (2008). *Mengenal hukum (suatu pengantar)*. Liberty: Yogyakarta.
- [12] Marzuki, P. M. (2008). *Penelitian hukum, Kencana: Jakarta*.
- [13] Merriam, S.B. (1998). *Qualitative research and case study applications in education*. Jossey-Bass: San Francisco, CA.
- [14] Miles, M. B., & Huberman, M. A. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage Publications: San Francisco, CA.
- [15] Mukminin, A., Kamil, D., Muazza, M., & Haryanto, E. (2017). Why teacher education? Documenting undocumented female student teachers' motives in Indonesia: A case study. *The Qualitative Report*, 22(1): 309-326.
- [16] Mukminin, A., & McMahon, B.J. (2013). International Graduate Students' Cross-Cultural Academic Engagement: Stories of Indonesian Doctoral Students on American Campus. *The Qualitative Report*, 18 (69):1-19.
- [17] Najwan, J., Fathni, I., and Nugraha, M.V. A. (2015). Agreement, disagreement and against the law in the perspectives of civil law in Indonesia. *JL Pol'y & Globalization*, 38(1): 89-92.
- [18] Norrie, A. (2014). Practical reasoning and criminal responsibility: A jurisprudential approach. In D. B. Cornish and R. V. Clarke (Eds), *The reasoning criminal: Rational choice perspectives on offending* (pp. 218-230). Transaction Publishers: New Jersey.
- [19] Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Sage Publications: Thousand Oaks, CA.
- [20] Patton, M. Q. (2002). *Qualitative evaluation and research methods*. (3rd ed.). Sage Publications: San Francisco, CA.
- [21] Sidharta, B.A. (2000). *Refleksi tentang struktur ilmu hukum*. Ghalian Indonesia: Jakarta.
- [22] Suratman & Dillah, P. (2012). *Metode penelitian hukum*. Alfabeta: Bandung.
- [23] The Indonesian Transportation Department. (2009). *Undang-undang tentang lalu lintas dan angkutan jalan*. UU Nomor 22 Tahun 2009. The Indonesian Transportation Department: Jakarta.
- [24] Wignjosoebroto, S. (1974). *Penelitian hukum: Sebuah tipologi, masyarakat Indonesia*. Alfabeta: Bandung.