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Bridging the Gap: A Multi-Pronged Approach to Road Safety in Malaysia

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ABSTRACT

Road traffic accidents are a growing global tragedy. Therefore, road safety is always a matter of great concern as it relates to the livelihood and well-being of the people of Malaysia. As elsewhere in the world, causes of road accidents include vehicle failure, uneven roads, reckless driving, speeding, intoxication, lack of sleep, and more. Although the government has implemented laws, rules, and programmes to curb road accidents in Malaysia, citizens remain unsure of the potential risks posed by legal deficiencies. Therefore, the focus of this article is to bridge the gap between the legal framework and lingering public uncertainty regarding road safety in Malaysia, paving the way for the development of more effective strategies to create a safer transportation environment for all.

Keywords: Road transport; Road traffic; Road accidents; Road safety; Malaysia

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1. Introduction

Malaysia's vibrant transportation network faces serious challenges from increasing road traffic accidents. This alarming trend has been exacerbated by a sharp increase in traffic volume and passenger and commercial vehicles on the roads. In fact, road traffic accidents are the leading cause of accidental deaths in Malaysia, especially during festive seasons

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when the number of road traffic accidents rises sharply. To illustrate, 1288 accidents were recorded during the Hari Raya season on 13th April 2024 and a total of 5891 accidents since the operation of Ops Selamat.[1]

Despite the existence of the Road Transport Act 1987, Road Traffic Rules 1959, and many other regulations to govern these situations, this development has cast a pall and the alarming number of accidents paints a worrying picture on the people. According to global data, road traffic accidents kill a large number of children and adolescents.[2] To prevent these tragedies, a long-term, sustainable approach to road safety is necessary.

Recognising the seriousness of the situation, in 2021, the Minister of Transport Malaysia launched the 3rd Conference of ASEAN ROAD Safety 2021, focusing on timely topics of innovation and technologies in road safety. This conference gathered more than 250 experts from various countries such as Thailand, Indonesia, and Myanmar to discuss and bring innovation in road safety to a higher level.[3]

Other than that, Malaysia launched the Road Safety Plan 2022–2030 (MRSP 2022–2030)[4] which aims to improve road safety at all levels by setting ambitious targets, including reducing road fatalities by 50% by 2030. The plan is in line with United Nations resolution 74/299, which declares 2021–2030 as the Second Global Decade of Action for Road Safety. Furthermore, it integrates road safety into Sustainable Development Goals 3.6[5] which is to reduce road traffic deaths and injuries and 11.2[6] to promote safe, affordable, accessible, and sustainable transport systems for all.

Most recently in 2023, EVOLVE was held in conjunction with the ASEAN Road Safety Week 2023 to discuss the discourse on road safety, particularly in the area of electric and autonomous vehicles. Such symposium was organised by the Automotive Development Centre at University Technology Malaysia (UTM) and the Malaysian Institute of Road Safety Research (MIROS) under the Ministry of Transport Malaysia to address the intersection of advanced technologies and road safety, fostering knowledge sharing and identifying future road transport challenges.[7]

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1 Austin Camoens, '1,288 Accidents on Fourth Day of Operation' *The Star* (Kuala Lumpur, 12 April 2024) <https://www.thestar.com.my/news/nation/2024/04/13/1288-accidents-on-fourth-day-of-operation>.

2 Ministry of Transport Malaysia Official Portal (2022). *Malaysia Road Safety Plan 2022–2030* <https://www.mot.gov.my:443/en/land/safety/road-safety-plan-2021-2030>.

3 Malaysian Institute of Road Safety Research (MIROS), *3rd Conference of ASEAN Road Safety* <http://cars-asean.miros.gov.my/cars2021_doc/CARS2021%20-%20Programme%20Book.pdf>.accessed 30 July 2024.

4 Ministry of Transport Malaysia Official Portal (2022). *Malaysia Road Safety Plan 2022–2030* <https://www.mot.gov.my:443/en/land/safety/road-safety-plan-2021-2030>.

5 United Nations, 'Transforming our world: the 2030 Agenda for Sustainable Development' (United Nations General Assembly, New York, 21 October 2015) UN Doc A/RES/70/1 <https://sdgs.un.org/2030agenda>, Goal 3.6.

6 ibid Goal 11.2.

7 Malaysian Institute of Road Safety Research (MIROS), *Evolve, in Collaboration with ASEAN Road Safety Week 2023, Marks a Pivotal Moment in Road Safety* < http://arsw.miros.gov.my/>.

This article advocates for an open discussion on the current state of road safety in Malaysia. It is vital that the cause and nature of the accident are rigorously scrutinised and gaps in existing legislation identified. By acknowledging the shortcomings of the current system and adopting a multi-pronged approach, Malaysia can bridge the gap between policy and progress. Through effective legislation, responsible driving practices, and a safety culture that prioritises the well-being of all road users, we can create a safer road environment for everyone.

In the subsequent sections, we will explore Malaysia's legal system, specific issues that contribute to accidents including reckless driving, speeding, lack of motorcycle lanes, poor maintenance of commercial vehicles and unclear regulations surrounding micromobility vehicles, data and statistic reports of road accidents from the Ministry of Transport Malaysia. Through this, this article hopes to raise awareness of the limitations of current road safety approaches in Malaysia and advocate for a more comprehensive approach to prevent more road accidents.

1.1. Problem Statement

This article argues that the current legal system lacks the capacity to effectively respond to the ever-changing challenges on Malaysia's roads, thereby raising concerns among Malaysians.

1.2 Objective

The objective of this article is to highlight the limitations of Malaysia's current road safety strategy and advocate for a more comprehensive approach to road safety.

1.3 Research Methodology

The research methodology used in this paper is based on doctrinal legal, by referring to relevant local statutes such as the Road Transport Act 1987 and Road Traffic Rules 1959, cases from Lexis Advance and journal articles, and statistics and reports from government agencies. There is also a road traffic report obtained from the Ministry of Transport Malaysia.

2. Malaysia's Perspective on Road Safety

In Malaysia, the extensive road network helps to boost economic activity and to connect with different communities. Hence, with many vehicles and different users on the road, a system is needed to ensure order and safety. Having said that, Malaysia, like many countries, has a comprehensive set of road transport laws in place and enforced. These laws are not just restrictions but important tools to protect human life.

Every driver is accountable for their safety and others. Traffic regulations in Malaysia establish a framework for the safety of drivers on the road by specifying the rules and regulations, do and do not in specific legislation. Therefore, drivers must be responsible and obey the laws to create a safer road environment for everyone. The following subsections will discuss some common Malaysia's laws governing the traffic and transportation.

2.1 Road Transport Act 1987

The Road Traffic Act 1987 serves as the cornerstone for Malaysia's safe and efficient road transportation system, thereby ensuring the safety of the citizens. Such an Act is the primary provision governing motor vehicles and road traffic, as well as any other vehicle-related matters. It also lays down provisions that protect third parties from any risk associated with motor vehicles and road traffic.

This Act outlines a variety of traffic violations such as speeding, reckless driving, driving under intoxication, and many more. If a driver of a motor vehicle commits an offence under this Act, he will then be punished in accordance with the laws stated.

The term "motor vehicle" is defined clearly in Section 2 of the Road Transport Act 1987 as any form of vehicle that is propelled by internal mechanisms and is designed to be used on the road. Section 5(1)[8] further classified such motor vehicles into invalid carriages, motorcycles, tractors heavy, tractors light, motor cars heavy, motor cars, mobile machinery heavy or light, pedestrian-controlled vehicles, trolley vehicles, and trailers. Such classification is important as it aids in developing suitable licencing requirements and restrictions for the vehicle specifically.

Aside from that, this Act specifies and penalises a variety of traffic violations, including speeding,[9] drunk driving,[10] ignoring traffics signals,[11] illegal overtaking,[12] and many more. Such a system that punishes the offender with the suspension of driving licence[13] serves as a deterrent for unsafe driving conduct and ensures the accountability of the offenders, thereby creating a safer road environment for all.

2.2 Road Traffic Rules 1959

The scope of the Road Traffic Rules 1959 extends beyond mere driving laws. Rule 8(1) emphasises the control over vehicle modifications and infrastructure. This guarantees that any improvements to the vehicle and road design are done with the goal of ensuring the

[8] Road Transport Act 1987 (MY), s 5(1).

[9] ibid s 40 and 1st Schedule.

[10] ibid s 44.

[11] ibid s 79(2).

[12] ibid s 79(2) and Road Traffic Rules 1959 (MY), r 6.

[13] ibid ss 31 and 32.

safety of everyone. By controlling these, the laws hope to reduce the risks associated with improperly modified cars or badly built road layouts.

Rules 8(1) and (2) offer clear guidelines on how to use crossing lanes. By requiring designated lanes for turning and through vehicles, these regulations encourage predictable traffic flow and decrease confusion, particularly on multi-lane roadways or junctions. This lane discipline helps to reduce the danger of accidents caused by cars making hazardous manoeuvres at crossings.

Furthermore, the driver must keep control of the vehicle, to ensure own safety and others. Rule 17 emphasises the significance of keeping the vehicle in excellent functioning order, maintaining a safe distance from other cars, and remaining aware of any risks.

In addition, inattentive driving is a major cause of accidents. Addressing the issue was part of the Road Traffic Rules 1959, which responded to evolving difficulties. Rule 10 prohibits sleeping while driving and Rule 17A prohibits the use of hand-held phones as it is a major distraction from driving. All these rules show the importance of staying focused and eliminating distractions that might impair the time to respond while driving.

In short, the regulations address basic challenges in a safe and efficient transportation system, from regulating vehicle modifications and infrastructure to promoting lane discipline, driver control, and focused driving, with the aim of ensuring the safety of drivers and preventing the happening of road accidents.

3. Specific Issues Contributing to Accidents

Although the Road Traffic Act 1987, Road Traffic Rules 1959, and the recent Road Safety Plan 2022–2030 appear to be comprehensive legal frameworks, numerous road traffic accident statistics and data reports prove that Malaysia's road traffic accident figures are high, thus painting a concerning picture to the public. Figure 1 shows actual data and statistics reported by the Malaysian Ministry of Transport showing the number of road accidents in Malaysia from 2010 to 2019 before the COVID-19 outbreak.[14]

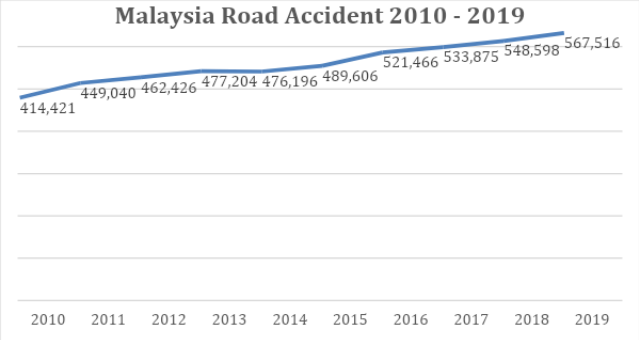

Figure 1: Malaysia Road Accident 2010–2019

[14] 'Road Accidents and Fatalities in Malaysia' (*Ministry of Transport Malaysia*) <https://www.mot.gov.my/en/land/safety/road-accident-and-facilities>.

To date, according to Jabatan Siasatan Dan Penguatkuasaan Trafik PDRM, the Nationwide Accident Daily Report shows 1288 road accident cases, as of 11th April 2024.[15]

With all these concrete evidence, it suggests a gap between policy and practice.

Beyond that, the recent verdict of the Public Prosecutor v. Sam Ke Ting[16] has also exposed serious loopholes in these seemingly sound regulations. The case involved Sam Ke Ting (the "accused"), who was charged under Section 41(1) of the Road Transport Act 1987 with reckless and dangerous driving, which resulted in the deaths of eight teenagers riding modified bicycles.

Although the defendant was acquitted in 2023, the accident attracted widespread public attention in Malaysia. The fact that the teenagers involved were underage and riding their bikes very late at around 3:20 a.m. raises questions about parental responsibility for allowing children to ride modified bikes at such times. In addition, the public mostly criticised the government and the legislature for enacting ambiguous laws that fail to address situations as such.

To be specific, the public has expressed concern over the broad definition of "reckless and dangerous driving", questioning whether it encompasses unforeseen and sudden encounters with a group of cyclists. Such absence of explicit regulations governing the nighttime use of modified bicycles has been identified as a significant legislative gap, thereby considered a major flow in the existing legal framework.

Additionally, Sam Ke Ting's acquittal has further fuelled public frustration, leading some to question the legal system's ability to ensure accountability. With the law being unclear, the public may misunderstand their obligations by having multiple interpretations. Such ambiguities therefore create a breeding ground for accidents by fostering confusion among the community.

With that, the Sam Ke Ting's case is therefore a stark reminder that the legal framework must be clear, comprehensive, and adaptable to address emerging challenges. Only by plugging these loopholes and ensuring strong enforcement can Malaysia truly achieve its goals of promoting safe driving and reducing road accidents.

The following subsections will discuss some of the issues and challenges that have contributed to the increase in road accidents in Malaysia.

3.1 Cars and Motorcycles

Despite all the issues that contribute to road accidents, it is important to acknowledge the positive trends. According to Figure 2,[17] statistics posted by the Ministry of Transport Malaysia show that the number of road traffic fatalities in Malaysia has steadily declined

[15] Bernama, '598,635 Road Accidents Recorded in 2023' *New Straits Time* (Kuala Lumpur, 1 January 2024) <https://www.nst.com.my/news/crime-courts/2024/01/996067/598635-road-accidents-recorded-2023>.

[16] *Public Prosecutor v Sam Ke Ting* [2023] 4 Malayan Law Journal 650.

since 2010. This shows that ongoing efforts to promote road safety are yielding positive results. However, the issue remains a pressing one, particularly given the disproportionate impact on certain groups of road users.

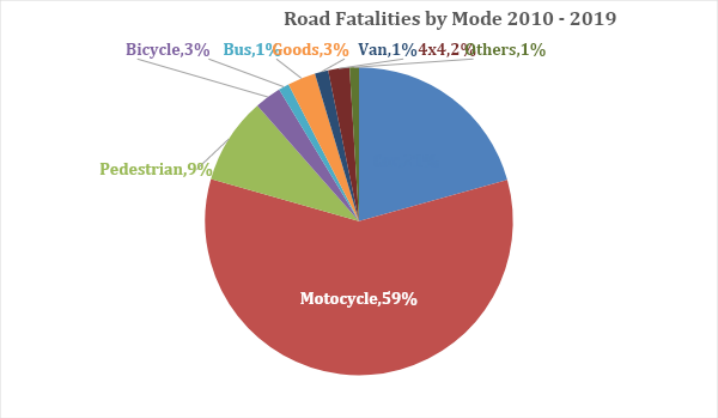

Figure 2: Road Fatalities by Mode 2010–2019

While overall death rates are declining, motorcyclists remain the most vulnerable group on the road. A shocking 59% of all road fatalities involve motorcyclists, highlighting the need for targeted interventions to address their safety. This could include promoting the use of helmets and protective gear, as well as specialised training programmes for motorcycle riders.

Furthermore, according to MRSP 2022–2030,[18] motorcycles are one the most dangerous vehicles on the road, leading to road accidents and fatalities. Beyond that, cars are also one of the significant factors contributing to the rise of road accidents in Malaysia.

Having that said, the subsequent subsections will discuss some under-discussed issues that contribute to the rise of road accidents in Malaysia.

3.1.1 Reckless Driving

Reckless driving is one of the major contributors to road accidents, thereby posing a significant threat to public safety. Reckless driving simply means going beyond or exceeding the speed limit and disregarding traffic laws and the well-being of other road users. Crucially, reckless driving is not an involuntary mistake but a deliberate and voluntary decision that puts others at risk. Drivers who engage in reckless driving knowingly prioritise their convenience over other's safety on the road.

Section 41(1) of the Road Transport Act 1987 defines reckless driving as operating a motor vehicle on the road without due consideration for the safety of others, leaving the risk of an accident. Behaviours like speeding, recklessly changing lanes, ignoring the traffic and

[17] Ministry of Transport Malaysia Official Portal (2022). *Ministry of Transport Malaysia* <https://www.mot.gov.my/en/land/safety/malaysia-road-fatalities-index>.

[18] Ministry of Transport Malaysia Official Portal (2022). *Malaysia Road Safety Plan 2022–2030, page 9* <https://www.mot.gov.my:443/en/land/safety/road-safety-plan-2021-2030>.

so on, fall within the category of reckless driving. Such behaviours create unforeseeable situations that can trigger a chain of reactions to dangerous events.

Reckless driving as mentioned in Section 41(1) of the Road Transport Act 1987 refers to a big crime that any offender of such crime will be punished with imprisonment and severe fines. However, despite having sanctions on the offender, the true expenses much exceeded the legal repercussions. The most devastating consequence is the risk of accidents, which frequently end in major injury or even death. Family must then cope with such death of their loved one and sufferers may have lifelong physical and mental issues.

While the dangers of reckless driving are undeniable, there are always ways to prevent it. It is recommended that more police cars patrol the highways, which will have a significant deterrent effect on reckless behaviour. The possibility of being pulled over can prompt drivers to think twice before performing dangerous manoeuvres. In addition, more speed cameras and automatic tickets can be installed to effectively identify and punish speeding violations and always remind people to obey the speed limit. Additionally, raising fines and considering harsher penalties for repeat offenders, such as licence suspension or revocation, may have a stronger disincentive effect.

3.1.2 Speeding

The second issue is about speeding on the highway. Section 69 of the Road Transport Act 1987 empowers the government to set national speed limits for all roads while allowing adjustments for specific highways under Section 69(1A) of the same Act. However, simply limiting speed is not enough. Many drivers choose to ignore these established safety measures, putting themselves and others at risk. People always have a mentality that the faster they go, the less time they have to react to unexpected situations. However, beyond this limit, it becomes a gamble of life. Driving at high speeds can make it more difficult to maintain control of your vehicle, especially during sudden manoeuvres or sharp turns.

To reduce highway accidents, it is recommended that a conspicuous police officer be present on roads to dissuade the reckless behaviour of drivers. The deployment of unmarked patrol vehicles plays an important role in catching offenders off guard. Aside from that, to prevent the drivers from disobeying the laws, stricter laws such as licence suspension or revocation for repeat offenders. The increase in fines will also function as a deterrent to the drivers to drive at an appropriate speed. Additionally, the deployment of speed cameras and automated ticketing systems can help to better detect the offenders thereby punishing them for violating the rules and regulations.

3.1.3 Absence of Motorcycle Lanes

The third issue is the absence of motorcycle lanes on the road. In Malaysia, where there are few dedicated motorcycle lanes, the lack of such critical infrastructure contributes significantly to traffic accidents.

The fundamental issue is that motorcycles are inherently fragile unlike other vehicles as there is only limited protection to their riders in the case of an accident. When a motorcyclist is forced to share lanes with larger vehicles, which travel at faster speeds, they become nearly undetectable in blind spots, thereby creating road accidents.

Additionally, the lack of dedicated motorcycle lanes presents additional challenges for riders, forcing them to navigate uneven road surfaces or cross-car lanes, which can contribute to a loss of control whenever there is an unexpected obstacle or sudden braking by nearby vehicles.

Other than that, the traffic congestion further exacerbates the issue of road accidents. Due to the heavy traffic flow in Malaysia, motorcyclist may be tempted to engage in unsafe lane splitting, to reach their destination in the shortest time. This behaviour is often accompanied by a lack of proper signalling, as riders might feel their smaller size vehicle affords them greater manoeuvrability as compared with other vehicles on the road. This may significantly increase the risk of collisions with other vehicles on the road, thereby causing accidents. Therefore, the absence of designed motorcycle lanes eliminates a crucial buffer zone that could potentially prevent accidents from happening.

Beyond physical concerns, the lack of motorcycle lanes adds to motorcyclist's dissatisfaction and impatience. They may feel squashed between larger cars and the need to battle traffic which leads to poor decision-making and disrespect for safety measures. In contrast, dedicated lanes are so important as they create a sense of security for motorcyclists and other motor vehicles on the road, thereby preventing the happening of road accidents.

In terms of legality, there are presently no particular statutes that link a motorcyclist's culpability to exceeding other regulations. Rule 53 of Road Traffic Rules 1959 prohibits the usage of emergency lanes unless in circumstances. This therefore stops motorcyclists from utilising such lanes as a temporary passing lane which then poses a major danger to all drivers on the road. In addition, Rule 6 of the same Rules addresses the behaviour of overtaking and obstructing other vehicles. In the circumstance of a motorcycle, if it attempts to overtake in a risky manner, it will then endanger other motor vehicles and affect lane safety.

Ultimately, a long-term strategy is required to solve the issue above. While motorcycle lanes provide the greatest safety advantage, they may not always be a realistic option owing to space limits on existing roadways in Malaysia. Hence, broader lane markers may be a feasible and cost-effective solution for creating a buffer zone between all motor vehicles, and to visually help to isolate from any blind spots, making all drivers easier to see on the road.

3.2 Commercial Vehicles

Moving on, commercial vehicles also pose a threat to road safety in Malaysia. These commercial vehicles are huge and powerful and they need constant check-ups as they can impede the traffic flow and cause a disproportionate number of road accidents. The

definition of "commercial vehicle" is set out in the interpretation Section 2 Commercial Vehicles Licensing Board Act (Act 334) 1987 which includes public service vehicles and goods vehicles. For example, commercial vehicles which include trucks, trailers, and buses.

Although commercial vehicles play an important role in Malaysia, their large size and weight pose inherent safety risks. These heavy vehicles require a longer distance to come to a complete stop, making it difficult to react to sudden changes in traffic or unexpected obstacles. Beyond that, due to their size, blind spots around trucks and buses can obscure pedestrians, motorcyclists, and even small cars, leading to potential collisions.

According to the news report, on 12th May 2022, at Perak, five students perished in an accident on a highway after the trailer of a lorry laden with mosaic tiles ploughed into their car.[19]

Then on 14th July 2022, at Kelantan, a woman was killed and four others, including a child, were injured in an accident involving a lorry carrying a load of iron rods collided with another vehicle.[20]

Later, on 20th September 2023, a lorry crashed into several vehicles in Putrajaya, leaving two dead. The police reported that such an accident happened due to the lorry attempting to change lanes and failing to break on time.[21]

Clearly, the above news reports highlight the disturbing trend of fatal accidents involving commercial vehicles in Malaysia. The report suggests potential causes of road tragedies such as improper lane changes, brake failure, and overloading of vehicles. Therefore, these incidents demonstrate the urgent need for immediate action to improve commercial vehicle safety in Malaysia.

The author believes that the existence of commercial vehicles must not be at the expense of road safety. Deterrence can be achieved through the implementation of stricter regulations and harsher penalties for non-compliance. Additionally, implement stricter weight limits, mandatory vehicle inspections and driver fatigue limits, promote safety technology, and foster a safety culture within the industry. Also, implementing a comprehensive training programme that emphasises defensive driving techniques, hazard recognition, and proper vehicle maintenance can equip drivers with the necessary skills. By taking all reasonable measures, Malaysia can create a safer environment for all road users.

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[19] Adeline Leong, '5 Students Perished in Road Collision With Lorry Trailers, Driver Has Been Remanded' *The Rakyat Post (TRP)* (12 May 2022) <https://www.therakyatpost.com/news/2022/05/12/5-students-perished-in-road-collision-with-lorry-trailers-driver-has-been-remanded/>.

[20] Bernama, 'Woman Killed, Four Injured in Crash Involving 29 Vehicles in Kelantan' *Malay Mail* (Pasir Puteh, 14 July 2022) <https://www.malaymail.com/news/malaysia/2022/07/14/woman-killed-four-injured-in-crash-involving-29-vehicles-in-kelantan/17452>.

[21] FMT Reporters, 'Lorry Rams into Vehicles Giving Way to Convoy, 2 Dead' *Free Malaysia Today* (*FMT*) (Petaling Jaya, 20 September 2023) <https://www.freemalaysiatoday.com/category/nation/2023/09/20/lorry-rams-into-vehicles-giving-way-for-convoy-2-dead/>.

3.3 Micromobility Vehicles

Micromobility vehicles are also one of the challenges in ensuring road safety in Malaysia. Micromobility vehicles refer to a category that includes e-scooters, e-bikes, and other compact electric transportation options that are rapidly changing the global urban transportation landscape. More specifically, Section 2 of the Road Transport Act 1987 defines a "micromobility vehicle" as any vehicle powered by an electric device, an internal combustion engine or human power, or a combination of both, and having a maximum speed of 50 km/h.

In addition to Sam Ke Ting's modified bicycle accident, there have been many micromobility vehicle accidents in Malaysia. For example, on 27th August 2019, a French tourist riding a motorcycle was killed in a collision with a car while trying to overtake in Langkawi. [22]

Beyond that, on 11th May 2021, in Johor, two senior citizens on an electric bicycle were knocked into the lorry on the main road thereby being killed in a crash with a lorry.[23]

Due to the continuous happening of road accidents caused by micromobility vehicles, finally, on 17th December 2021, the use of micromobility vehicles prescribed in the Schedule of Road Traffic (Prohibition of Use of Certain Micromobility Vehicles) Rules 2021 is banned under Rule 3 of the same Rules. The ban applies to mopeds and personal mobility devices, including those powered by human power, electricity, or personal mobility aids.

However, the ban on micromobility vehicles is not a blanket ban, as per Rule 3(2) of the same Rules which empowers the Minister to grant exemptions to specific roads or designated areas subject to certain conditions.

Recognising the potential of micromobility vehicles, the Town and Country Planning Department (PLANMalaysia)[24] finalising guidelines for their use on roads. The guidance is expected to address key issues such as speed limits, designated lanes or routes for safe operation, and potential licencing requirements for micromobility vehicle users and providers.

As a result, the existing Malaysian micromobility restrictions are characterised by ambiguity and a sense of waiting, which both raise doubts in the minds of the people. The laws keep changing, hence, without a clear and certain law, it will be hard for the people to understand the law and to obey it.

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[22] Bernama, 'French Tourist Killed in Scooter Crash in Langkawi' *Malay Mail* (Langkawi, 27 August 2019) <https://www.malaymail.com/news/malaysia/2019/08/27/french-tourist-killed-in-scooter-crash-in-langkawi/1784586>.

[23] Essa Abu Yamin, 'Two Senior Citizens on Electric Bicycle Killed in Crash with Lorry' *New Straits Times* (Batu Pahat, 12 May 2021) <https://www.nst.com.my/news/nation/2021/05/689850/two-senior-citizens-electric-bicycle-killed-crash-lorry'google_vignette>.

[24] Garis Panduan Perancangan Mikromobiliti, *Plan Malaysia Official Portal* <https://www.planmalaysia.gov.my/index.php/en/>.

Since the use of micromobility vehicles is not outright prohibited, with the exception that the Minister may allow it under certain conditions, it, therefore, opens new possibilities for urban transportation in Malaysia. However, integrating them seamlessly into the current transportation system is still a huge challenge for the government. It imposes careful considerations of existing, foreseeable, and unforeseeable issues from arising. The primary concern of such micromobility vehicles is the collisions between pedestrians and micromobility vehicles. This is because such vehicles are smaller and quicker than pedestrians and it might reduce visibility, thereby increasing the number of road accidents, and keeping people unsafe.

To address this issue, it is recommended that creating separate lanes or designated paths for micromobility vehicles is crucial as this physical separation reduces the risk of conflicts with pedestrians and motorists. In addition, enforcing speed limits for micromobility vehicles and conventional vehicles in designated areas can further improve safety.

Among other things, the initial inclusion of personal mobility assistive devices in micromobility vehicle bans raised concerns about potential limitations for people with disabilities who rely on these devices for mobility. Therefore, regulations need to differentiate between high-performance micromobility vehicles and personal mobility aids designed to assist walking and allow the use of personal mobility aids on sidewalks or designated walking areas, with clear rules to ensure accessibility for those who rely on them.

It is important to strike a balance between safety and accessibility by promoting alternative modes of transport. Malaysia can learn from the best practices of other countries that have successfully integrated micromobility vehicles into their transportation ecosystem and developed comprehensive regulatory frameworks to promote innovation while prioritising the safety of all road users.

3.4 High-Risk Groups

Moving on, 'age' is one of the under-discussed factors and a worrying trend in increasing road accidents. This increase can be attributed to inexperienced young and older drivers, who may have declining physical or cognitive abilities, posing a significant challenge to road safety. By acknowledging the challenges faced by young and older drivers and promoting open discussions on potential solutions, Malaysia can create a safer and more secure driving environment, thereby achieving the goals of the Road Safety Plan 2022–2030.

3.4.1 Drivers Below the Age of Majority

Malaysia's current driving licence system allows 16-year-olds to obtain motorcycle licences and 17-year-olds to obtain car licences.[25] While the system confers early independence, it raises concerns about the safety of young drivers and other road users.

[25] JPJ.MY, *Driving Test Age Eligibility* <https://www.jpj.my/misc/age_eligibility_driving_test.htm>.

Young drivers often develop a new sense of independence that can translate into risky behaviour while driving. Their lack of experience and honed skills can lead to misjudgments in complex driving situations. The excitement of newfound freedom may manifest itself in speeding, attempting reckless driving behaviour, or even driving under the influence. These actions greatly increase the likelihood of an accident, endangering not only the driver himself but also other motorists, pedestrians, and cyclists.

Countries such as Thailand, which have a minimum driving age of 18,[26] recognise the continued development of the brain, particularly in key areas of responsible decision-making. The prefrontal cortex, responsible for judgment and impulse control, continues to develop well into the early twenties.[27] This suggests that adolescent brains are still in a critical stage of development and may be more susceptible to risky driving behaviours. Therefore, raising the minimum driving age in Malaysia may further facilitate this development, potentially reducing accidents involving young drivers.

However, considering that many teenagers in Malaysia rely on motorcycles as their primary mode of transportation, especially in rural areas where public transportation options may be limited. Therefore, the destructive potential and importance of adolescent experiences cannot be ignored. To strike a balance, it would be best to enforce stricter traffic laws, especially for young drivers, to send a strong message about safe driving behaviour.

3.4.2 Drivers at the Age of Golden Age

At the other end of the age spectrum, older drivers face different challenges. While experience is often viewed as an asset, age-related physical and cognitive decline can pose challenges for older drivers. Reaction time, which is critical for safe manoeuvring, also naturally slows with age. In some cases, cognitive decline can further impair judgment and decision-making while driving. These factors can increase the risk of an accident for older drivers.

In Singapore, there is a mandatory medical assessment programme for drivers over the age of 65.[28] The programme requires seniors to undergo regular physical exams to ensure they are fit to drive a vehicle safely. This proactive approach acknowledges the potential decline in physical and cognitive abilities associated with ageing and aims to mitigate associated risks on the road.

With Malaysia's retirement age at 60,[29] road safety for older drivers is a growing concern. Although Section 29 of the Road Transport Act 1987 already provides for a

[26] Land Traffic Act 1979 (TH).

[27] Sara B Johnson, Robert W Blum and Jay N Giedd, 'Adolescent Maturity and the Brain: The Promise and Pitfalls of Neuroscience Research in Adolescent Health Policy' (2009) 45 Journal of Adolescent Health 216 <https://doi.org/10.1016/j.jadohealth.2009.05.016>.

[28] Singapore Police Force, *Submission of Medical Examination Form Report for Aged Drivers* <https://eservices.police.gov.sg/content/policehubhome/e-services-traffic/medical-examination-form.html>.

[29] Minimum Retirement Age Act 2012 (MY), s 4(1).

competency test for the purpose of obtaining a regular driving licence, the continued competency of a senior driver still needs to be considered. To solve this problem, it is recommended to establish a regular proficiency testing system for elderly drivers based on the existing driving licence examination. This will involve regular assessment of driving skills, vision, and reaction times to ensure the vehicle continues to operate safely.

Besides, educational programmes for older adults about signs of cognitive or physical decline can empower them to make informed decisions about their ability to drive. This knowledge can enable them to consider alternative transportation options, such as reliable and accessible public transportation, if necessary.

4. Conclusion

All in all, Malaysia's present road safety situation deserves a thorough re-evaluation. General methods to curb the high numbers of road accidents such as stricter enforcement of current traffic regulations, along with harsher fines for infractions, is an essential deterrent.

Additionally, looking at the traditional traffic enforcement methods, which rely on the physical presence of police patrol, sets limitations in effectively monitoring the vast road networks. It always requires police officers to be on duty most of the time. Emerging technologies such as overhead surveillance systems utilising drones or any AI camera can swiftly detect unlawful and risky behaviour of drivers on the road. Such technologies help to decrease the workload and stress on the shoulders of police officers, thereby assisting in identifying traffic violations.

Also, implementing targeted education programmes aimed at all age groups and road users can help to develop a culture of safe road usage. The groundwork for safe driving should be built early on through interesting, age-appropriate educational activities. With that, public education efforts aimed primarily at this demographic should cover topics such as speeding, the hazards of distracted driving caused by mobile phone usage and the negative repercussions of driving while intoxicated.

In essence, road safety is a continuous process that involves government agencies, transportation planners, and advocacy organisations to collaborate to enact evidence-based policies and adapt to changing transportation landscapes. By closing the policy-practice gap, Malaysia can convert its roads into genuine arteries of growth, paving the way for a more sustainable and safe future.

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